ENVIRO-AG ENGINEERING, INC.
EAE
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203 East Main Street
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May 7, 2026

Via *FedEx*

Mr. Christopher Gajewski, Project Manager
Municipal Solid Waste Permits
TCEQ
MC 124
Austin TX 78711-3087

Re: Technical Notice of Deficiency Letter
Vexara Pharmaceuticals, LLC
Houston, Harris County, TX
Proposed Municipal Solid Waste Permit Number: 2430
Tracking No. 32678027; RN100701051/CN606428281
New Type V Permit Application

Dear Municipal Solid Waste Facility Applications Team,

Enclosed, please find the revisions for Parts 2-4 of the above referenced permit application. There is an original and a red lined paper copy. I have included a spreadsheet with my comments listed and labelled for each item on the WPD MWS Deficiency Table – Technical NOD #1. I will submit the updated MSW checklist electronically.
If you have any questions or require additional information, please give me a call.

Sincerely,

Amy Peoples
Enviro-Ag Engineering, Inc.

Enclosures

Cc: Vexara Pharmaceuticals, LLC
EAE file

PAGE REVISION DATE: 4/29/2026

Applicant Signature Page

Site Operator (Permittee or Registrant Name) or Authorized Signatory

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

Name: Sheryn Jageman Title: Owner

Email Address: [redacted]

Signature: Sheryn Jageman Date: 5/7/26

Authorization by Facility Owner for Operator to Submit Application

To be completed by the facility owner if the application is submitted by an operator who is not the facility owner.

I am the owner of the facility that is the subject of this application, and authorize the operator, _____, _____ to submit this application pursuant to 30 TAC 305.43(c).

Name: _____ : _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said _____

On this 7th day of MAY, 26

My commission expires on the MAY day of 3rd, 2027

_____

Notary Public in and for

HARRIS Texas (notary's jurisdiction, including county and state)

Note: Application Must Bear Signature & Seal of Notary Public

SYED AZMI HUSSAIN NAQVI
Notary ID #130093076
My Commission Expires
May 3, 2027

VEXARA PHARMACEUTICALS

MWS No. 2430 - Tracking No. 32678027

*** The page numbers in the TOC & List of Supporting Documents have been updated for each Part**

NOD ID	FIRST NOD RESPONSE
T1	The MSW checklist has been updated
T2	Parts I-IV cover page and the Index page for each plus engineer drawings , plans and flow charts are signed and sealed. That should cover whole application.
T3	Revision dates are on documents as they are changed. Figures/Tables match TOC and reflect the Part and Section within the permit.
T4	Standard drawings are attached.
T5	All drawings match the Part # and section with a unique # - See TOC in each Part
T6	Maps have been checked and revised as needed
T7	Letter sent out on 1/28/2026 and still no response from TX Dot
T8	Statement added in Part II - Section 2.12 -The requirements in 330.61h(1)-(6) have been evaluated. The location of the facility and management of waste are not believed to have a negative impact on this area of Houston.
T9	The growth trends provided are for the Houston Metro Area. This includes the proposed facility. Harris County Economic Highlights 2025 document was added to the supporting documents. Part II Section 2.4 was revised for the Harris County Precinct 4 numbers and revised Figure 2.4.1d. Major development within 5 miles of the facility was attached in Figure 2.4.1e.
T10	See Part II Section 2.4 - This area encompasses part of the City of Houston, including approximately 1,280 businesses and approximately 6,100 residences within a mile of the facility. The closest residence is about 0.1 miles to the west acrpss Bingle Rd, and the closest business is located directly to the North and to the South of the proposed site.
T11	See Part II - Section 2.7 Ground and Surface Water and checklist has been revised to 2.7
T12	Surface water shown on Figure 2.1.4 - USGS Topo Map
T13	Part II Section 2.9 - Figure 2.9.2 E-mailed packet for Wildlife Assessment to TPWD 5/1/2026 - Waiting for response.
T14	Email Response added to Part 2 of supporting documents - Figure 2.11.3
T15	Figure 2.4.1a was revised
T16	No wells located on property - Refer to Part II - Section 2.7 & Figure 2.7.1
T17	Revised Figures 2.4.1a-c
T18	No public drainage, pipeline or utility easements exist within the facility property line. Adjacent City right-of-way being Bingle Road exists along the west frontage of the facility property line which contains public and franchise utilities.
T19	Shown on Figure 2.1.3 – Site Layout
T20	Shown on Figure 2.1.3 – Site Layout
T21	Provided Figure 2.1.4 – USGS Topo Map
T22	Provided Figure 2.4.1b - Aerial Map
T23	a) Per Figure 2.1.1 (Metes and Bounds Survey) the 100-year floodway elevation at the property is 73' (NAV88 elevation datum). The minimum finished floor of the facility is 74.25' which protects the building and facility equipment from flooding during the 100-year event. The facility site parking and drives are concrete and asphalt paved per City codes. All landscaped areas are required to be vegetated per City code requirements. These design elements and code requirements demonstrate that washout will be prevented during the 100-year storm event.
T23	b) A FEMA conditional letter of map amendment is not required because no additional structures are being added in addition to what was previously accounted for in the established Zone AE flood plain line. As a result, volume capacity is maintained within the floodway and a FEMA letter of map amendment is not warranted.
T24	See Part II Section 2.9 -This statement was added - The facility and the operation of the facility shall 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.
T25	See Part II Section 2.12 - This statement was added - . The owner/operator will maintain a 50 feet separation distance between the final product storage areas within or adjacent to the facility boundary.

T26	See Part III Section 3.0 -Access to the facility is controlled by a perimeter fence, consisting of a four-foot barbed wire fence or a 6-foot chain link fence or equivalent with lockable gates. An attendant will be on-site during operating hours. The operating area and transport unit storage will be enclosed by walls or fence.
T27	Figure 3.2.1 – Process Flow Diagram was revised to include grit trap and lint waste as a feedstock.
T28	Construction drawings have been provided demonstrating a comprehensive design of the proposed facility. Sections of generalized construction details of the receiving, processing and storage units have been provided including name, number and capacity of each equipment and appurtenance. Separate pictures, drawings, diagrams and schematics are referenced by its unique identifier.
T29	The building consists of a 65' x 130' x 20' tall prefabricated metal building. The site generally drains southeast with the 100-year floodplain draining east across the property as the predominant drainage direction. A sump pit is located inside the building within the dewatering box area to collect effluent that leaves the dewatering boxes and is pumped to the effluent holding tank. Process storage tanks that are outside of the building consist of three 10' dia x 33' long horizontal steel tanks (20K gallon each) and one 8.5' x 46' horizontal steel frac tank (21K gallons). These tanks will be contained on a concrete slab by a 2-ft tall by 5-inch wide constructed concrete wall measuring 56' wide by 58' long. The 2-ft tall containment wall serves to contain the worst case spill by accounting for the spill volume of the largest tank while taking into account the volume displacement of the other tanks inside the containment area as well as a significant rain event volume. In the event of a spill within this area, effluent will be pumped back to the tanks via a portable pump. Clean precipitation over the area will be pumped out of the containment area. Roof drainage from the metal building will not be allowed to enter the containment area. Roof drains will be installed to divert roof drainage away from the containment area.
T30	The building consists of a prefabricated metal building. The floor is a 7-inch reinforced concrete slab.
T31	In reference to the previous response to T23, the 100-year floodway elevation at the property is 73' (NAV88 elevation datum). The minimum finished floor of the facility is 74.25' which protects the building and facility equipment from flooding during the 100-year event. The facility site parking and drives are concrete and asphalt paved per City codes. All landscaped areas are required to be vegetated per City code requirements. These design elements and code requirements demonstrate that washout will be prevented during the 100-year storm event.
T32	Reference response in T31. A FEMA conditional letter of map amendment is not required because no additional structures are being added in addition to what was previously accounted for in the established Zone AE flood plain line. As a result, volume capacity is maintained within the floodway and a FEMA letter of map amendment is not warranted.
T33	Updated Part III Section 3.6 with better description of worst case scenario spill control and containment. Updated the site plan and construction plans
T34	See Part III Section 3.0 -Based on 50,000 gallons per day with an expected percentage of waste stream solids at 0.5%, it is anticipated that on average it may take up to 32 days to fill a dewatering box of solids prior to disposal. Operating at maximum capability of 150,000 gallons per day it would be projected that it would take 21 days to fill two dewater boxes of solids prior to disposal.
T35	See Part IV Section 4.25 comment - All reports required by the Executive Director will be submitted based off the permit reporting requirements including MSW quarterly and annual reports.
T36	See Part IV Section 4.0 - Based on 50,000 gallons per day with an expected percentage of waste stream solids at 0.5%, it is anticipated that on average it may take up to 32 days to fill a dewatering box of solids prior to disposal. Operating at maximum capability of 150,000 gallons per day it would be projected that it would take 21 days to fill two dewater boxes of solids prior to disposal.
T37	See Part IV Section 4.12 Comment added - Each waste type will be analyzed annually for lead.
T38	See Part IV Section 4.0 - The proposed facility has contacted other facilities receiving the waste and they can manage the volumes and concentrations estimated by the facility design. See Figure 4.0.1
T39	See Part IV Section 4.0 - See comment - Once a dewatering box is full of waste solids and can pass a dryness test via a paint filter test, the solids will be offloaded into a 40-cubic yard rollbox and hauled to an approved/authorized domestic solid waste disposal site landfill or composting facility.
T40	See Part IV Section 4.0 Comment added - All wastewater generated by the facility will be managed as contaminated water in accordance with 30 TAC 330.207.
T41	See Part IV Section 4.6 - Pressurized water is available on-site – See Part III - Equipment Specs.

T42	See Part IV Section 4.6 - Comment added - The facility will be equipped with fire extinguishers in the office area (1) and around the processing area at a minimum of 4. The City of Houston's Fire Marshall will oversee additional fire equipment needs during the city permit approval process.
T43	The current road design and turning radii are approved by City of Houston's Planning and Development Department for industrial zoning use and meets current code requirements for industrial activities including design loads on pavements for dual axel semi trucks and minimum dimension/radii requirements for semi trucks. This is to ensure that pavement integrity is maintained to meet the intended use and to ensure that the disruption of normal traffic patterns is avoided on public right-of-way and within the property.
T44	See Part IV Section 4.0 - Safety bumpers will be provided for the vehicles at the hoppers.
T45	See Part IV Section 4.0 - Comment added - Access to the facility is controlled by a perimeter fence, consisting of a four-foot barbed wire fence or a 6-foot chain link fence or equivalent with lockable gates. An attendant will be on-site during operating hours. The operating area and transport unit storage will be enclosed by walls or fence.
T46	See Part IV Section 4.14 - Comment added - The facility will display at all entrances to the facility where waste is received, a sign measuring at least four feet by four feet with letters at least three inches in height stating the Site Name, Permittee Name, Type of Site, Hours of Operation, permit number , facility rules, Emergency Contact Information and unloading area location.
T47	**See Part IV Section 4.9** -All solids removed from the storage tanks will be processed through the dewatering boxes. Wash water will be collected in sump pump pit and then pumped to the storage tank to be pumped to the City of Houston sanitary sewer system via underground lines. No wash water will accumulate. **See Part IV Section 4.8** - In the event of a spill from the receiving area, storage area or processing area, the spill will be contained within the walls of the enclosed 7,800 square foot building with a 6" curb. The holding tanks located outside the building will have a two-foot tall and five-inch-thick containment wall in the event of a spill.
T48	See Part IV Section 4.22 - Revised this section to add clarity.
T49	See Part IV Section 4.13 - The waste acceptance hours of the facility will be between 7:00 a.m. and 7:00 p.m., Monday-Friday and Saturday 7:00am-noon. The operating hours for operating heavy equipment and transporting materials on- or off-site will be between 5:00am and 9:00 pm.
T50	Saturday's are required for many county and other government building facilities that require pump outs over the weekend for example the county courthouse and juvenile justice center operate during the week and have grease traps in the basements. The traps are close to air handlers that suck odors into the courtrooms and judges chambers. Early a.m. service - Customers like the Four Seasons downtown and Houston community college (most major office buildings in downtown Houston and the Houston medical center have the same issues) require early a.m. service for the same reason. (Every other disposal site in Houston is allowed these hours.)
T51	See Part IV Section 4.23 - Comment added - Litter and windblown material resulting from the operation will be collected and disposed of properly once per day on days of operation to minimize unsightly conditions
T52	See Part IV Section 4.0 - Added Comment -Access to the facility is controlled by a perimeter fence, consisting of a four-foot barbed wire fence or a 6-foot chain link fence or equivalent with lockable gates. An attendant will be on-site during operating hours. The operating area and transport unit storage will be enclosed by walls or fence.
T53	See Part IV Section 4.7 - added daily
T54	Revise to 24 not 72 in Part IV Section 4.11 & 4.21
T55	See Part IV Section 4.16 -During the process of liquid separation, a polymer is added for separation, and lime is added to adjust the pH as needed. The addition of lime and polymer help reduce the odor. Typically, solids will not remain in the boxes long enough to create an odor problem. Vinyl Tarps with integrated mesh pouches on the underside for odor absorbing carbon inserts will be used to cover the boxes as needed to help limit contain and reduce the odors and stored insideduring storage and transport. If nuisance odors are found to pass the facility boundary, operations may be suspended until odors are abated.
T56	See Part IV Section 4.16 - Added Comment - If nuisance odors are found to pass the facility boundary, operations may be suspended until odors are abated.
T57	See Part IV Section 4.22 SeeComment - The waste storage units are completely covered or enclosed and do not constitute fire, safety, health or litter hazards. There will be no surface water discharges from these areas or ponded water onsite that could become a nuisance.

APPLICATION TO THE TCEQ FOR NEW PERMIT FOR A MUNICIPAL SOLID WASTE FACILITY

Part II – General Information – MSW Permit No. 2430

Vexara Pharmaceuticals

3300 Bingle Road

Houston, TX 77055

Prepared For:

Vexara Pharmaceuticals, LLC

1800 West Loop South Suite 1110

Houston, TX 77027

1-281-830-0284

February 1, 2026

Revision Date: February 27, 2026, April 29, 2026

F#2507

STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED
PROFESSIONAL ENGINEER

05-06-2026

Prepared By:

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO - STEPHENVILLE- ARTESIA

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General Information Table of Contents

F# 2507

05-06-2026

List of Supporting Documents

2.1 Facility Location & General Information

Vexara Pharmaceuticals is situated in the Daniel Alexander Survey A-92, Harris County, Texas, according to the topographic survey from South Point Surveying, PLLC. (Figure 2.1.2 – Metes & Bounds Survey)

The proposed facility will be built pending an approved Municipal Solid Waste Permit from TCEQ. The land is under contract and consists of about 2.93 acres with a concrete slab surrounded by asphalt and concrete. Vacuum trucks containing domestic waste consisting of human waste (municipal sewage wastewater), food greases, lint and grit pumped from septic tanks will be offloaded by hose at a receiving station that will be enclosed by a building and surrounded by a curb to contain small spills. The receiving station will contain an automated trash separating screen (dusky shark or screw press) that will remove large non-biodegradable particulate/trash and convey it to a trash receptacle (10 cubic yard box) which will be taken to a landfill once it is filled. The separated waste will be transferred to a separations tank via a 4" trash pump (200 to 400gpm). This tank is 10' diameter x 33' long and has a capacity of 20,000 gallons. It will be used as a separating tank to allow grease to float to the top from the liquids and bio-solids. The grease on the top of the separation tank will be pumped through a pick heater at 25 gpm that will inject steam directly into the waste stream. This will heat the grease instantly from 60°F to 180°F. The waste stream that exits the pick heater will enter a cyclone tank (cone shaped tank, 10" diameter x 2' tall, 8-gallon capacity) where the waste stream enters the cyclone tank at an angle to make the waste stream spin that allows for further separation of brown grease from the waste liquids and bio-solids. The clarified brown grease will stay at the top of the cyclone tank and discharged through the acceptance port where under residual pressure will flow to a 7,000-gallon high density polyethylene recyclable oil tank where it will eventually be offloaded and taken to a recycling facility. The separated waste liquids and bio-solids that fall out of the bottom of the cyclone will be discharged through the reject port where under residual pressure will flow back into the receiving station for re-processing. The remaining waste liquids and bio-solids in the separation tank will be pumped at 200 to 400 gpm through a series of two storage tanks (10'diameter x 33'long with 20,000-gallon capacity each) and then a 21,000-gallon mixing tank (frac tank 46' x 10' x 8.5') where the waste liquids and bio-solids will be batched for processing with the addition of lime manually added to the mixing tank for pH adjustment (optimal pH level: 6.5-7.5) at the appropriate consistency to allow dewatering process to be optimized. Once the batch volume in the mixing tank is pH optimized, the waste liquids and bio-solids will be pumped at 200 to 400 gpm to one of two dewatering boxes (40 cubic yards each or 8,078 gallons each). Polymer will be injected into the waste stream as it is being pumped into one of the two dewatering boxes that will cause bio-solids to bind with the polymer compound enhancing the further separation of solids from the liquids. The dewatering boxes are built with a special arrangement of screens that allows the effluent wastewater to escape into the designated collection space and then drain through ports in the dewatering box

and gravity flow into a sump pump pit. The collected bio-solids in the dewatering box with the aid of the ADS 5084G polymer will form dime to nickel size clumps of solid waste material separated from the effluent wastewater through the use of a belt press filter media that allows the solids to collect in the box and only allows the effluent water to pass through. One 40-cubic yard dewatering box processes up to 80,000 gallons of waste liquids and solids per day. The expected percentage of waste solids in this waste stream entering the dewatering boxes is 0.5%. From the sump pump pit, the effluent wastewater will be pumped at 200 to 400 gpm into a 6,000-gallon high density polyethylene holding tank. The holding tank will set at ground level and will allow the effluent wastewater to gravity flow to the underground sanitary sewer service line that connects to the City of Houston's sanitary sewer system. There will be a sampling/inspection port consisting of a manhole or other City approved structure on the sanitary sewer service line gravity flowing from the holding tank. This will allow the City of Houston access for sampling and inspection. Once a dewatering box is full of waste solids and can pass a dryness test via a paint filter test, the solids will be offloaded into a 40-cubic yard rollbox and hauled to an approved domestic solid waste disposal site landfill or composting facility. If the solids cannot be hauled immediately to a disposal site, the solids will be stored temporarily in the enclosed facility building in an available storage bay until it can be disposed of. This overall process results in dewatered solids of 18-22% on average, reducing the total volume of waste by up to 95%, and reduces FOG, BOD, COD and TSS levels by an average of 99%.

The facility has contacted the City of Houston and will be applying for any required City of Houston permits and will comply with the conditions within these permits as well. The solids will be stored no longer than 7 business days on-site or what local jurisdiction limits require and then it will be transported to an approved domestic solid waste disposal site landfill or composting facility. The facility plans on processing on average 50,000 gallons of waste liquids and solids per day with a maximum capability of 150,000 gallons per day. Based on 50,000 gallons per day with an expected percentage of waste stream solids at 0.5%, it is anticipated that on average it may take up to 32 days to fill a dewatering box of solids prior to disposal. Operating at maximum capability of 150,000 gallons per day it would be projected that it would take 21 days to fill two dewater boxes of solids prior to disposal.

- Brown grease is composed of fats, oils and grease (FOG). It can clog sewer lines and interfere with septic systems and sewage treatment operations. Recognition of its value for production of fertilizer, biodiesel and other products, as well as stringent EPA regulations, are driving a trend of brown grease recycling.
- The solid waste will consist of food particles, grit and septic waste. The lipids are made up of fatty acids, triacylglycerols and fat-soluble hydrocarbons and originate from scraps of baked and fried food items removed from grease traps. The grit includes sand, gravel, cinder, as well as eggshells, bone chips, seeds,

coffee grinds and large organic materials (food waste). Septic waste is the liquid and water-borne waste derived from ordinary living processes.

- The liquid waste will be the grey water that is mixed with the solids in the grease and grit traps as well as in the septic tanks.

See Figure 2.1.3 – Facility Layout and Figure 2.1.4 – Topo Map

Polymer – ADS 5084G

- The ADS 5084G polymer is a product of AQUA-Zyme Disposal Systems, Inc. It is a mixture that is a processing aid for industrial applications and used in the dewatering process. The addition of the polymer causes sludge mixture to flocculate, separating the liquids from the solids, therefore speeding up the dewatering process. See supporting documents 2.1.5 – Polymer MSDS

Access Routes

The facility is located 0.1 mile south and west of Hempstead Hwy on Bingle Road. From the north, the trucks will turn on Hempstead Highway then south onto Bingle Road or they will take US 290 to Bingle Road south and turn left into the facility. From the South, the trucks will come up Kempwood Dr. to Bingle Road and turn right into the facility.

Latitude and Longitude

Latitude: 29.823804°

Longitude: -95.494699°

Acknowledgement

The proposed facility owner acknowledges his responsibilities according to 30 TAC § 330.59(d)(2)(A) and (C). He also acknowledges that the State has access during the life of the facility and during closure.

2.2 Waste Identification

The waste materials that will be processed at the facility are grease trap waste from food service businesses and septage. Each incoming load will have a manifest and be screened by employees visually for unauthorized or prohibited materials. The trucks may have lengths up to 59 feet and capacities up to 6,300 gallons. The mix of incoming material will very but will not affect the dewatering process. Grease trap waste is expected to be the largest component of the waste stream.

Characteristics of proposed waste stream:

Fats, Oil and greases:	5-10%
Solids:	15-25%
Water:	65-80%

A sample analysis for the proposed waste before and after processing is provided in the Support Documentation (Figure 2.2.1). The sample analysis describes expected total dissolved solids (TSS), biochemical oxygen demand (BOD) and oil and grease concentration of the waste.

2.3 Waste Data

The proposed facility is designed to accept and process non-hazardous grease trap, domestic sewage sludge and septage wastes for the purpose of separation of brown grease, liquid and solids.

The facility plans on processing approximately 2 filter box containers of solid waste daily to be hauled to the landfill. This is estimated at 80,000 gallons of waste at 0.5% solids per day and a maximum of 150,000 gallons.

Waste will be processed daily with approximately 20-25% of the material retained in the dewatering tanks. The maximum length of time for solid waste storage is no more than 7 business days after processing or what local jurisdiction allows.

Representative sample results of sludge after processing are provided in the Supporting Documentation (Figure 2.3.1).

Solids are planned to be transported to an approved domestic solid waste disposal site landfill or composting facility in Houston area.

The facility will serve the Houston Metro area. The total population of the area served by the facility is estimated at 6,900,000 people.

2.4 Description of Land Use

The land of the proposed site is shown on the Land Use Map (Figure 2.4.1a) in the supporting documents. This area encompasses part of the City of Houston, including approximately 1,280 businesses and approximately 6,100 residences within a mile of the facility. The closest residence is about 0.1 miles to the west across Bingle Rd, and the closest business is located directly to the North and to the South of the proposed site. The City of Houston does have zoning but development is governed by codes that address how the property can be subdivided. This allows the property owners significant flexibility in how they use their land. It can foster unique development patterns and potentially reduce bureaucratic hurdles often associated with obtaining permits in strictly zoned areas. The facility tract is coded as industrial. There are also about 2 churches, 9 schools and several businesses and houses located within one mile (Figure 2.4.1b). George Bush Intercontinental and William P Hobby airports are over 20-miles from the proposed facility. (Figure 2.4.1c)

MacroTrends has compiled community growth trends for the Houston Metro Area as shown below:

Year	Population	Percent Change
2026	6,971,000	1.18%
2025	6,890,000	1.29%
2024	6,802,000	1.42%
2023	6,707,000	1.58%

Houston Metro Area Population (1950-2026) | MacroTrends

In the City of Houston, the number of single-family new construction building permit application rates have gone up and down over the past few years with no defined increase or decrease.

Year	Number of Building Permits
2020	5760
2021	7153
2022	6742
2023	6183
2024	6714

City of Houston Residential Building Permits by Month and Year - Dataset - City of Houston Open Data -1/19/2026

The proposed area is in Precinct 4 of Harris County. The population is about 1.2 million.

Other makes up the largest employment sector (15.4%) followed by Professional and Technical Services (12.4%) followed by Health Care & Social Assistance (11.8%).Found in Supporting Documents Figure 2.4.1d Economy at a Glance –Precint 4.pdf

Major developments within 5 miles of the facility can be found in Supporting Documents Figure 2.4.1e

The proposed grease trap, grit and sewage sludge waste processing facility is an industrial activity similar to other approved TCEQ solid separation facilities and will be working in conjunction with the City of Houston sanitary sewer system.

See Figure 2.4.2– City of Houston Coordination Letter

2.5 Transportation and Site Access

Hempstead Hwy is the major traffic and roadway within 0.1 mile of the facility. The 2025 TXDOT traffic count on Hempstead Hwy shows that the average daily traffic count is 15,336 veh/day about 0.1 mile north of the site. The average daily traffic count for Bingle Road averages 20,083 veh/day. TPP Statewide Traffic Count Map – Figure 2.5.1

Traffic will access the facility via Hempstead Highway or US 290 to Bingle Road from the North or Kempwood Dr. to Bingle Road from the South and enter the site via Bingle Road into the existing driveway on the west side of the property. The site traffic will not use any residential streets. Bingle Road, Hempstead Highway and Kempwood Dr are paved roadways. See Figure 2.5.2 – TX DOT Maps. The estimated 10 vehicles/day generated by the facility will not cause disruption of normal traffic patterns. See Figure 2.5.3-TxDOT Coordination Letter

The internal driveway from the facility entrance to the facility processing area is asphalt. The asphalt and truck pathways within the facility will be inspected daily and cleaned as required. Dust generation will be minimal due to the asphalt and paved roads as well as slow truck speeds. No tracking of mud will occur. No solid waste unloading, storage, disposal or processing operations will occur within any easement, buffer zone or right -of-way that crosses the facility.

2.6 General Geology and Soils

The facility is located in an area with soils characterized as Clodine-Urban land complex-Ce. (Figure 2.6.1) This is a nearly level complex in broad, irregular areas that range from 20 to several hundred acres in size. The slope ranges from 0 to 1 percent but averages 0.6 percent. Pine and hardwoods have encroached in some areas, and in a few areas trees have been planted for shade.

Clodine soils make up 20 to 85 percent of this mapping unit; Urban land, 10 to 75 percent; and other soils, 5 to 20 percent. The soils are so intricately mixed that separation was not practical at the scale used in mapping.

The surface layer of the Clodine soil is friable, dark gray loam about 12 inches thick. It is neutral in the upper part and moderately alkaline in the lower part. The layer below that is friable, moderately alkaline, gray loam about 17 inches thick. The next layer is friable, moderately alkaline, light brownish gray loam that has irregular, pitted calcium carbonate concretions.

Urban land consists of soils that have been altered or covered by buildings and other urban structures making classification impractical. Typical structures are single and multiple-unit dwellings, driveways, sidewalks, garages and patios, streets, schools, churches, parking lots, office buildings, and shopping centers of less than 40 acres in size. Included are areas of Clodine soils that have been altered by cutting, filling, and grading for development. Fill material commonly covers the Clodine soils.

This mapping unit has moderate to severe limitations for urban development. The main limitation is poor drainage. There are only a few limitations for landscaping and gardening, but chlorosis in plants is common. The proposed facility is on a concrete slab surrounded by asphalt.

There are no faults shown within 0.5 miles of the site on the Geologic Atlas of Texas (Figure 2.6.2). Seismic zone and unstable area demonstrations for landfills (330.304 and .305) do not apply to this facility. USGS | Pocket Texas Geology

2.7 Ground and Surface Water

The Gulf Coast Aquifer is a major aquifer paralleling the Gulf of Mexico coastline from the Louisiana border to the border of Mexico. It consists of several aquifers, including the Jasper, Evangeline, and Chicot aquifers, which are composed of discontinuous sand, silt, clay, and gravel beds. The maximum total sand thickness of the Gulf Coast Aquifer ranges from 700 feet in the south to 1,300 feet in the north. Freshwater saturated thickness averages about 1,000 feet.

Water quality varies depending on depth and locality. It is generally good in the central and northeastern parts of the aquifer, where total dissolved solids concentrations are less than 500 milligrams per liter but is more saline to the south, where total dissolved solids are typically 1,000 to more than 10,000 milligrams per liter and where the productivity of the aquifer decreases. Areas of increased salinity along the central and eastern Gulf Coast may be associated with saltwater intrusion in response to groundwater pumping or to brine migration in response to oil field operations and natural flows from salt domes intruding into the aquifer.

The aquifer is used for municipal, industrial, and irrigation purposes. In Harris, Galveston, Fort Bend, Jasper, and Wharton counties, water level declines of as much as 350 feet have led to land subsidence.

See Texas Water Development Board Map (Figure 2.7.1) in supporting documents. No wells are located on the proposed property.

The proposed facility was an existing retail discount store that is no longer there. The proposed building will enclose the proposed facility on the existing concrete slab and it is surrounded by asphalt and concrete so there will be less than 1 acre disturbed to

construct the building. Coverage is not required under the TPDES storm water permitting requirements and Clean Water Act to discharge stormwater.

The volume of surface runoff from rain will not change due to the fact that there is an existing concrete slab surrounded by existing asphalt, concrete and the flat slope of the land. With this type of level land, the water will tend to accumulate in low areas then slowly percolate in the soil or evaporate. Any surface runoff leaving the property will follow the existing drainage structures designed by the City of Houston. The average annual precipitation for Houston is 49.77 inches. The average precipitation falls from May through October.

2.8 Floodplains and Wetlands

Vexara Pharmaceuticals is located in Zone AE on the FIRM map. This zone is a high-risk flood area designated by FEMA, indicating a 1% annual chance of flooding, which requires property owners to take specific precautions and obtain flood insurance. Building codes and regulations will be followed to mitigate flood risks. The land survey map (Figure 2.1.1) does show that the proposed building will remain outside the floodplain. The FIRM map (Figure 2.8.1) and Metes and Bounds Survey (Figure 2.1.1) are located in the supporting documentation.

The National Map and National Wetland Inventory Database were reviewed. No defined wetlands were identified on the site of the facility or surrounding areas. The proposed facility location is outside the coastal boundary map. The Wetland Map (Figure 2.8.2) and Coastal Boundary Map (Figure 2.8.3) are located in the Supporting Documentation.

2.9 Endangered Species

An official list of endangered species in the area was obtained from the United States Department of Interior-Information for Planning and Consultation (IPaC). Based on the provided list from the Texas Coastal & Central Plains Esfo, seven threatened, endangered or candidate species were listed, and no critical habitats are within the project area. The IPaC species list (Figure 2.9.1) is included in the supporting documentation. Because this is an existing industrial facility totally surrounded by concrete/asphalt and based on the IPAC showing there are no critical habitats found within the project area or wetlands, there are no other environmental issues that may be affected by this facility. Texas Parks and Wildlife Department was not contacted for this reason. The facility and the operation of the facility shall 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.

2.10 Climate

Vexara Pharmaceuticals is located in Houston which experiences a humid subtropical climate with notable influences on its proximity to the Gulf of Mexico and low elevation. The proposed location has an average altitude of approximately 76 feet above mean sea level. Houston is the county seat for Harris County and is in the southeastern part of Texas. In the general area of the proposed facility, it is mainly commercial and industrial with housing developments and major transportation hub located on both the north and west of the property.

According to the National Weather Service, the city exhibits distinct seasonal temperature variations during the year. August represents the peak of Houston's summer season, averaging 95 degrees and January marks the coolest month, averaging 63 degrees which represents the winter season.

The average annual precipitation for Houston is 49.77 inches of precipitation. The average precipitation falls from May through October, generally referred to as its own irregular monsoon season. Measurable precipitation falls on an average of 104 days per year.

Sleet and freezing rain are more common than snow. Accumulating snow events are rare and have very little to no impact on travel.

Houston has occasional severe weather, mostly flooding. Hurricanes that have the potential to landfall can bring severe damage to the area. Because of Houston's location to the Gulf of Mexico, it has a high chance of being hit by hurricanes/tropical storms each season (June-November).

There are some residences within one mile of the project area. The prevailing wind pattern is from the south, and wind rose data (Figure 2.10.1) included in the supporting documentation. There are no known documented health effects caused by odors generated by this type of facility. Houston's topographical or meteorological conditions such as subtropical climate, flat terrain and high elevation may hinder the dispersion of air emissions and odors.

2.11 Historical/Archeological Resources

A review of the Texas Archeological Sites Atlas and the National Register of Historic Places database for Harris County, no recorded archeological sites or historic resources are recorded on the parcels. (Figure 2.11.1-National Register of Historic Places Map & Figure 2.11.2 – Tx DOT PALM Map). A request for SHPO Consultation for the proposed facility has also been made. (Figure 2.11.3 – SHPO Consultation)

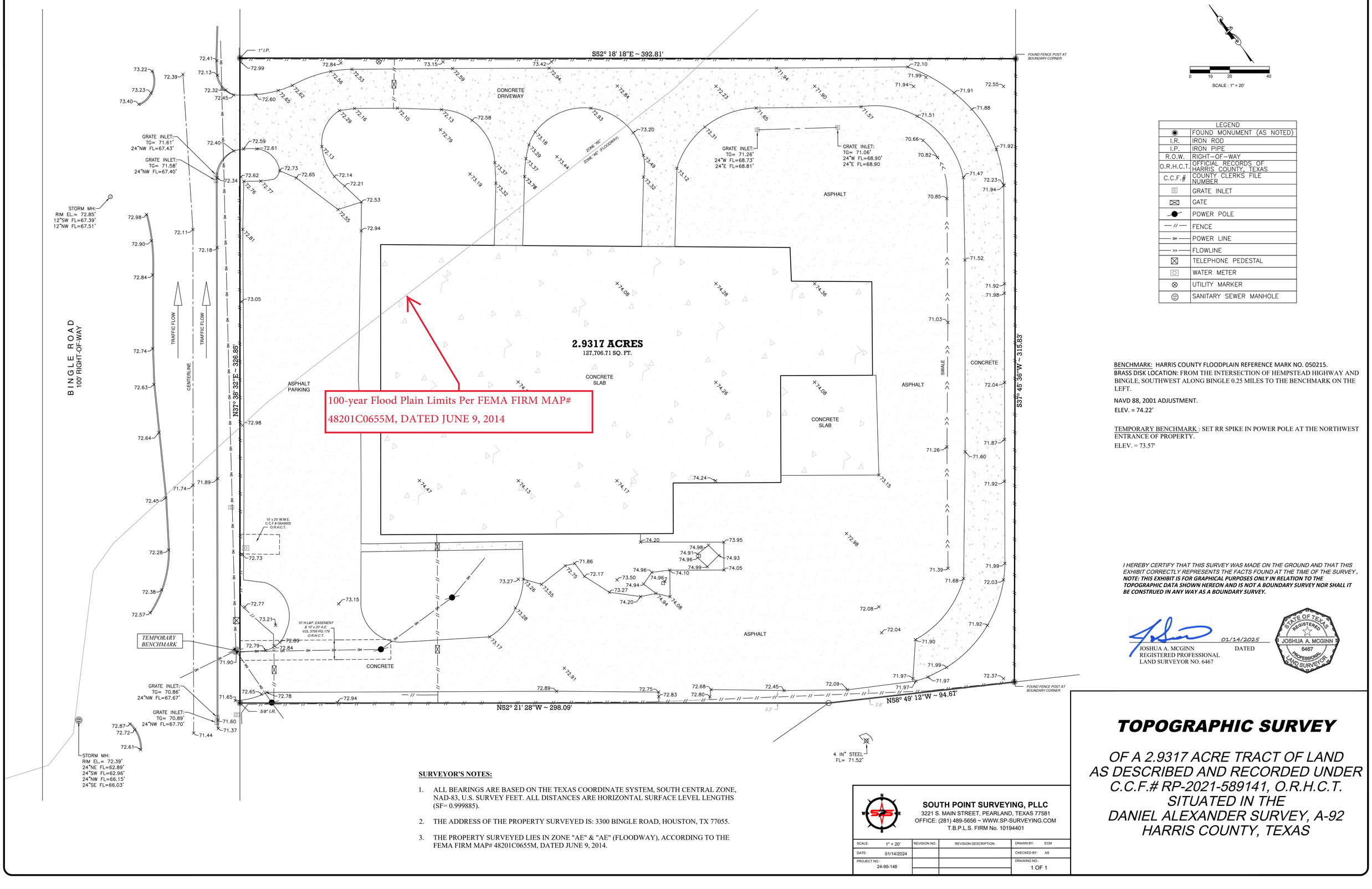
2.12 Community Infrastructure

Houston is located in the Southeast region of the state and is the largest city in Texas. The proposed facility location has access to interstate highways. Vexara Pharmaceuticals will work closely with the City of Houston to apply for the necessary permits required by the city for the proposed site. (See Figure 2.4.2). The requirements in 330.61h(1)-(6) have been evaluated. The location of the facility and management of waste are not believed to have a negative impact on this area of Houston. The owner/operator will maintain a 50 feet separation distance between the final product storage areas within or adjacent to the facility boundary.

Supporting Documents

2.1.1: Metes & Bounds Survey

Figure 2.1.1



LEGEND	
◉	FOUND MONUMENT (AS NOTED)
I.R.	IRON ROD
I.P.	IRON PIPE
R.O.W.	RIGHT-OF-WAY
O.R.H.C.T.	OFFICIAL RECORDS OF HARRIS COUNTY, TEXAS
C.C.F.#	COUNTY CLERKS FILE NUMBER
	GRATE INLET
	GATE
	POWER POLE
— // —	FENCE
— OH —	POWER LINE
— >> —	FLOWLINE
	TELEPHONE PEDESTAL
	WATER METER
	UTILITY MARKER
	SANITARY SEWER MANHOLE

BENCHMARK: HARRIS COUNTY FLOODPLAIN REFERENCE MARK NO. 050215.
BRASS DISK LOCATION: FROM THE INTERSECTION OF HEMPSTEAD HIGHWAY AND BINGLE, SOUTHWEST ALONG BINGLE 0.25 MILES TO THE BENCHMARK ON THE LEFT.

NAVD 88, 2001 ADJUSTMENT.
ELEV. = 74.22'

TEMPORARY BENCHMARK : SET RR SPIKE IN POWER POLE AT THE NORTHWEST ENTRANCE OF PROPERTY.
ELEV. = 73.57'

SURVEYOR'S NOTES:

1. ALL BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET. ALL DISTANCES ARE HORIZONTAL SURFACE LEVEL LENGTHS (SF= 0.999885).
2. THE ADDRESS OF THE PROPERTY SURVEYED IS: 3300 BINGLE ROAD, HOUSTON, TX 77055.
3. THE PROPERTY SURVEYED LIES IN ZONE "AE" & "AE" (FLOODWAY), ACCORDING TO THE FEMA FIRM MAP# 48201C0655M, DATED JUNE 9, 2014.

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND THAT THIS EXHIBIT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF THE SURVEY.
NOTE: THIS EXHIBIT IS FOR GRAPHICAL PURPOSES ONLY IN RELATION TO THE TOPOGRAPHIC DATA SHOWN HEREON AND IS NOT A BOUNDARY SURVEY NOR SHALL IT BE CONSTRUED IN ANY WAY AS A BOUNDARY SURVEY.

JOSHUA A. MCGINN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6467

01/14/2025
DATED

STATE OF TEXAS · REGISTERED · JOSHUA A. MCGINN · 6467 · PROFESSIONAL LAND SURVEYOR

SOUTH POINT SURVEYING, PLLC
3221 S. MAIN STREET, PEARLAND, TEXAS 77581
OFFICE: (281) 489-5656 ~ WWW.SP-SURVEYING.COM
T.B.P.L.S. FIRM No. 10194401

SCALE: 1" = 20'	REVISION NO.:	REVISION DESCRIPTION:	DRAWN BY: ECM
DATE: 01/14/2024			CHECKED BY: AS
PROJECT NO.: 24-99-148			DRAWING NO.: 1 OF 1

TOPOGRAPHIC SURVEY

OF A 2.9317 ACRE TRACT OF LAND
AS DESCRIBED AND RECORDED UNDER
C.C.F.# RP-2021-589141, O.R.H.C.T.
SITUATED IN THE
DANIEL ALEXANDER SURVEY, A-92
HARRIS COUNTY, TEXAS

Revised 4/29/2026

Docusign Envelope ID: 6A197B3C-4946-42D6-B6D9-E082CDA6EF59

EXHIBIT B

LEGAL DESCRIPTION OF THE LEASED PREMISES

Being a tract or parcel of land containing 2.9317 acres of land or 127,706 square feet, located in the Daniel Alexander Survey, Abstract 92, Harris County, Texas; Said 2.9317 acre tract of record in the name of Almeda/Pearland Warehouses, Ltd. in Harris County Clerk's File (H.C.C.F.) Number V360555; Said 2.9317 acre tract being more particularly described as follows (bearings based on said deed):

BEGINNING at a 5/8 inch iron rod found for the west corner of the herein described tract, being the north corner of a called 0.979 acre tract of record in the name of Rockstar Empire, LLC in H.C.C.F. Number RP-2019-426766 and being on the southeast Right-of-Way (R.O.W.) line of Bingle Road (100 feet wide);

THENCE, coincident the northwest line of the herein described tract and the southeast R.O.W. line of aforesaid Bingle Road, North 39 degrees 36 minutes 00 seconds East, a distance of 326.85 feet to a 5/8 inch iron rod with "Gruller" cap set for the north corner of the herein described tract and being the west corner of a called 1.6098 acre tract of record in the name of Isolatek International in H.C.C.F. Number T438235;

THENCE, coincident the southwest line of aforesaid 1.6098 acre tract and the northeast line of the herein described tract, South 50 degrees 20 minutes 50 seconds East, a distance of 392.81 feet to a 5/8 inch iron rod with "Gruller" cap set for the east corner of the herein described tract, being the south corner of said 1.6098 acre tract and being on the northwest line of a called 5.3649 acre tract of record in the name of the City of Houston in H.C.C.F. Number BB479954;

THENCE, coincident the southeast line of the herein described tract and the northwest line of aforesaid 5.3649 acre tract, South 39 degrees 43 minutes 04 seconds West, a distance of 315.83 feet to a 5/8 inch iron rod with "Gruller" cap set for the south corner of the herein described tract, being the west corner of said 5.3649 acre tract and being on the northeast line of Brickhouse Gully;

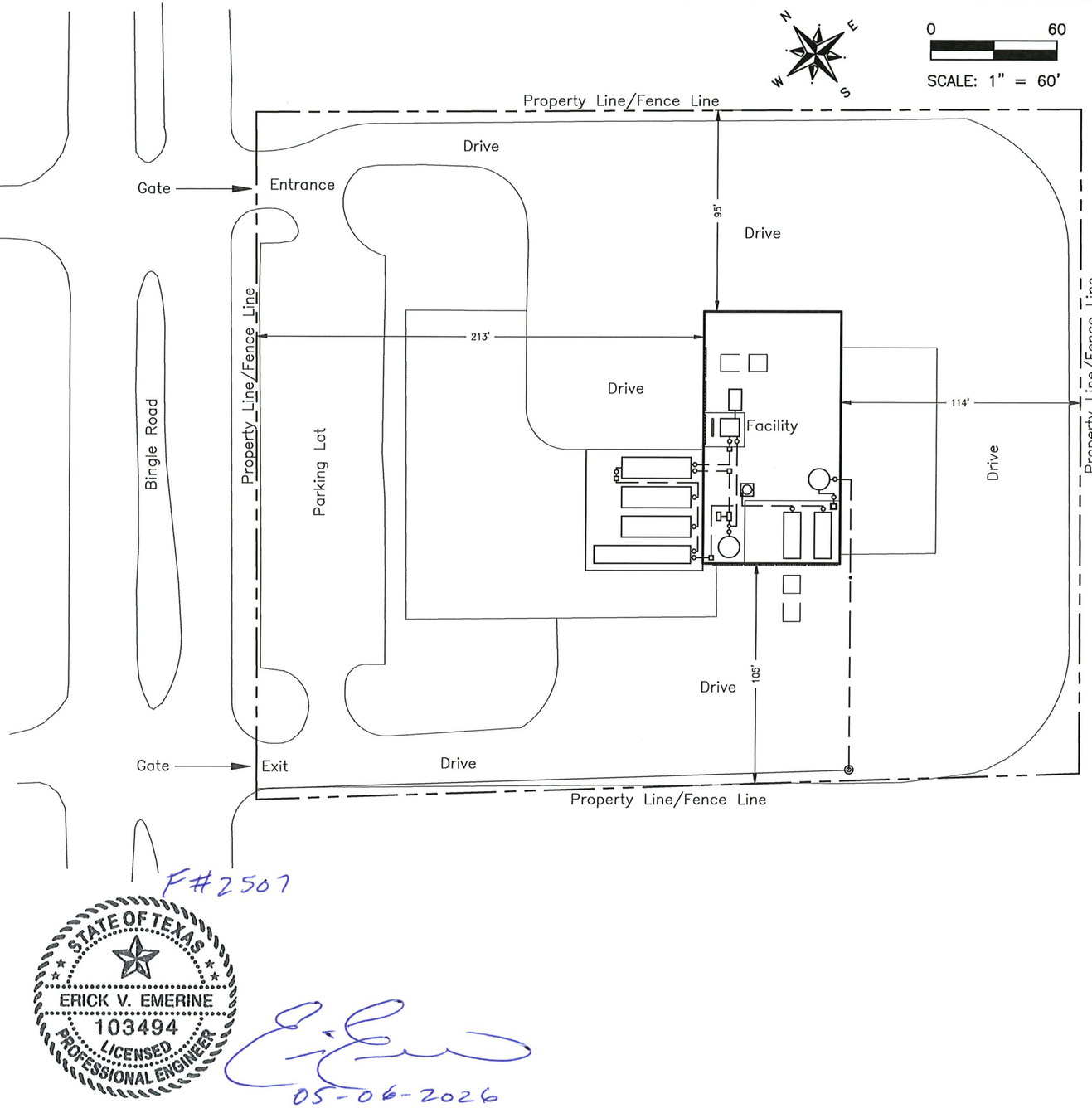
THENCE, coincident the southwest line of the herein described tract and the northeast line of aforesaid Brickhouse Gully, North 56 degrees 51 minutes 44 seconds West, a distance of 94.67 feet to a 5/8 inch iron rod with "Gruller" cap set, being the east corner of aforesaid 0.979 acre tract;

THENCE, coincident the southwest line of the herein described tract and the northeast line of aforesaid 0.979 acre tract, North 50 degrees 24 minutes 00 seconds West, a distance of 298.09 feet to the **POINT OF BEGINNING** and containing 2.9317 acres of land.

2.1.2: Deed Record

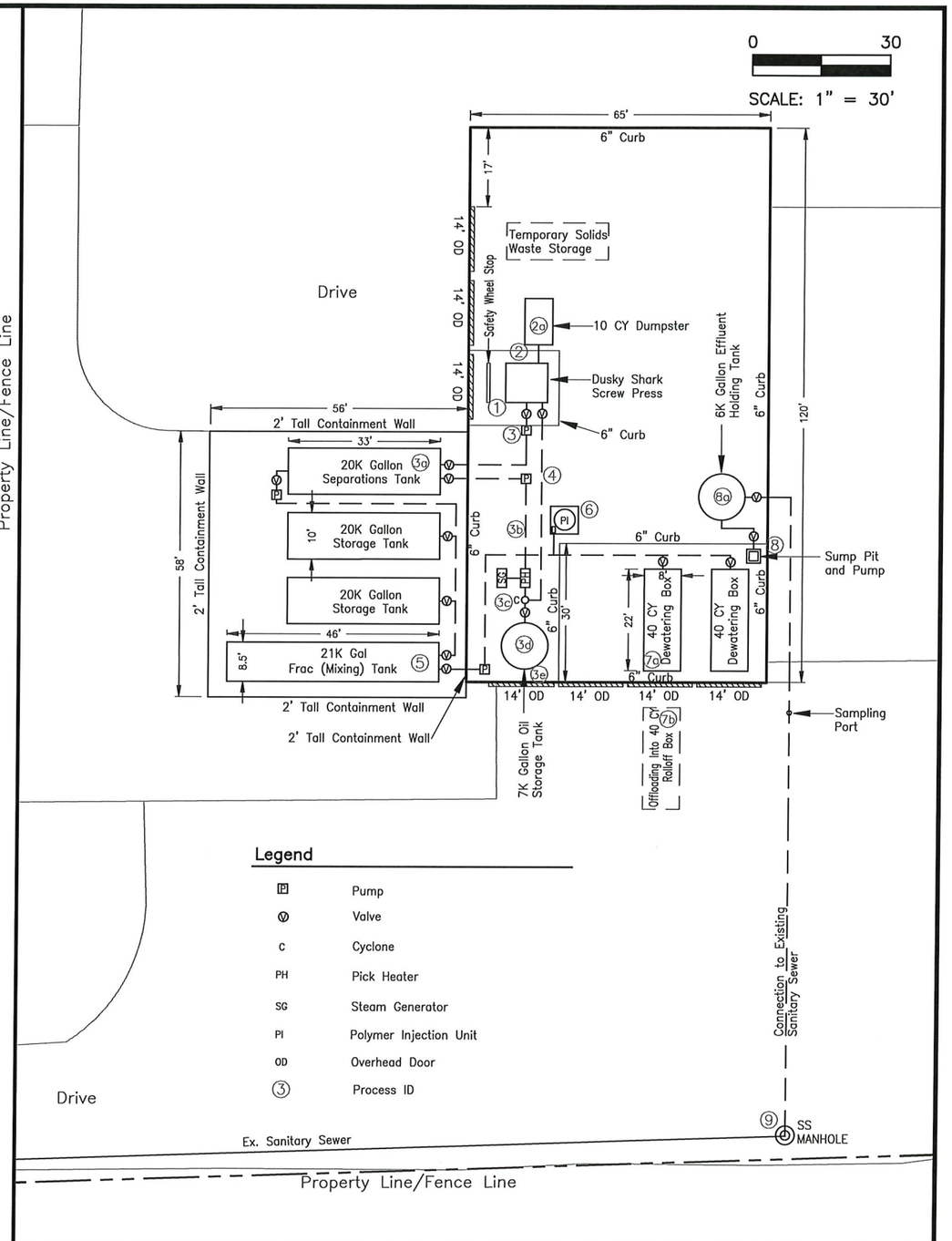
The deed record will be provided to TCEQ once the land is purchased. See Figure 1.8 – Facility Lease

2.1.3: Facility Layout



F#2507

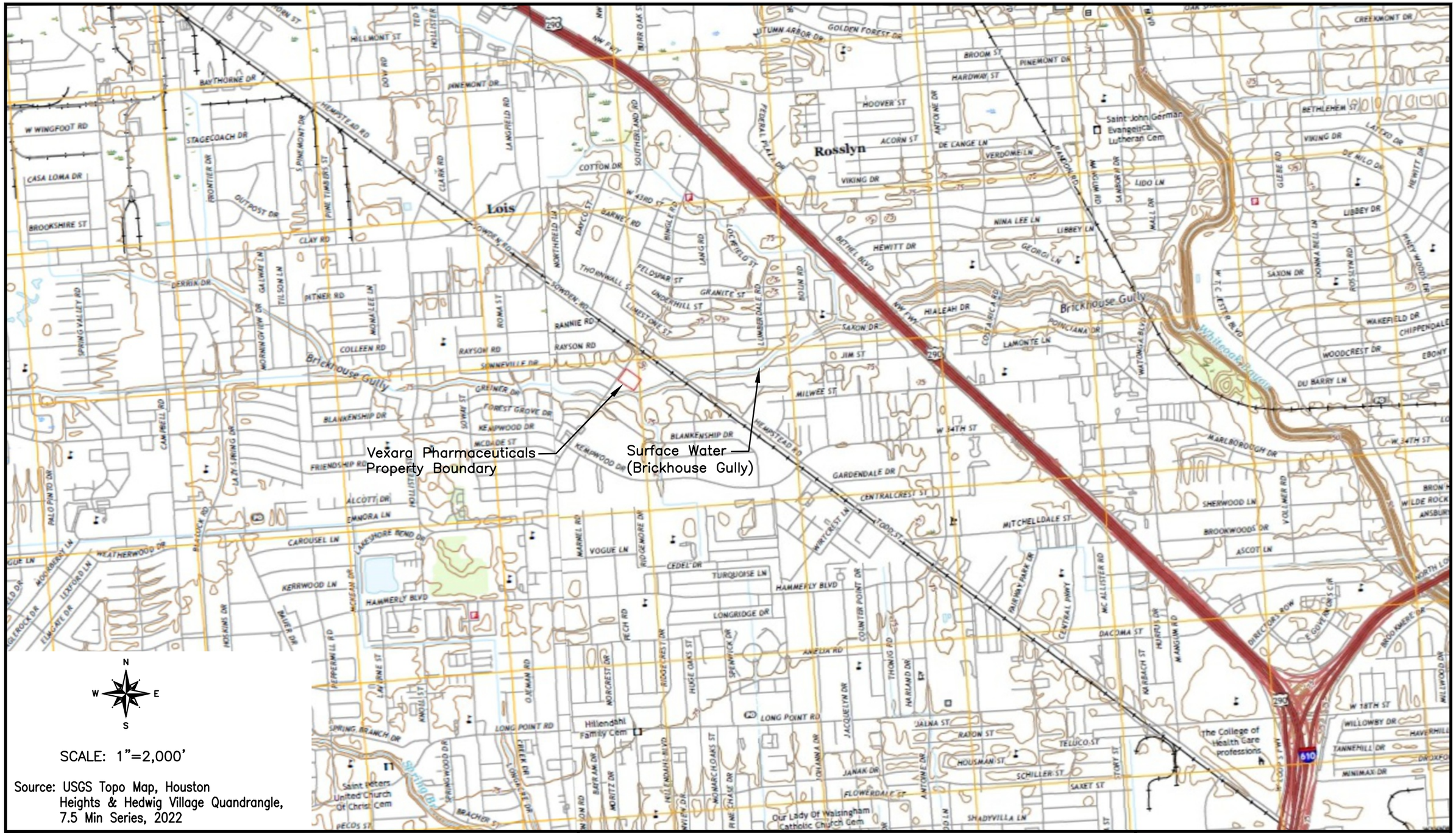
05-06-2026



Vexara Pharmaceuticals LLC Domestic Liquid Waste Processing Facility Houston, TX	Facility Layout Figure 2.1.3 April 2026	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Revised 4/30/2026

2.1.4: Topo Map



SCALE: 1"=2,000'

Source: USGS Topo Map, Houston Heights & Hedwig Village Quandrangle, 7.5 Min Series, 2022

Vexara Pharmaceuticals LLC Houston Harris County, TX	Figure 2.1.4 USGS Map Large Scale	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Revised 4/29/2026

2.1.5: Polymer - MSDS

Figure 2.1.5

SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: ADS 5084G

Type of product: Mixture.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

Uses advised against: None.

1.3. Details of the supplier of the safety data sheet

Company:

AQUA-Zyme Disposal Systems, Inc.

PO BOX 489
Van Vleck, TX 77482
United States

Telephone: Telefax: (979) 245-5656

E-mail address:

1.4. Emergency telephone number

24-hour emergency number: Chemtrec: 1-800-424-9300 (CCN 20412)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s):	None.
Signal word:	None.
Hazard statement(s):	None.
Precautionary statement(s):	None.

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingrédients

3.1. Substances

Not applicable, this product is a mixture.

3.2. Mixtures

This product is a mixture.

Hazardous components

Distillates (petroleum), hydrotreated light

Concentration/ -range:	20 - 30%
CAS Number:	64742-47-8
Classification according to paragraph (d) of 29 CFR 1910.1200:	Asp. Tox. 1; H304

Notes

Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm²/s measured at 40°C.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Concentration/ -range:	< 5%
CAS Number:	69011-36-5
Classification according to paragraph (d) of 29 CFR 1910.1200:	Acute Tox. 4; H302, Eye Dam. 1; H318

For explanation of abbreviations see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air. No hazards which require special first aid measures.

Skin contact:
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Ingestion:
Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed

None under normal use.

4.3. Indication of any immediate medical attention and special treatment needed

None reasonably foreseeable.

Other information:
None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water. Water spray. Foam. Carbon dioxide (CO2). Dry powder. Warning!
Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:
None known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products:
Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), Carbon oxides (COx). Ammonia (NH3). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters

Protective measures:
Wear self-contained breathing apparatus and protective suit.

Other information:
Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment, and emergency procedures

Personal precautions:
Avoid contact with skin and eye. Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment:
Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:
Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

6.2. Environmental precautions

As with all chemical products, do not flush into surface water.

6.3. Methods and material for containment and cleaning up

Small spills:
Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills:
Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

Residues:
After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink, or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:
Distillates (petroleum), hydrotreated light
ACGIH: 200 mg/m_3 (8 hours) (vapors)

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a)Eye/face protection:
Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection:
i)Hand Protection: PVC or other plastic material gloves. Be aware that liquid may permeate gloves, frequent change is advised. Suitable gloves can be recommended by the glove supplier. The selected protective gloves must satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.
ii) Other: Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur. The type of protective equipment must be selected according to the concentrations and amount of the dangerous substance at the specific workplace.

c) Respiratory Protection: No personal respiratory protective equipment normally required.

d) Additional advice:
Wash hands before breaks and at the end of workday. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Viscous liquid, Milky.
b) Odour:	Aliphatic.
c) Odour Threshold:	No data available.
d) pH:	Not applicable.
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C
g) Flash point:	Does not flash.

h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	0.804 g/litre @ 20°C
m) Relative density:	1.0 - 1.2 (See technical Bulletin or Product Specifications for more precise value, if available)
n) Solubility(ies):	Completely miscible.
o) Partition coefficient:	Not applicable.
p) Autoignition temperature:	No data available.
q) Decomposition temperature:	> 150°C
r) Viscosity:	> 20.5 mm^2/s @ 40°C
s) Kinematic viscosity:	No date available.
t) Explosive properties	Not expected to be explosive based on chemical structure.
u) Oxidizing properties:	Not expected to be oxidizing based on the chemical structure.
v) Particle characteristics:	Not applicable

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Oxidizing agents my cause exothermic reactions.

10.4. Conditions to avoid

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Ammonia (NH3). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin.
Serious eye damage/eye irritation:	Not irritating. (OECD 437)
Respiratory/skin sensitisation:	Not sensitizing.
Mutagenicity:	Not mutagenic.
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	Due to the viscosity, this product does not present an aspiration hazard.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
Acute inhalation toxicity:	LC0/inhalation/4 hours/rat >= 4951 mg/m_3 (vapors) (OECD 403) (Based on results obtained from tests on analogous products)
Skin corrosion/irritation:	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation:	Not irritating. (OECD 405)
Respiratory/skin sensitisation:	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
Mutagenicity:	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)

Carcinogenicity:	Carcinogenicity study in rats (OECD 451): Negative.
Reproductive toxicity:	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days >= 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
Aspiration hazard:	May be fatal if swallowed and enters airways.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute oral toxicity:	LD50/oral/rat = 500 - 2000 mg/kg
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg
Acute inhalation toxicity:	No data available.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Causes serious eye irritation. (OECD 405)
Respiratory/skin sensitisation:	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
Mutagenicity:	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
Carcinogenicity:	Carcinogenicity study in rats (OECD 451): Negative.
Reproductive toxicity:	Based on available data, the product is not expected to be toxic for reproduction. Two – Generation Reproduction Toxicity (OECD 416) NOAEL/rat = 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) NOAEL/Maternal toxicity/rat = 50 mg/kg/day NOAEL/Developmental toxicity/rat = 50 mg/kg/day
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, the product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
Aspiration hazard:	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish: LC50/Fish/96 hours > 10 - 100 mg/L (Estimated)

Acute toxicity to invertebrates: EC50/Daphnia magna/48 hours > 10 - 100 mg/L (Estimated)

Acute toxicity to algae: Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.

Chronic toxicity to fish: No data available.

Chronic toxicity to invertebrates: No data available.

Toxicity to microorganisms: No data available.

Effects on terrestrial organisms: No data available.

Sediment toxicity: No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute toxicity to fish: LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L. (OECD 203)

Acute toxicity to invertebrates: EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)

Acute toxicity to algae: IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L. (OECD 201)

Chronic toxicity to fish: NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L

Chronic toxicity to invertebrates: NOEC/Daphnia magna/21 days > 1000 mg/L

Toxicity to microorganisms: EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.

Effects on terrestrial organisms: No data available.

Sediment toxicity: No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute toxicity to fish: LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)

Acute toxicity to invertebrates: EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)

Acute toxicity to algae: IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)

Chronic toxicity to fish: No data available.

Chronic toxicity to invertebrates: NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)

Toxicity to microorganisms: EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)

Effects on terrestrial organisms: No data available.

Sediment toxicity: No data available.

12.2. Persistence and degradability

Information on the product as supplied:

Degradation: Based on the degradability, data of the components, this product is expected to be readily (bio)degradable according to OECD criteria.

Hydrolysis: At natural PHs (>6) the polymer degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.

Photolysis: No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Degradation: Readily biodegradable. 67.6% / 28 days (OECD 301 F); 68.8% / 28 days (OECD 306); 61.2% / 61 days (OECD 304 A)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation: Readily biodegradable. > 60% / 28 days (OECD 301 B)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): Not applicable.

Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow): 3 - 6

Bioconcentration factor (BCF): No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow): > 3

Bioconcentration factor (BCF): No data available.

12.4. Mobility in soil

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer recycling of material when in accordance with the local regulations.

SECTION 14: Transport information

Land transport (DOT)

Not classified.

Sea transport (IMDG)

Not classified.

Air transport (IATA)

Not classified.

SECTION 15: Regulatory information

15.1. Safety, health, and environmental regulations/legislation specific for the substance or mixture

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:
Not concerned.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity: Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity: Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity: Not concerned.

RCRA status:

Not RCRA hazardous.

California Proposition 65 Information:

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide

SECTION 16: Other information

NFPA and HMIS Ratings:

NFPA:

Health:	0
Flammability:	1
Instability:	0

HMIS:

Health:	0
Flammability:	1
Physical	0
Hazard: PPE Code:	B

This data sheet contains changes from the previous version in section(s):

SECTION 8. Exposure controls/personal protection, SECTION 9. Physical and chemical properties. SECTION 16. Other information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

Acronyms
STOT = Specific target organ toxicity

Abbreviations
Acute Tox. 4 = Acute toxicity Category Code 4
Asp. Tox. 1 = Aspiration hazard Category Code 1
Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

Hazard statements
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H318 - Causes serious eye damage

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:
U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 19.01.c

ENAC001A

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

2.2.1: Lab Analysis Examples – Before Processing/After Processing

Figure 2.2.1

Laboratory Analysis Report

Total Number of Pages: 41

Job ID : 11090672

10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :

Report To :	Client Name:	Aqua Zyme Services	P.O.#.:	
	Attn:	Justin	Sample Collected By:	Allison Diamond
	Client Address:	PO Box 800	Date Collected:	09/20/11
	City, State, Zip:	Van Vleck, Texas, 77482		

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
Septic Before	Water	11090672.01
Septic After	Water	11090672.02
Grease Before	Water	11090672.03
Grease After	Water	11090672.04

Released By: Shantall Carpenter
Title: Senior Project Manager
Date: 9/29/2011

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Soil samples are reported on a wet weight basis unless otherwise noted.

Date Received : 09/20/2011 16:17

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services

Attn: Justin

Project Name:

Client Sample ID: Septic Before
Date Collected: 09/20/11
Time Collected: 12:47
Other Information:

Job Sample ID: 11090672.01
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 1664A	Oil & Grease, Hexane Extractables								
	Oil & Grease	31.4	mg/L	1.12	2.80			09/27/11 09:30	SG
EPA 200.7	Total Recoverable Metals								
	Aluminum	13.30	mg/L	1	0.01			09/21/11 14:39	SS
	Arsenic	0.01	mg/L	1	0.01			09/21/11 14:39	SS
	Barium	0.50	mg/L	1	0.01			09/21/11 14:39	SS
	Boron	0.27	mg/L	1	0.01			09/21/11 14:39	SS
	Cadmium	BRL	mg/L	1	0.01			09/21/11 14:39	SS
	Chromium	0.02	mg/L	1	0.01			09/21/11 14:39	SS
	Cobalt	BRL	mg/L	1	0.01			09/21/11 14:39	SS
	Copper	0.27	mg/L	1	0.01			09/21/11 14:39	SS
	Iron	13.30	mg/L	1	0.02			09/21/11 14:39	SS
	Lead	0.05	mg/L	1	0.01			09/21/11 14:39	SS
	Manganese	0.31	mg/L	1	0.01			09/21/11 14:39	SS
	Molybdenum	BRL	mg/L	1	0.02			09/21/11 14:39	SS
	Nickel	0.03	mg/L	1	0.01			09/21/11 14:39	SS
	Selenium	BRL	mg/L	1	0.05			09/21/11 14:39	SS
	Silver	BRL	mg/L	1	0.01			09/21/11 14:39	SS
	Zinc	1.81	mg/L	1	0.02			09/21/11 14:39	SS
EPA 200.7	Total Recoverable Metals								
	Lithium	BRL	mg/L	1	0.1			09/28/11 12:00	SC
	Tin	BRL	mg/L	1	0.1			09/27/11 12:04	SS
EPA 245.1	Total Metals - Mercury								
	Mercury	0.00065	mg/L	1	0.0002			09/23/11 14:18	GG
EPA 300.0	Anions								
	Fluoride	BRL	mg/L	1	0.1			09/28/11 15:28	JKD
	Sulfate	6.53	mg/L	1	0.1			09/28/11 15:28	JKD
EPA 330.5	Chlorine, as Total Residual								
	Chlorine, Free	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
	Chlorine, Total	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
EPA 420.1	Phenolics (Total Phenols)								
	Phenols	BRL	mg/L	5.00	0.250			09/29/11 14:08	SR
LA 29-B	Sodium Adsorption Ratio								
	SAR	4.4	meq/L	1	0.1			09/22/11 18:00	SC
NIOSH 3500	Formaldehyde								
	Formaldehyde	BRL	mg/L	10	0.5			09/28/11 15:10	KS
SM 2120B	Apparent Color								
	Color	<100	PCU	100	200			09/22/11 10:00	AJ
SM 2150B	Threshold Odor Test								

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services Attn: Justin

Project Name:

Client Sample ID: Septic Before
Date Collected: 09/20/11
Time Collected: 12:47
Other Information:

Job Sample ID: 11090672.01
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
	Odor	>200		200	200			09/21/11 10:45	AJ
SM 2510B	Conductivity								
	Conductance	1674	umho/cm	1	5			09/29/11 16:05	SR
SM 2540D	Total Suspended Solids								
	TSS	849	mg/L	10	25			09/22/11 12:01	PRK
SM 2550B									
	Temperature	27.6		1				09/20/11 12:47	AD
SM 4500CNC/E	Total Cyanide								
	Cyanide	0.045	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500CN-I	Weak Acid Dissociable Cyanide								
	Cyanide, Free	0.037	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500H B	Corrosivity, pH								
	pH	6.83	s.u.	1				09/20/11 12:47	AD
SM 4500NH3D	Ammonia as Nitrogen								
	Ammonia as N	65.0	mg/L	20	2.00	5		09/28/11 13:22	SR
SM 4500NH3D	Total Kjeldahl Nitrogen								
	TKN	79.4	mg/L	50	25			09/29/11 14:44	KS
SM 4500P-E									
	Phosphorus	9.0	mg/L	20	1			09/22/11 17:34	SR
SM 4500-S D	Sulfide								
	Sulfide	BRL	mg/L	10	0.5		H1	09/29/11 12:40	KS
SM 4500SO3-B	Reducing Agents, as Sulfite								
	Sulfite	20	mg/L	1	2		H3	09/21/11 11:00	SG
SM 5220D	Chemical Oxygen Demand								
	COD	306	mg/L	2.00	20			09/29/11 10:44	KS
SW-846 1010A	Ignitability (Flash Point)								
	Ignitability	>150	°F	1				09/21/11 10:30	PRK
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12	1.06	mg/L	1	1		J	09/22/11 09:00	AVB
	>C12-C28	11.2	mg/L	1	2.48			09/22/11 09:00	AVB
	>C28-C35	23.2	mg/L	1	1.88			09/22/11 09:00	AVB
	Total C6-C35	35.46	mg/L	1				09/22/11 09:00	AVB
	1-Chlorooctane(surr)	100	%	1	60-120			09/22/11 09:00	AVB
	Chlorooctadecane(surr)	N/A	%	1	53-122		S5	09/22/11 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services

Attn: Justin

Project Name:

Client Sample ID: Septic After
Date Collected: 09/20/11
Time Collected: 13:50
Other Information:

Job Sample ID: 11090672.02
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 1664A	Oil & Grease, Hexane Extractables								
	Oil & Grease	BRL	mg/L	1.12	2.80			09/27/11 09:30	SG
EPA 200.7	Total Recoverable Metals								
	Aluminum	0.02	mg/L	1	0.01			09/21/11 14:45	SS
	Arsenic	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Barium	0.10	mg/L	1	0.01			09/21/11 14:45	SS
	Boron	0.48	mg/L	1	0.01			09/21/11 14:45	SS
	Cadmium	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Chromium	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Cobalt	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Copper	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Iron	0.64	mg/L	1	0.02			09/21/11 14:45	SS
	Lead	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Manganese	0.14	mg/L	1	0.01			09/21/11 14:45	SS
	Molybdenum	BRL	mg/L	1	0.02			09/21/11 14:45	SS
	Nickel	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Selenium	BRL	mg/L	1	0.05			09/21/11 14:45	SS
	Silver	BRL	mg/L	1	0.01			09/21/11 14:45	SS
	Zinc	0.03	mg/L	1	0.02			09/21/11 14:45	SS
EPA 200.7	Total Recoverable Metals								
	Lithium	BRL	mg/L	1	0.1			09/28/11 12:02	SC
	Tin	BRL	mg/L	1	0.1			09/27/11 12:07	SS
EPA 245.1	Total Metals - Mercury								
	Mercury	BRL	mg/L	1	0.0002			09/23/11 13:58	GG
EPA 300.0	Anions								
	Fluoride	BRL	mg/L	1	0.1			09/28/11 17:23	JKD
	Sulfate	3.33	mg/L	1	0.1			09/28/11 17:23	JKD
EPA 330.5	Chlorine, as Total Residual								
	Chlorine, Free	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
	Chlorine, Total	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
EPA 420.1	Phenolics (Total Phenols)								
	Phenols	0.2625	mg/L	5.00	0.250			09/29/11 14:08	SR
LA 29-B	Sodium Adsorption Ratio								
	SAR	8.1	meq/L	1	0.1			09/22/11 18:00	SC
NIOSH 3500	Formaldehyde								
	Formaldehyde	BRL	mg/L	10	0.5			09/28/11 15:10	KS
SM 2120B	Apparent Color								
	Color	<100	PCU	100	200			09/22/11 10:00	AJ
SM 2150B	Threshold Odor Test								

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services Attn: Justin

Project Name:

Client Sample ID: Septic After
Date Collected: 09/20/11
Time Collected: 13:50
Other Information:

Job Sample ID: 11090672.02
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
	Odor	>200		200	200			09/21/11 10:45	AJ
SM 2510B	Conductivity								
	Conductance	3390	umho/cm	1	5			09/29/11 16:05	SR
SM 2540D	Total Suspended Solids								
	TSS	12.1	mg/L	1	2.50			09/22/11 12:01	PRK
SM 2550B									
	Temperature	26.3	°C	1				09/20/11 13:50	AD
SM 4500CNC/E	Total Cyanide								
	Cyanide	BRL	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500CN-I	Weak Acid Dissociable Cyanide								
	Cyanide, Free	BRL	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500H B	Corrosivity, pH								
	pH	6.95	s.u.	1				09/20/11 13:50	AD
SM 4500NH3D	Ammonia as Nitrogen								
	Ammonia as N	201.9	mg/L	25	2.50	5		09/28/11 13:22	SR
SM 4500NH3D	Total Kjeldahl Nitrogen								
	TKN	208.4	mg/L	50	25			09/29/11 14:44	KS
SM 4500P-E									
	Phosphorus	20	mg/L	50	2.50			09/22/11 17:34	SR
SM 4500-S D	Sulfide								
	Sulfide	BRL	mg/L	10	0.5		H1	09/29/11 12:40	KS
SM 4500SO3-B	Reducing Agents, as Sulfite								
	Sulfite	8	mg/L	1	2		H3	09/21/11 11:00	SG
SM 5220D	Chemical Oxygen Demand								
	COD	1298	mg/L	2.00	20			09/29/11 10:44	KS
SW-846 1010A	Ignitability (Flash Point)								
	Ignitability	>150	°F	1				09/21/11 10:30	PRK
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12	2.52	mg/L	1	1			09/22/11 09:00	AVB
	>C12-C28	BRL	mg/L	1	2.48			09/22/11 09:00	AVB
	>C28-C35	BRL	mg/L	1	1.88			09/22/11 09:00	AVB
	Total C6-C35	2.52	mg/L	1				09/22/11 09:00	AVB
	1-Chlorooctane(surr)	118	%	1	60-120			09/22/11 09:00	AVB
	Chlorooctadecane(surr)	97.2	%	1	53-122			09/22/11 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services

Attn: Justin

Project Name:

Client Sample ID: Grease Before
Date Collected: 09/20/11
Time Collected: 13:40
Other Information:

Job Sample ID: 11090672.03
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 200.7	Total Recoverable Metals								
	Aluminum	21.8	mg/L	2	0.02			09/22/11 17:12	SC
	Arsenic	0.056	mg/L	2	0.02			09/22/11 17:12	SC
	Barium	2.47	mg/L	2	0.02			09/22/11 17:12	SC
	Boron	0.363	mg/L	2	0.02			09/22/11 17:12	SC
	Cadmium	BRL	mg/L	2	0.02		D1,U	09/22/11 17:12	SC
	Chromium	0.171	mg/L	2	0.02			09/22/11 17:12	SC
	Cobalt	BRL	mg/L	2	0.02		D1,U	09/22/11 17:12	SC
	Copper	1.4	mg/L	2	0.02			09/22/11 17:12	SC
	Iron	29.3	mg/L	2	0.04			09/22/11 17:12	SC
	Lead	0.143	mg/L	2	0.02			09/22/11 17:12	SC
	Manganese	0.619	mg/L	2	0.02			09/22/11 17:12	SC
	Molybdenum	0.06	mg/L	2	0.04			09/22/11 17:12	SC
	Nickel	0.087	mg/L	2	0.02			09/22/11 17:12	SC
	Selenium	BRL	mg/L	2	0.1		D1,U	09/22/11 17:12	SC
	Silver	BRL	mg/L	2	0.02		D1,U	09/22/11 17:12	SC
	Zinc	4.51	mg/L	2	0.04			09/22/11 17:12	SC
EPA 200.7	Total Recoverable Metals								
	Lithium	BRL	mg/L	1	0.1			09/28/11 12:04	SC
	Tin	0.197	mg/L	1	0.1			09/27/11 12:11	SS
EPA 245.1	Total Metals - Mercury								
	Mercury	BRL	mg/L	10	0.002		D1	09/23/11 18:04	GG
EPA 300.0	Anions								
	Fluoride	0.298	mg/L	1	0.1			09/28/11 17:42	JKD
	Sulfate	1.35	mg/L	1	0.1			09/28/11 17:42	JKD
EPA 330.5	Chlorine, as Total Residual								
	Chlorine, Free	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
	Chlorine, Total	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
EPA 420.1	Phenolics (Total Phenols)								
	Phenols	0.3122	mg/L	5.00	0.250			09/29/11 14:08	SR
LA 29-B	Sodium Adsorption Ratio								
	SAR	4.1	meq/L	1	0.1			09/22/11 18:00	SC
NIOSH 3500	Formaldehyde								
	Formaldehyde	BRL	mg/L	10	0.5			09/28/11 15:10	KS
SM 2120B	Apparent Color								
	Color	<100	PCU	100	200			09/22/11 10:00	AJ
SM 2150B	Threshold Odor Test								
	Odor	>200		200	200			09/21/11 10:45	AJ
SM 2510B	Conductivity								

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services

Attn: Justin

Project Name:

Client Sample ID: Grease Before
Date Collected: 09/20/11
Time Collected: 13:40
Other Information:

Job Sample ID: 11090672.03
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
	Conductance	3850	umho/cm	1	5			09/29/11 16:05	SR
SM 2540D	Total Suspended Solids								
	TSS	24600	mg/L	20	50			09/22/11 12:01	PRK
SM 2550B									
	Temperature	29.5	°C	1				09/20/11 13:40	AD
SM 4500CNC/E	Total Cyanide								
	Cyanide	BRL	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500CN-I	Weak Acid Dissociable Cyanide								
	Cyanide, Free	BRL	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500H B	Corrosivity, pH								
	pH	7.01	s.u.	1				09/20/11 13:40	AD
SM 4500NH3D	Ammonia as Nitrogen								
	Ammonia as N	184.0	mg/L	50	5.00	5		09/28/11 13:22	SR
SM 4500NH3D	Total Kjeldahl Nitrogen								
	TKN	259.9	mg/L	250	125			09/29/11 14:44	KS
SM 4500P-E									
	Phosphorus	57	mg/L	100	5.00			09/22/11 17:34	SR
SM 4500-S D	Sulfide								
	Sulfide	BRL	mg/L	10	0.5		H1	09/29/11 12:40	KS
SM 4500SO3-B	Reducing Agents, as Sulfite								
	Sulfite	84	mg/L	1	2		H3	09/21/11 11:00	SG
SM 5220D	Chemical Oxygen Demand								
	COD	9420	mg/L	10	100			09/29/11 10:44	KS
SW-846 1010A	Ignitability (Flash Point)								
	Ignitability	>150	°F	1				09/21/11 10:30	PRK
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12	411	mg/L	100	100			09/29/11 15:09	AVB
	>C12-C28	2278	mg/L	100	248			09/29/11 15:09	AVB
	>C28-C35	169	mg/L	10	18.8			09/29/11 13:59	AVB
	Total C6-C35	2858	mg/L	100				09/29/11 15:09	AVB
	1-Chlorooctane(surr)	8987	%	10	60-120		S5	09/29/11 15:09	AVB
	Chlorooctadecane(surr)	4463	%	10	53-122		S5	09/29/11 15:09	AVB

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services

Attn: Justin

Project Name:

Client Sample ID: Grease After
Date Collected: 09/20/11
Time Collected: 14:15
Other Information:

Job Sample ID: 11090672.04
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 1664A	Oil & Grease, Hexane Extractables								
	Oil & Grease	BRL	mg/L	1.14	2.85			09/27/11 09:30	SG
EPA 200.7	Total Recoverable Metals								
	Aluminum	0.15	mg/L	1	0.01			09/21/11 14:50	SS
	Arsenic	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Barium	0.47	mg/L	1	0.01			09/21/11 14:50	SS
	Boron	0.36	mg/L	1	0.01			09/21/11 14:50	SS
	Cadmium	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Chromium	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Cobalt	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Copper	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Iron	10.30	mg/L	1	0.02			09/21/11 14:50	SS
	Lead	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Manganese	0.51	mg/L	1	0.01			09/21/11 14:50	SS
	Molybdenum	BRL	mg/L	1	0.02			09/21/11 14:50	SS
	Nickel	0.02	mg/L	1	0.01			09/21/11 14:50	SS
	Selenium	BRL	mg/L	1	0.05			09/21/11 14:50	SS
	Silver	BRL	mg/L	1	0.01			09/21/11 14:50	SS
	Zinc	0.11	mg/L	1	0.02			09/21/11 14:50	SS
EPA 200.7	Total Recoverable Metals								
	Lithium	BRL	mg/L	1	0.1			09/28/11 12:07	SC
	Tin	BRL	mg/L	1	0.1			09/27/11 12:14	SS
EPA 245.1	Total Metals - Mercury								
	Mercury	BRL	mg/L	1	0.0002			09/23/11 14:02	GG
EPA 300.0	Anions								
	Fluoride	BRL	mg/L	1	0.1			09/28/11 18:00	JKD
	Sulfate	6.58	mg/L	1	0.1			09/28/11 18:00	JKD
EPA 330.5	Chlorine, as Total Residual								
	Chlorine, Free	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
	Chlorine, Total	BRL	mg/L	1	0.05	0.1	H3	09/21/11 16:55	AJ
EPA 420.1	Phenolics (Total Phenols)								
	Phenols	0.3122	mg/L	5.00	0.250			09/29/11 14:08	SR
LA 29-B	Sodium Adsorption Ratio								
	SAR	5.2	meq/L	1	0.1			09/22/11 18:00	SC
NIOSH 3500	Formaldehyde								
	Formaldehyde	BRL	mg/L	10	0.5			09/28/11 15:10	KS
SM 2120B	Apparent Color								
	Color	<100	PCU	100	200			09/22/11 10:00	AJ
SM 2150B	Threshold Odor Test								

LABORATORY TEST RESULTS

Job ID : 11090672

Date 9/29/2011

Client Name: Aqua Zyme Services Attn: Justin

Project Name:

Client Sample ID: Grease After
Date Collected: 09/20/11
Time Collected: 14:15
Other Information:

Job Sample ID: 11090672.04
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
	Odor	>200		200	200			09/21/11 10:45	AJ
SM 2510B	Conductivity								
	Conductance	3510	umho/cm	1	5			09/29/11 16:05	SR
SM 2540D	Total Suspended Solids								
	TSS	150	mg/L	2	5			09/22/11 12:01	PRK
SM 2550B									
	Temperature	28.5	°C	1				09/20/11 14:15	AD
SM 4500CNC/E	Total Cyanide								
	Cyanide	BRL	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500CN-I	Weak Acid Dissociable Cyanide								
	Cyanide, Free	BRL	mg/L	1	0.02			09/26/11 13:52	SR
SM 4500H B	Corrosivity, pH								
	pH	5.21	s.u.	1				09/20/11 14:15	AD
SM 4500NH3D	Ammonia as Nitrogen								
	Ammonia as N	151.5	mg/L	20	2.00	5		09/28/11 13:22	SR
SM 4500NH3D	Total Kjeldahl Nitrogen								
	TKN	200.5	mg/L	100	50			09/29/11 14:44	KS
SM 4500P-E									
	Phosphorus	46	mg/L	100	5.00			09/22/11 17:34	SR
SM 4500-S D	Sulfide								
	Sulfide	BRL	mg/L	10	0.5		H1	09/29/11 12:40	KS
SM 4500SO3-B	Reducing Agents, as Sulfite								
	Sulfite	8	mg/L	1	2		H3	09/21/11 11:00	SG
SM 5220D	Chemical Oxygen Demand								
	COD	6650	mg/L	10	100			09/29/11 10:44	KS
SW-846 1010A	Ignitability (Flash Point)								
	Ignitability	>150	°F	1				09/21/11 10:30	PRK
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12	83.9	mg/L	10	10			09/22/11 09:00	AVB
	>C12-C28	3.75	mg/L	1	2.48			09/22/11 09:00	AVB
	>C28-C35	BRL	mg/L	1	1.88			09/22/11 09:00	AVB
	Total C6-C35	87.65	mg/L	1				09/22/11 09:00	AVB
	1-Chlorooctane(surr)	N/A	%	10	60-120		S5	09/22/11 09:00	AVB
	Chlorooctadecane(surr)	117	%	10	53-122			09/22/11 09:00	AVB

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Reducing Agents, as Sulfite** **Method :** **SM 4500SO3-B** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092140 **Created Date :** 09/21/11 **Created By :** Sgarcia

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Sulfite		BRL	mg/L	1	2		

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Sulfite	19.53	19.53	mg/L	0	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Sulfite	1000	904	90.4	1000	884	88.4	2.2	20	70-130	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Ignitability (Flash Point) **Method : SW-846 1010A** **Reporting Units : °F**

QC Batch ID : Qb11092142 **Created Date :** 09/21/11 **Created By :** PRKasar

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Ignitability	>150	>150	°F		20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Ignitability	83	85	102	83	84	101	0	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Recoverable Metals **Method :** EPA 200.7 **Reporting Units :** mg/L

QC Batch ID : Qb11092143 **Created Date :** 09/21/11 **Created By :** Ssrinivasan

Samples in This QC Batch : 11090672.01,02,04

Digestion : PB11092129 **Prep Method :** EPA 200.7 **Prep Date :** 09/21/11 11:30 **Prep By :** Ggorane

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Aluminum	7429-90-5	BRL	mg/L	1	0.01		
Arsenic	7440-38-2	BRL	mg/L	1	0.01		
Barium	7440-39-3	BRL	mg/L	1	0.01		
Boron	7440-42-8	BRL	mg/L	1	0.01		
Cadmium	7440-43-9	BRL	mg/L	1	0.01		
Chromium	7440-47-3	BRL	mg/L	1	0.01		
Cobalt	7440-48-8	BRL	mg/L	1	0.01		
Copper	7440-50-8	BRL	mg/L	1	0.01		
Iron	7439-89-6	BRL	mg/L	1	0.02		
Lead	7439-92-1	BRL	mg/L	1	0.01		
Manganese	7439-95-5	BRL	mg/L	1	0.01		
Molybdenum	7439-98-7	BRL	mg/L	1	0.02		
Nickel	7440-02-0	BRL	mg/L	1	0.01		
Selenium	7782-49-2	BRL	mg/L	1	0.05		
Silver	7440-22-4	BRL	mg/L	1	0.01		
Zinc	7440-66-6	BRL	mg/L	1	0.02		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Aluminum	1	1.04	104	1	1.04	104	0	20	85-115	
Arsenic	1	1.01	101	1	1.02	102	1	20	85-115	
Barium	1	1.05	105	1	1.05	105	0	20	85-115	
Boron	1	1.03	103	1	1.03	103	0	20	85-115	
Cadmium	1	1.00	100	1	1.01	101	1	20	85-115	
Chromium	1	1.01	101	1	1.02	102	1	20	85-115	
Cobalt	1	1.02	102	1	1.03	103	1	20	85-115	
Copper	1	1.04	104	1	1.04	104	0	20	85-115	
Iron	1	1.03	103	1	1.03	103	0	20	85-115	
Lead	1	1.01	101	1	1.01	101	0	20	85-115	
Manganese	1	1.03	103	1	1.04	104	1	20	85-115	
Molybdenum	1	1.05	105	1	1.05	105	0	20	85-115	
Nickel	1	1.01	101	1	1.02	102	1	20	85-115	
Selenium	1	0.99	99.2	1	1.00	99.6	0.4	20	85-115	
Silver	1	1.01	101	1	1.01	101	0	20	85-115	
Zinc	1	1.00	99.5	1	1.00	99.6	0.1	20	85-115	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Total Recoverable Metals** **Method :** **EPA 200.7** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092143 **Created Date :** 09/21/11 **Created By :** Ssrinivasan

Samples in This QC Batch : 11090672.01,02,04

QC Type: MS and MSD
QC Sample ID: 11090671.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Aluminum	0.117	1	1.17	105						75-125	
Arsenic	BRL	1	1.12	111						75-125	
Barium	0.039	1	1.02	98.1						75-125	
Boron	0.445	1	1.50	106						75-125	
Cadmium	BRL	1	1.08	108						75-125	
Chromium	BRL	1	1.01	101						75-125	
Cobalt	BRL	1	0.96	96.1						75-125	
Copper	BRL	1	1.08	108						75-125	
Iron	0.117	1	1.12	100						75-125	
Lead	BRL	1	0.91	91.1						75-125	
Manganese	0.037	1	1.04	100						75-125	
Molybdenum	BRL	1	1.04	104						75-125	
Nickel	BRL	1	0.95	94.6						75-125	
Selenium	BRL	1	1.09	109						75-125	
Silver	BRL	1	1.11	111						75-125	
Zinc	0.02	1	1.02	100						75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Total Suspended Solids** **Method :** **SM 2540D** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092229 **Created Date :** 09/22/11 **Created By :** PRKasar

Samples in This QC Batch : 11090672.01,02,03

Sample Preparation : PB11092215 **Prep Method :** SM 2540D **Prep Date :** 09/22/11 12:00 **Prep By :** PRKasar

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
TSS		BRL	mg/L	1	2.50		

QC Type: Duplicate

QC Sample ID: 11090643.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
TSS	20.0	19.5	mg/L	2.5	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
TSS	500	495.0	99	500	496.7	99.3	0.3	20	72-108	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Total Suspended Solids** **Method :** **SM 2540D** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092230 **Created Date :** 09/22/11 **Created By :** PRKasar

Samples in This QC Batch : 11090672.04

Sample Preparation : PB11092215 **Prep Method :** SM 2540D **Prep Date :** 09/22/11 12:00 **Prep By :** PRKasar

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
TSS		BRL	mg/L	1	2.50		

QC Type: Duplicate

QC Sample ID: 11090672.04

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
TSS	148.6	150	mg/L	1.2	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
TSS	500	494.4	98.9						72-108	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Recoverable Metals **Method :** EPA 200.7 **Reporting Units :** mg/L

QC Batch ID : Qb11092238 **Created Date :** 09/22/11 **Created By :** Scuello

Samples in This QC Batch : 11090672.03

Digestion : PB11092224 **Prep Method :** EPA 200.7 **Prep Date :** 09/22/11 10:40 **Prep By :** Ggorane

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Aluminum	7429-90-5	BRL	mg/L	1	0.01		
Arsenic	7440-38-2	BRL	mg/L	1	0.01		
Barium	7440-39-3	BRL	mg/L	1	0.01		
Boron	7440-42-8	BRL	mg/L	1	0.01		
Cadmium	7440-43-9	BRL	mg/L	1	0.01		
Chromium	7440-47-3	BRL	mg/L	1	0.01		
Cobalt	7440-48-8	BRL	mg/L	1	0.01		
Copper	7440-50-8	BRL	mg/L	1	0.01		
Iron	7439-89-6	BRL	mg/L	1	0.02		
Lead	7439-92-1	BRL	mg/L	1	0.01		
Manganese	7439-95-5	BRL	mg/L	1	0.01		
Molybdenum	7439-98-7	BRL	mg/L	1	0.02		
Nickel	7440-02-0	BRL	mg/L	1	0.01		
Selenium	7782-49-2	BRL	mg/L	1	0.05		
Silver	7440-22-4	BRL	mg/L	1	0.01		
Zinc	7440-66-6	BRL	mg/L	1	0.02		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Aluminum	1	1.03	103	1	1.04	104	1	20	85-115	
Arsenic	1	1.04	104	1	1.03	103	1	20	85-115	
Barium	1	0.99	99	1	0.986	98.6	0.4	20	85-115	
Boron	1	1.04	104	1	1.03	103	1	20	85-115	
Cadmium	1	1.02	102	1	1.01	101	1	20	85-115	
Chromium	1	0.991	99.1	1	0.993	99.3	0.2	20	85-115	
Cobalt	1	1.04	104	1	1.04	104	0	20	85-115	
Copper	1	0.988	98.8	1	0.989	98.9	0.1	20	85-115	
Iron	1	1.03	103	1	1.04	104	1	20	85-115	
Lead	1	1.02	102	1	1.02	102	0	20	85-115	
Manganese	1	0.943	94.3	1	0.946	94.6	0.3	20	85-115	
Molybdenum	1	1.03	103	1	1.03	103	0	20	85-115	
Nickel	1	1.04	104	1	1.03	103	1	20	85-115	
Selenium	1	1.03	103	1	1.02	102	1	20	85-115	
Silver	1	0.968	96.8	1	0.968	96.8	0	20	85-115	
Zinc	1	1.03	103	1	1.02	102	1	20	85-115	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Total Recoverable Metals** **Method :** **EPA 200.7** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092238 **Created Date :** 09/22/11 **Created By :** Scuello

Samples in This QC Batch : 11090672.03

QC Type: MS and MSD
QC Sample ID: 11090707.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Aluminum	0.084	1	1.14	106						75-125	
Arsenic	BRL	1	1.08	108						75-125	
Barium	0.064	1	1.04	97.6						75-125	
Boron	0.118	1	1.19	107						75-125	
Cadmium	BRL	1	1.04	104						75-125	
Chromium	BRL	1	0.994	99.1						75-125	
Cobalt	BRL	1	1.03	103						75-125	
Copper	0.066	1	1.07	100						75-125	
Iron	0.321	1	1.35	103						75-125	
Lead	BRL	1	1	99.7						75-125	
Manganese	0.012	1	0.951	93.9						75-125	
Molybdenum	BRL	1	1.05	105						75-125	
Nickel	0.019	1	1.04	102						75-125	
Selenium	BRL	1	1.07	107						75-125	
Silver	0.011	1	0.996	98.5						75-125	
Zinc	0.065	1	1.1	104						75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Method :** **SM 4500P-E** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092254 **Created Date :** 09/23/11 **Created By :** Srani

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Phosphorus	7723-14-0	BRL	mg/L	1	0.05		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Phosphorus	0.200	0.195	97.4	0.200	0.188	93.8	3.6	20	80-120	

QC Type: MS and MSD
QC Sample ID: 11090516.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Phosphorus	0.4880	0.200	0.699	106						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Method :** **LA 29-B** **Reporting Units :** **meq/L**

QC Batch ID : Qb11092256 **Created Date :** 09/22/11 **Created By :** Scuello

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092255 **Prep Method :** LA 29-B **Prep Date :** 09/22/11 10:00 **Prep By :** Ssrinivasan

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
SAR		BRL	meq/L	1	0.1		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
SAR	0.16	0.177	111	0.16	0.179	112	1.1	20	80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Petroleum Hydrocarbons **Method :** TX 1005 **Reporting Units :** mg/L

QC Batch ID : Qb11092309 **Created Date :** 09/21/11 **Created By :** AVBembde

Samples in This QC Batch : 11090672.01,02,04

Sample Preparation : PB11092303 **Prep Method :** TX 1005 **Prep Date :** 09/21/11 16:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/L	1	1.00		
>C12-C28	TPH-1005-2	BRL	mg/L	1	2.48		
>C28-C35	TPH-1005-4	BRL	mg/L	1	1.88		
Total C6-C35		BRL	mg/L	1			
Chlorooctadecane(surr)	3386-33-2	80.7	%	1	53-122		
1-Chlorooctane(surr)	111-85-3	81.5	%	1	60-120		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	43	39.2	91.2	43	39.2	91.2	0	20	75-125	
>C12-C28	43	36.4	84.7	43	34.4	80	5.6	20	75-125	
>C28-C35	43	36.9	85.8	43	36.8	85.6	0.3	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Total Metals - Mercury** **Method :** **EPA 245.1** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092346 **Created Date :** 09/23/11 **Created By :** Ggorane

Samples in This QC Batch : 11090672.01,02,03,04

Digestion : PB11092319 **Prep Method :** EPA 245.1 **Prep Date :** 09/23/11 11:15 **Prep By :** Ggorane

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Mercury	7439-97-6	BRL	mg/L	1	0.0002		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Mercury	0.005	0.00503	101	0.005	0.00490	98	2.6	35	80-120	

QC Type: MS and MSD
QC Sample ID: 11090737.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Mercury	BRL	0.005	0.00515	102						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Cyanide **Method : SM 4500CNC/E** **Reporting Units : mg/L**

QC Batch ID : Qb11092609 **Created Date :** 09/26/11 **Created By :** Srani

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092606 **Prep Method :** SM 4500CNC/E **Prep Date :** 09/26/11 08:00 **Prep By :** Srani

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Cyanide		BRL	mg/L	1	0.02		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Cyanide	0.1	0.087	87.2	0.1	0.088	88.2	0.9	20	80-120	

QC Type: MS and MSD
QC Sample ID: 11090663.05

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Cyanide	BRL	0.1	0.083	83						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Ammonia as Nitrogen **Method : SM 4500NH3D** **Reporting Units : mg/L**

QC Batch ID : Qb11092616 **Created Date :** 09/28/11 **Created By :** Srani

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Ammonia as N		BRL	mg/L	1	0.1		

QC Type: Duplicate

QC Sample ID: 11090711.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Ammonia as N	115	116	mg/L	0.7	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Ammonia as N	5.00	4.66	93.1	5.00	4.58	91.5	1.6	17.9	87.1-115	

QC Type: MS and MSD

QC Sample ID: 11090711.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Ammonia as N	116	250	317	80.5						85.2-121	M2

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Oil & Grease, Hexane Extractables **Method :** EPA 1664A **Reporting Units :** mg/L

QC Batch ID : Qb11092703 **Created Date :** 09/27/11 **Created By :** Sgarcia

Samples in This QC Batch : 11090672.01,02,04

Sample Preparation : PB11092704 **Prep Method :** EPA 1664A **Prep Date :** 09/27/11 08:54 **Prep By :** Sgarcia

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Oil & Grease		BRL	mg/L	1	2.50		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Oil & Grease	40	35.8	89.5	40	35.1	87.8	2	11	78-114	

QC Type: MS and MSD
QC Sample ID: 11090661.02

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Oil & Grease	BRL	40	40.3	101						78-114	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Recoverable Metals **Method :** EPA 200.7 **Reporting Units :** mg/L

QC Batch ID : Qb11092727 **Created Date :** 09/27/11 **Created By :** Ssrinivasan

Samples in This QC Batch : 11090672.01,02,03,04

Digestion : PB11092715 **Prep Method :** SW-846 3005A **Prep Date :** 09/27/11 08:40 **Prep By :** Ssrinivasan

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Lithium	7439-93-2	BRL	mg/L	1	0.1		
Tin	7440-31-5	BRL	mg/L	1	0.1		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Lithium	1	1.007	101	1	1.000	100	0.7	20	80-120	
Tin	1	0.9909	99.1	1	0.9968	99.7	0.6	20	80-120	

QC Type: MS and MSD
QC Sample ID: 11090671.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Lithium	0.055	1	2.059	200						80-120	M3
Tin	BRL	1	0.9265	92.4						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Chlorine, as Total Residual **Method : EPA 330.5** **Reporting Units : mg/L**

QC Batch ID : Qb11092753 **Created Date :** 09/21/11 **Created By :** Ajohn

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Chlorine, Free		BRL	mg/L	1	0.05		
Chlorine, Total		BRL	mg/L	1	0.05		

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Chlorine, Free	BRL	BRL	mg/L		20		
Chlorine, Total	BRL	BRL	mg/L		20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Chlorine, Total	1	0.97	97						95-105	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Apparent Color **Method : SM 2120B** **Reporting Units : PCU**

QC Batch ID : Qb11092754 **Created Date :** 09/22/11 **Created By :** Ajohn

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Color		BRL	PCU	1	2		

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Color	<100	<100	PCU		20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Color	5.0	5.0	100						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Threshold Odor Test** **Method :** **SM 2150B** **Reporting Units :**

QC Batch ID : Qb11092809 **Created Date :** 09/21/11 **Created By :** Ajohn

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Odor		No Odor O		1	1		

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Anions **Method :** EPA 300.0 **Reporting Units :** mg/L

QC Batch ID : Qb11092903 **Created Date :** 09/29/11 **Created By :** Jdongre

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092905 **Prep Method :** EPA 300.0 **Prep Date :** 09/28/11 14:35 **Prep By :** Jdongre

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Fluoride		BRL	mg/L	1	0.1		
Sulfate		BRL	mg/L	1	0.1		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Fluoride	1	0.949	94.9	1	0.919	91.9	3.2	20	90-110	
Sulfate	1	0.938	93.8	1	0.984	98.4	4.8	20	90-110	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Chemical Oxygen Demand **Method :** SM 5220D **Reporting Units :** mg/L

QC Batch ID : Qb11092914 **Created Date :** 09/29/11 **Created By :** Ksudha

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092911 **Prep Method :** SM 5220D **Prep Date :** 09/29/11 10:40 **Prep By :** Ksudha

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
COD		BRL	mg/L	1	10		

QC Type: Duplicate

QC Sample ID: 11090800.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
COD	13	13	mg/L	0	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
COD	300	315	105	300	311	104	1.3	20	80-120	

QC Type: MS and MSD

QC Sample ID: 11090800.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
COD	13	400	462	112						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Weak Acid Dissociable Cyanide** **Method :** **SM 4500CN-I** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092917 **Created Date :** 09/26/11 **Created By :** Srani

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092913 **Prep Method :** SM 4500CN-I **Prep Date :** 09/26/11 08:15 **Prep By :** Srani

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Cyanide, Free		BRL	mg/L	1	0.02		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Cyanide, Free	0.1	0.082	82	0.1	0.081	81	1.2	20	80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : **Phenolics (Total Phenols)** **Method :** **EPA 420.1** **Reporting Units :** **mg/L**

QC Batch ID : Qb11092922 **Created Date :** 09/29/11 **Created By :** Srani

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092921 **Prep Method :** EPA 420.1 **Prep Date :** 09/29/11 08:00 **Prep By :** Srani

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Phenols		BRL	mg/L	1	0.05		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Phenols	0.200	0.185	92.5	0.200	0.188	94.2	1.6	20	80-120	

QC Type: MS and MSD
QC Sample ID: 11090913.04

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Phenols	BRL	0.200	0.178	89						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Kjeldahl Nitrogen **Method : SM 4500NH3D** **Reporting Units : mg/L**

QC Batch ID : Qb11092926 **Created Date :** 09/29/11 **Created By :** Ksudha

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092925 **Prep Method :** SM 4500NorgB **Prep Date :** 09/28/11 14:20 **Prep By :** Ksudha

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
TKN		BRL	mg/L	1	0.500		

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
TKN	81.1	79.3619	mg/L	2.2	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
TKN	5.00	4.06	81.2	5.00	4.22	84.5	3.9	20	80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Total Petroleum Hydrocarbons **Method :** TX 1005 **Reporting Units :** mg/L

QC Batch ID : Qb11092933 **Created Date :** 09/29/11 **Created By :** AVBembde

Samples in This QC Batch : 11090672.03

Sample Preparation : PB11092932 **Prep Method :** TX 1005 **Prep Date :** 09/29/11 12:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/L	1	1		
>C12-C28	TPH-1005-2	BRL	mg/L	1	2.48		
>C28-C35	TPH-1005-4	BRL	mg/L	1	1.88		
Total C6-C35		BRL	mg/L	1			
Chlorooctadecane(surr)	3386-33-2	99.4	%	1	53-122		
1-Chlorooctane(surr)	111-85-3	98.1	%	1	60-120		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	43	39.9	92.8	43	42.4	98.6	6.1	20	75-125	
>C12-C28	43	34.8	80.9	43	35.2	81.9	1.1	20	75-125	
>C28-C35	43	32.5	75.6	43	33.2	77.2	2.1	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Conductivity **Method : SM 2510B** **Reporting Units : umho/cm**

QC Batch ID : Qb11092943 **Created Date :** 09/29/11 **Created By :** Srani

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Conductance		BRL	umho/cm	1	5		

QC Type: Duplicate

QC Sample ID: 11090648.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Conductance	457	456	umho/cm	0.2	20		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Conductance	100	104.1	104						90-110	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Formaldehyde **Method : NIOSH 3500** **Reporting Units : mg/L**

QC Batch ID : Qb11092947 **Created Date :** 09/29/11 **Created By :** Ksudha

Samples in This QC Batch : 11090672.01,02,03,04

Sample Preparation : PB11092950 **Prep Method :** NIOSH 3500 **Prep Date :** 09/28/11 15:09 **Prep By :** Ksudha

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Formaldehyde	50-00-0	BRL	mg/L	1	0.05		

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Formaldehyde	BRL	BRL	mg/L		14		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Formaldehyde	0.250	0.225	90	0.250	0.234	93.6	3.9	14	82-113	

QC Type: MS and MSD

QC Sample ID: 11090672.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Formaldehyde	BRL	2.5	1.02	40.8						75-125	M2

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 11090672 **Date :** 9/29/2011

Analysis : Sulfide **Method : SM 4500-S D** **Reporting Units : mg/L**

QC Batch ID : Qb11092951 **Created Date :** 09/29/11 **Created By :** Ksudha

Samples in This QC Batch : 11090672.01,02,03,04

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Sulfide		BRL	mg/L	1	0.05		

QC Type: Duplicate

QC Sample ID: 11090672.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Sulfide	BRL	BRL	mg/L				

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Sulfide	0.2	0.189	94.5	0.2	0.177	88.5	6.6	20	80-120	

QC Type: MS and MSD

QC Sample ID: 11090672.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Sulfide		2.0	1.96	98						70-130	

Refer to the Definition page for terms.

LABORATORY TERM AND QUALIFIER DEFINITION REPORT

Job ID : 11090672

Date: 9/29/2011

General Term Definition

Back-Wt	Back Weight	Post-Wt	Post Weight
BRL	Below Reporting Limit	ppm	parts per million
cfu	colony-forming units	Pre-Wt	Previous Weight
Conc.	Concentration	Q	Qualifier
D.F.	Dilution Factor	RegLimit	Regulatory Limit
Front-Wt	Front Weight	RPD	Relative Percent Difference
LCS	Laboratory Check Standard	RptLimit	Reporting Limit
LCSD	Laboratory Check Standard Duplicate	SDL	Sample Detection Limit
MS	Matrix Spike	surr	Surrogate
MSD	Matrix Spike Duplicate	T	Time
MW	Molecular Weight	TNTC	Too numerous to count

Qualifier Definition

D1	Sample required dilution due to matrix effects.
H1	Sample analysis performed past holding time.
H3	Sample was received and analyzed past holding time.
J	Estimation. Below calibration range but above MDL.
M2	Matrix Spike and/or Matrix Spike Duplicate recovery is below laboratory control limits due to matrix interference."The sample randomly selcted as QC for this batch was not part of your project. Therefore, this sample matrix is not applicable to your project samples."
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The LCS recovery is acceptable."The sample randomly selcted as QC for this batch was not part of your project. Therefore, this sample matrix is not applicable to your project samples."
S5	Target compounds caused elevation of baseline. Surrogate not calculated
U	Undetected at SDL (Sample Detection Limit).

H·D

A & B Labs — *Chain of Custody* — The Chain of Custody is a Legal Document — Page ____ of ____

10100 East Fwy (I-10) Ste. 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 1109067

5. Project #

1. REPORT TO:
Company: AQUA ZYME SERVICES
Address: PO BOX 1189 VAN VLECK, TX 77482
Contact: JUSTIN
Phone: 979-245-0957
Fax: ☐
E-mail: ☐

2. INVOICE TO:
Company:
Address:
Contact:
Phone:
Fax: ☐
E-mail: ☐

3. PO #

4. Turnaround Time (Business Days)
☐ 1 Day* ☐ Other
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☐ 7 Days - Standard

6. Project Name/Location

7. Reporting Requirement:
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II

8. Sampler's Name & Company (PLEASE PRINT): ALLISON DIAMOND A&B LABS
Sampler's Signature & Date: Allison Diamond 9-20-11

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	10. Sampling Time	11. Comp.	11. Grab	12. Matrix: Water	Soil	Sludge	Oil	Air	Other	No. of Containers	Analyses/Methods	18. REMARKS
01A-O	SEPTIC BEFORE	9/20/11	12:47		X							15		PH 6.83 TEMP 27.6
02A-O	SEPTIC AFTER	9/20/11	1:50		X							15		PH 6.95 TEMP 26.3 SEE ATTACHED FOR ANALYSIS
03A	GREASE BEFORE	9/20/11	1:40		X							15		PH 7.01 TEMP 29.5 ~~TEMP 30.1 A.D~~
04A-O	GREASE AFTER	9/20/11	2:15		X							15		~~PH 5.21 A.D~~ TEMP 28.5 PH 5.21

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Allison Diamond	9/20/11	4:17			
2					
3			21. RECEIVED BY LABORATORY	9/20/11	16:17

22. KNOWN HAZARDS/COMMENTS

Temperature: 13.1 °C

Intact: Y or N Initials A.D

*Containers: VOA - 40 ml vial; A/G - Amber/Glass 1 Liter; 4 oz/8 oz - glass wide mouth; P/O - Plastic/other

**Preservatives: C - Cool; H - HCl; N - HNO_3; S - H_2SO_4; OH - NaOH; T - $Na_2S_2O_3$; X - Other

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days
A&B reserves the right to return samples

LAB USE ONLY SAMPLING ____ RENTAL ____ P/U ____

A&B Labs Analytical Testing Quotation

Date: 08/11/2011

1109067

QUOTE ID: QT11081101

Quote To :

Client : Aqua Zyme Services
Contact : Justin Atkinson
Address : PO Box 800
Van Vleck,Texas - 77482
Project :
Phone : 979-245-0957 **Fax** : 979-244-8239

Quoted By :

Contact : Bethany Sapp
Phone : (713) 453-6060
Fax : (713) 453-6091
Email :

	Test Description	Matrix	Method	Qty	TAT
A	Apparent Color	Liquid	SM 2120B	4	7 Days
B	Threshold Odor Test	Liquid	SM 2150B	4	7 Days
	Temperature*	Liquid	SM 2550B	4	7 Days
C	Chemical Oxygen Demand	Liquid	SM 5220D	4	7 Days
D	Conductivity	Liquid	SM 2510B	4	7 Days
E	Sodium Adsorption Ratio	Liquid	LA 29-B	4	7 Days
D	Total Suspended Solids	Liquid	SM 2540D	4	7 Days
	Corrosivity, pH*	Liquid	SM 4500H B	4	7 Days
F	Oil & Grease, Hexane Extractables	Liquid	EPA 1664A	4	7 Days
C	Ammonia as Nitrogen	Liquid	SM 4500-NH3 G	4	7 Days
C	Total Kjeldahl Nitrogen	Liquid	SM 4500NH3D	4	7 Days
D	Anions (Sulfate, Fluoride)	Liquid	EPA 300.0	4	7 Days
G	Reducing Agents, as Sulfite	Liquid	SM 4500SO3-B	4	7 Days
H	Sulfide	Liquid	SM 4500-S D	4	7 Days
C	Total Phosphorus	Liquid	SM 4500P-E	4	7 Days
I	Ignitability (Flash Point)	Liquid	SW-846 1010A	4	7 Days
E	Total Metals (B, Al, As, Ba, Cd, Cr, Co, Cu, Fe, Pb, Mn, Mo, Ni, Se, Ag, Zn)	Liquid	EPA 200.7	4	7 Days
E	Total Metals - Mercury	Liquid	EPA 245.1	4	7 Days
E	Total Metals, Tin**	Liquid	EPA 200.7	4	2 Weeks
E	Total Metals, Li	Liquid	EPA 200.7	4	7 Days
D	Chlorine, Total and Free	Liquid	EPA 330.5	4	7 Days
J	Total Cyanide	Liquid	SM 4500CNC/E	4	7 Days
J	Weak Acid Dissociable Cyanide	Liquid	SM 4500CN-I	4	7 Days
K	Formaldehyde	Liquid	NIOSH 3500	4	7 Days
L	Phenolics (Total Phenols)	Liquid	EPA 420.1	4	7 Days
M	Total Petroleum Hydrocarbons	Liquid	TX 1005	4	7 Days
NO	Sampling Fees	per hour	2 hour minimum	4	

Sample Condition Checklist

Date : **09/29/11**

A&B JobID :	**11090672**	Date Received :	**09/20/2011**	Time Received :	**4:17PM**
Client Name :	**Aqua Zyme Services**				
Temperature :	**13.1°C**	Sample pH :	**<2 COD, NH3N, TKN, P, Metals >12 Cyanide**		

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**		X	
2.	**Sample(s) in a cooler.**	X		
3.	**If yes, ice in cooler.**	X		
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☑ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☐ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**		X	
10.	**Sample(s) were received with proper preservative**		X	
11.	**All samples were logged or labeled.**		X	
12.	**Sample ID labels match C-O-C ID's**		X	
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**	X		
17.	**Sample accepted.**	X		

Comments : Include actions taken to resolve discrepancies/problem:

Sample cooling initiated in the field. Sample 03 was received in a plastic bucket and will need to be split and preserved by lab. Sample 03 has too many solids for O&G analysis; lab is not set up to run O&G on solid samples.

Received by : Dlopez

Check in by/date : Dlopez / 09/20/2011

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

22 April 2024

Aqua-Zyme Services
JW Massey
PO Box 800
Van Vleck, TX 77482-0800

OAK HOLLOW WWTP

Enclosed are the results of analyses for samples received by the laboratory on 26-Mar-24 14:25. The analytical data provided relates only to the samples as received in this laboratory report.

ELI certifies that all results are NELAP compliant and performed in accordance with the referenced method except as noted in the Case Narrative or as noted with a qualifier. Any reproductions of this laboratory report should be in full and only with the written authorization from the client.

The total number of pages in this report is 7

Thank you for selecting ELI for your analytical needs. If you have any questions regarding this report, please contact us.

Sincerely,

Julie Peterson
Client Services Representative

Certificate No: T104704265-22-20

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client:	Aqua-Zyme Services
Project:	OAK HOLLOW WWTP
Work Order:	24C3183

Reported:
22-Apr-24 16:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Dewatering Container	24C3183-01	Water	26-Mar-24 00:00	26-Mar-24 14:25

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client:	Aqua-Zyme Services
Project:	OAK HOLLOW WWTP
Work Order:	24C3183

Reported:
22-Apr-24 16:35

Dewatering Container

24C3183-01 (Water) Sampled: 26-Mar-24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
Envirodyne Laboratories, Inc.										
Field Analysis										
pH	**7.42**		SU	1	B4C5765	26-Mar-24	26-Mar-24 00:00	SM4500H+ B	MD	a
Wet Chemistry										
Ammonia-N (NH3-N)	**1.77**	0.20	mg/L	1	B4D4479	15-Apr-24	15-Apr-24 15:20	EPA 350.1	SSJ	
BOD-5	> 686.43	2.0	mg/L	1	B4D3176	26-Mar-24	26-Mar-24 19:34	SM5210 B	AGT	
COD	**1240**	50.0	mg/L	10	B4D4967	18-Apr-24	18-Apr-24 13:06	HACH 8000	JMM	
Oil & Grease	**11.2**	5.0	mg/L	1	B4D3918	11-Apr-24	11-Apr-24 13:00	EPA 1664 A	JMM	
TSS	**40.0**	2.0	mg/L	1	B4D3062	02-Apr-24	02-Apr-24 10:45	SM2540 D	TB	Q

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client:	Aqua-Zyme Services
Project:	OAK HOLLOW WWTP
Work Order:	24C3183

Reported:
22-Apr-24 16:35

Wet Chemistry - Quality Control

Envirodyne Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4D3062 - Inorganics										
Blank (B4D3062-BLK1)				Prepared & Analyzed: 02-Apr-24						
TSS	<2.0	2.0	mg/L							
LCS (B4D3062-BS1)				Prepared & Analyzed: 02-Apr-24						
TSS	81.0		mg/L	100		81.0	80-120			
Duplicate (B4D3062-DUP1)		**Source: 24C2394-01**		Prepared & Analyzed: 02-Apr-24						
TSS	4.0	2.0	mg/L		5.8			36.7	20	
Batch B4D3176 - Inorganics										
Blank (B4D3176-BLK1)				Prepared & Analyzed: 26-Mar-24						
BOD-5	<2.0	2.0	mg/L							
LCS (B4D3176-BS1)				Prepared & Analyzed: 26-Mar-24						
BOD-5	220		mg/L	198		111	84.6-115.4			
Duplicate (B4D3176-DUP1)		**Source: 24C2756-01**		Prepared & Analyzed: 26-Mar-24						
BOD-5	<2.0	2.0	mg/L		<2.0			0	20	
Batch B4D3918 - Inorganics										
Blank (B4D3918-BLK1)				Prepared & Analyzed: 11-Apr-24						
Oil & Grease	<5.0	5.0	mg/L							
LCS (B4D3918-BS1)				Prepared & Analyzed: 11-Apr-24						
Oil & Grease	34.3		mg/L	40.0		85.8	78-114			

Envirodyne Laboratories, Inc.

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Julie Peterson, Client Services Representative

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client:	Aqua-Zyme Services
Project:	OAK HOLLOW WWTP
Work Order:	24C3183

Reported:
22-Apr-24 16:35

Wet Chemistry - Quality Control

Envirodyne Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4D3918 - Inorganics										
LCS Dup (B4D3918-BSD1)				Prepared & Analyzed: 11-Apr-24						
Oil & Grease	35.6		mg/L	40.0		89.0	78-114	3.61	18	
Batch B4D4479 - Inorganics										
Blank (B4D4479-BLK1)				Prepared & Analyzed: 15-Apr-24						
Ammonia-N (NH3-N)	<0.20	0.20	mg/L							
LCS (B4D4479-BS1)				Prepared & Analyzed: 15-Apr-24						
Ammonia-N (NH3-N)	0.99		mg/L	1.00		99.0	90-110			
Matrix Spike (B4D4479-MS1)		**Source: 24C2834-01**		Prepared & Analyzed: 15-Apr-24						
Ammonia-N (NH3-N)	1.25	0.20	mg/L	1.00	0.34	91.0	90-110			
Matrix Spike Dup (B4D4479-MSD1)		**Source: 24C2834-01**		Prepared & Analyzed: 15-Apr-24						
Ammonia-N (NH3-N)	1.28	0.20	mg/L	1.00	0.34	94.0	90-110	2.37	20	
Batch B4D4967 - Inorganics										
Blank (B4D4967-BLK1)				Prepared & Analyzed: 18-Apr-24						
COD	<5.0	5.0	mg/L							
LCS (B4D4967-BS1)				Prepared & Analyzed: 18-Apr-24						
COD	93.0		mg/L	100		93.0	90-110			
Matrix Spike (B4D4967-MS1)		**Source: 24D0005-03**		Prepared & Analyzed: 18-Apr-24						
COD	57.0	5.0	mg/L	50.0	7.00	100	80-120			

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client:	Aqua-Zyme Services
Project:	OAK HOLLOW WWTP
Work Order:	24C3183

Reported:
22-Apr-24 16:35

Wet Chemistry - Quality Control

Envirodyne Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4D4967 - Inorganics										
Matrix Spike Dup (B4D4967-MSD1)		**Source: 24D0005-03**		Prepared & Analyzed: 18-Apr-24						
COD	59.0	5.0	mg/L	50.0	7.00	104	80-120	3.45	20	

Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client:	Aqua-Zyme Services
Project:	OAK HOLLOW WWTP
Work Order:	24C3183

Reported:
22-Apr-24 16:35

Notes and Definitions

Q	QC did not meet ELI acceptance criteria
>	> 686.43
ND	Analyte NOT DETECTED at or above the reporting limit
<	Result is less than the RL
a	Analyte not available for TNI/NELAP accreditation
n	Not accredited

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative

Envirodyne Laboratories, Inc.
11011 Brooklet, Ste. 230
Houston, Texas 77099-3543
Phone (281)568-7880 - Fax (281)568-8004

TCEQ Certification # T104704265

2463183

E A430318

Page _____ Of _____

Analysis Request and Chain of Custody Record

Name: Aquazyme
Address: P.O. Box 489
City: Van Vleck, TX 77482
Contact: Jim Massey Phone: 979-245- Email: 979-244-8239

Project No. Oak Hollow WWTP

Client/Project Discharge Water from Dewatering Container

Lab ID No	Field Sample No./ Indentification	Date & Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid, Sludge, etc.)	Preservative	ANALYSIS REQUESTED	pH	D.O.	Temp.	Analysis Time
	Dewatering Container	3.26.24	✓		1 liter /P	Liquid	ICE	NH3N, COD, BOD,TSS, pH,	7.42		23	
								Oil & Grease				

Samplers: (Signature)	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: 3.26.24 Time: 752	Seal Intact?
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Seal Intact?
	Relinquished by: (Signature)	Date: 3.26.24 Time: 1425	Received by Lab: (Signature)	Date: 3/26/24 Time: 1425	Seal Intact?
Remarks:	FLOW: _____ Meter Reading: _____ Cl_2 Residual: _____ Mn Correction: _____ Cl_2 Corrected _____	Arrival Temp. 4.5|4.5 IR#4	Data Results To: 1. Site Representative:	Date: Time:	Laboratory No.

2.3.1: Lab Analysis Example – Sludge Sample

Figure 2.3.1

CHEMTEX
Environmental & Industrial Hygiene Services

3082 25th Street, Port Arthur, Texas 77642 (409) 983-4575 FAX (409) 982-1522
5544 Leopard Street, Corpus Christi, Texas 78408 (361) 299-9900 FAX (361) 299-1155
138 S. Cities Service Hwy., Sulphur, Louisiana 70663 (337) 626-2121 FAX (337)626-2126
401 N. 11 Street, La Porte, Texas 77571 (281) 867-9900 FAX (281) 867-1155

Client: VALLEY DEWATERING SERVICES INC
P. O. Box 489
VAN VLEEK, TX 78482-0489

Attn: Mr. Justin Atkinson
Phone: 979-245-5656
Cell: 956-376-8229, 979-4530911
E.mail: [redacted]
E.mail: [redacted]

Reporting Date:	7/17/2022
Sample Matrix:	Wastewater
Date Collected:	7/12/22
Time Collected:	12:30 pm
Collected by:	Mr. Ricku Vasquez
Date Received:	7/13/22
Time Received:	11:10 am
CHEMTEX File #:	C22070130

RESULTS OF ANALYSIS

Site/Location: Valley Dewaterinf Monitoring, Inc 120 Patricia St Texas

CHEMTEX ID	Sample ID	Parameter	Units	Results	RL
C22070130A	Valley Dewatering	CBOD	mg/L	>1320	2
		TSS	mg/L	106	4
C22070130B	Valley Dewatering	*Ammonia-N	mg/L	66.5	0.10
C22070130C	Valley Dewatering	COD	mg/L	5375	250
C22070130C	Valley Dewatering	Oil & Grease	mg/L	<5.0	5

RL(Reporting Limit) values in our report are our lowest analyses limits, not the Reporting Limits to report to any Governmental Agencies.
Analysis performed and report generated at CHEMTEX, Corpus Christi, TX. a NELAP Accredited Laboratory (T104704259-22-5).

Parameter	Method Reference	Date Analyzed/Analyzed By
Carbonaceous Biochemical Oxygen Demand (CBOD)	SM 5210 B	7/13 - 18/22@4:30 pm - 12:00 pm CHR
Total Suspended Solids (TSS)	SM 2540 D	7/14/22 GC
Ammonia-N	SM 4500-NH3 D	7/15/22 KM
Chemical Oxygen Demand (COD)	HACH8000	7/15/22 SMK
Oil & Grease (O & G)	EPA Method 1664AB	7/15/22 KS

Hari R. Chinnasani, M.Sc.,
Technical Manager

csr/chr/CNR

NOTICE / DISCLAIMER. The analytical results, opinions or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. No person or entity other than the client may relay on this report Any such reliance will be unjustified. Any person other than the client, that reads this reports does so at his or her own risk. The analytical results, oopinions and/or interpretations expressed herein represent the best judgement of CHEMTEX, bsed on the information and instructions received from the client. Chemtex makes no warranty or representation, express or implied, of any type, and expressly disclaims same. This report shall not be reporduced, in whole or in part, without the writted approval of CHEMTEX. In no event shall CHEMTEX be responsible for any damage greater than the amount it received for the analysis performed.

0-T - 4.0
C-T - 4.0

CHEMTEX

Environmental & Industrial Hygiene Services
5544 Leopard Street, Corpus Christi, TX 78408

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL
ANALYTICAL SERVICES REQUEST

Vdsi@ATT.Net
PHONE : (361) 299-9900 FAX : (361) 299-1155
E-mail : cc@chemtexas.com
Web Site : www.chemtexas.com

CLIENT: Valley Dewatering Services, Inc ATTN : Mr. Justin Atkinson	ADDRESS: Valley Dewatering Services, Inc PO Box 489 Van Vleck, TX 77482-0489	PHONE : 979) 245-5656 E. Mail : zymme@aqua-zyme.com (956)376-8229
BILLING CONTACT/ADDRESS: (if different from above)	P. O. #: / PROJECT NO: / PROJECT: Vally Dewatering Monitoring	SITE/LOCATION: Valley Dewatering Services, Inc. 120 Patricia St.
SAMPLE (S) COLLECTED BY: (Print Name) Ricky Vasquez	Expected Turnaround Time 2-4 hr. Rush__ 24 hr. Rush___ 48 hr. Rush___ 5-7 days _X_ 7-14days___	REQUESTED ANALYSES

Sample Matrix Codes: Drinking Water: **DW;** Groundwater: **GW**; Liquid Waste: **LW;** Oil(s): **O;** Paint Chips: **PC;** Sand: **Sn.** Sludge: **SL:** Soil/Solid: **S;** Solid Waste: **SW;** Trip Blank: **TB;** Water: **W;** Wipes: **WP;** Wastewater: **WW**

CHEMTEX #	SAMPLE IDENTIFICATION	COLLECTION Date	COLLECTION Time	Sample Matrix	Composite/ Grab	Chemical Preservative	Sample Containers No	Sample Containers Size (oz)	Sample Containers Type (Glass/ Plastic)	CBOD, TSS	NH_3-N	COD	Oil &Grease	Preserved			
C22070130A	Vally Dewatering	7-12-22	12:30 PM	WW	G	-	1	32 oz	P	X							
C22070130B	Vally Dewatering	"	"	WW	G	H_2SO_4	1	8 oz	P		X						
C22070130C	Vally Dewatering	"	"	WW	G	H_2SO_4	1	8 oz	P			X					
C22070130D	Vally Dewatering	"	"	WW	G	H_2SO_4	1	32 oz	G				X				
C22070130E	"	"	"	WW	G	—	2	32	G					Y			

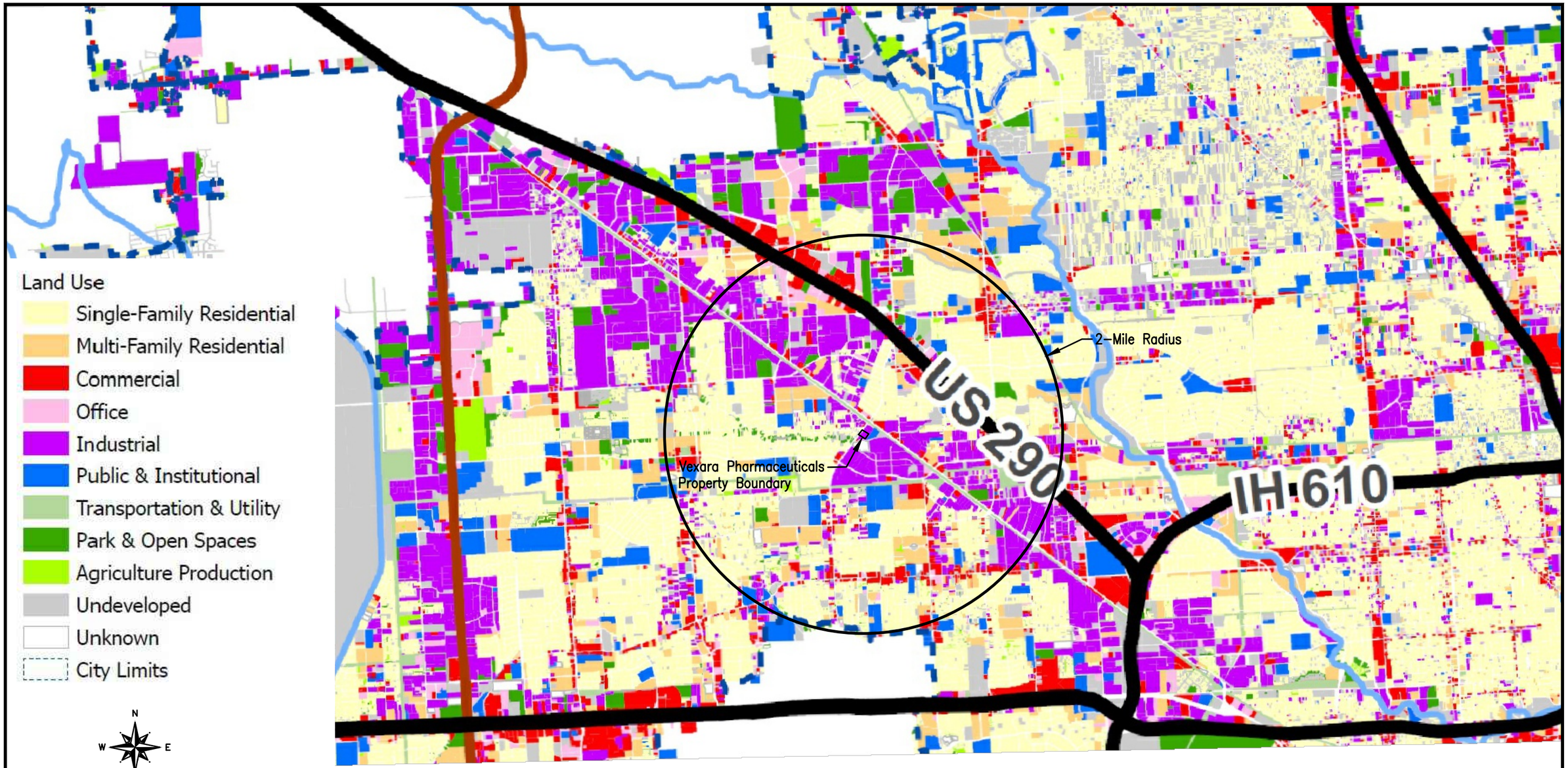
Special Instructions: Samples are preserved on ice after collection and transported in ice chest. Regulatory ----------●----------: non-Regulatory ----------X---------- RV

Relinquished By:	Date/Time: 7-13-22 11:10 PM	Received By:	Date/Time: 7/13/22 11:10 am
Relinquished By: Ricky Vasquez	Date/Time:	Received By:	Date/Time:

Facilities also available at: 3082 25th Street, Port Arthur, TX 77642; Phone: 409-983-4575; Fax: 409-982-1522; E-mail: pa@chemtexas.com: and 138 S. Cities Service Hwy., Sulphur, LA 70663: Phone 337- 626-2121; Fax: 337-626-2126: E-mail: lc@chemtexas.com

NOTICE / DISCLAIMER: Client has asked Chemtex to perform the analyses listed above, on the samples described herein. Any analytical results, opinions or interpretations which may be provided to Client are based upon the information and material supplied by Client, for whose exclusive and confidential use a report will be made. No person or entity other than Client may rely on any such report. Any such reliance will be unjustified. Any person, other than Client, that reads or relies on any such report, does so at his or her own risk. Chemtex makes no warranty or representation, express or implied, of any type, and expressly disclaims same. Any report provided by Chemtex shall not be reproduced, in whole or in part, without the written approval of Chemtex. In no event shall Chemtex be responsible for any damage greater than the amount that it received for performing some or all of the analyses listed above.

2.4.1 a-e: Land Use Map, ,1-Mile & 6-Mile Maps, Community Growth Trends & Harris County Economic Highlights 2025, Major Developments

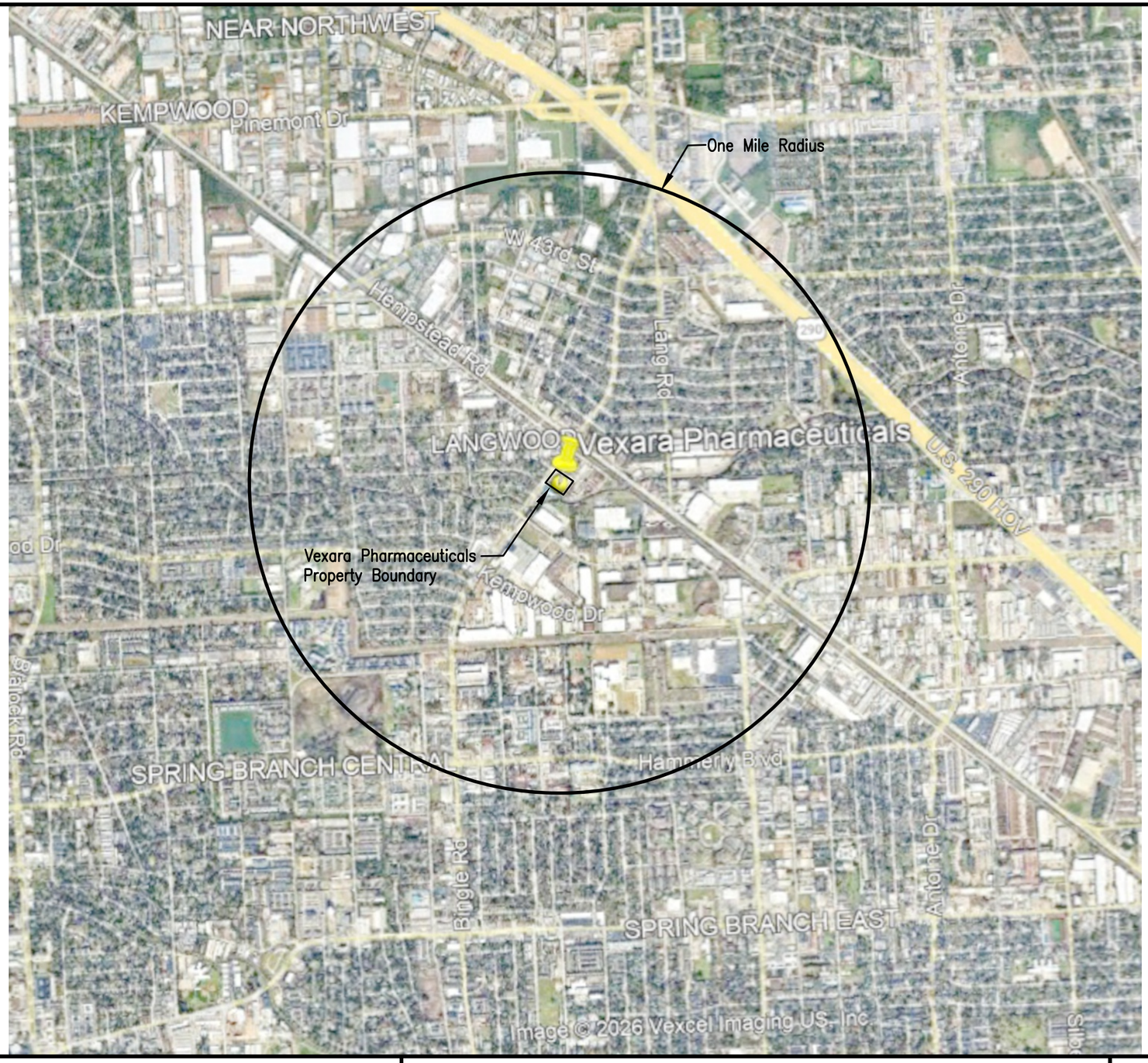


SCALE: 1"= 1 mile

Source: City of Houston Land Use Map,
Planning & Development Dept, 01/2024

Vexara Pharmaceuticals LLC Houston Harris County, TX	Figure 2.4.1a Land Use Map	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Revised 4/29/2026



N
W E
S

SCALE: 1"=2,000'

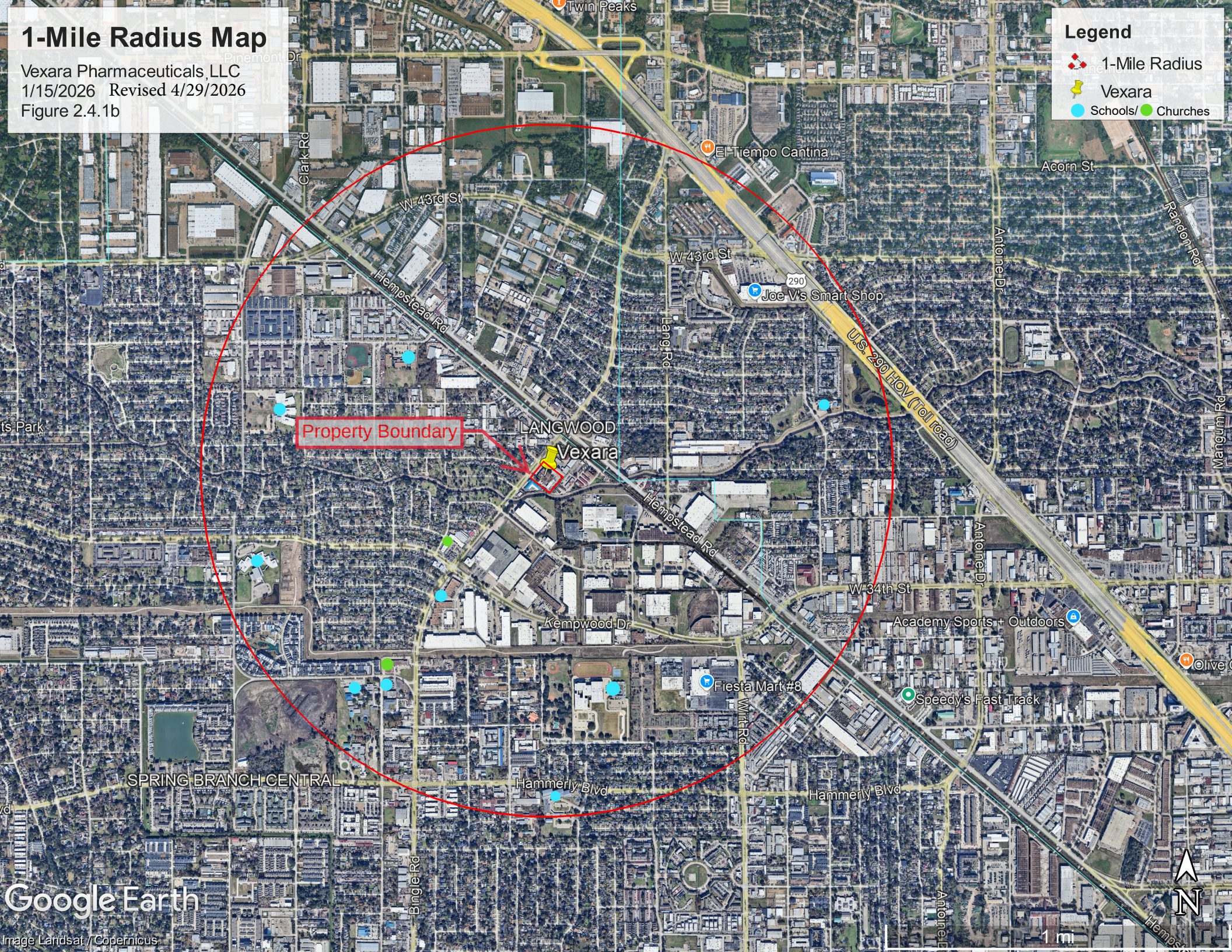
Source: Google Earth Imagery, 11/2023

Vexara Pharmaceuticals LLC Houston Harris County, TX	Figure 2.4.1b-R Aerial Map with One Mile Radius	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Revised 4/29/2026

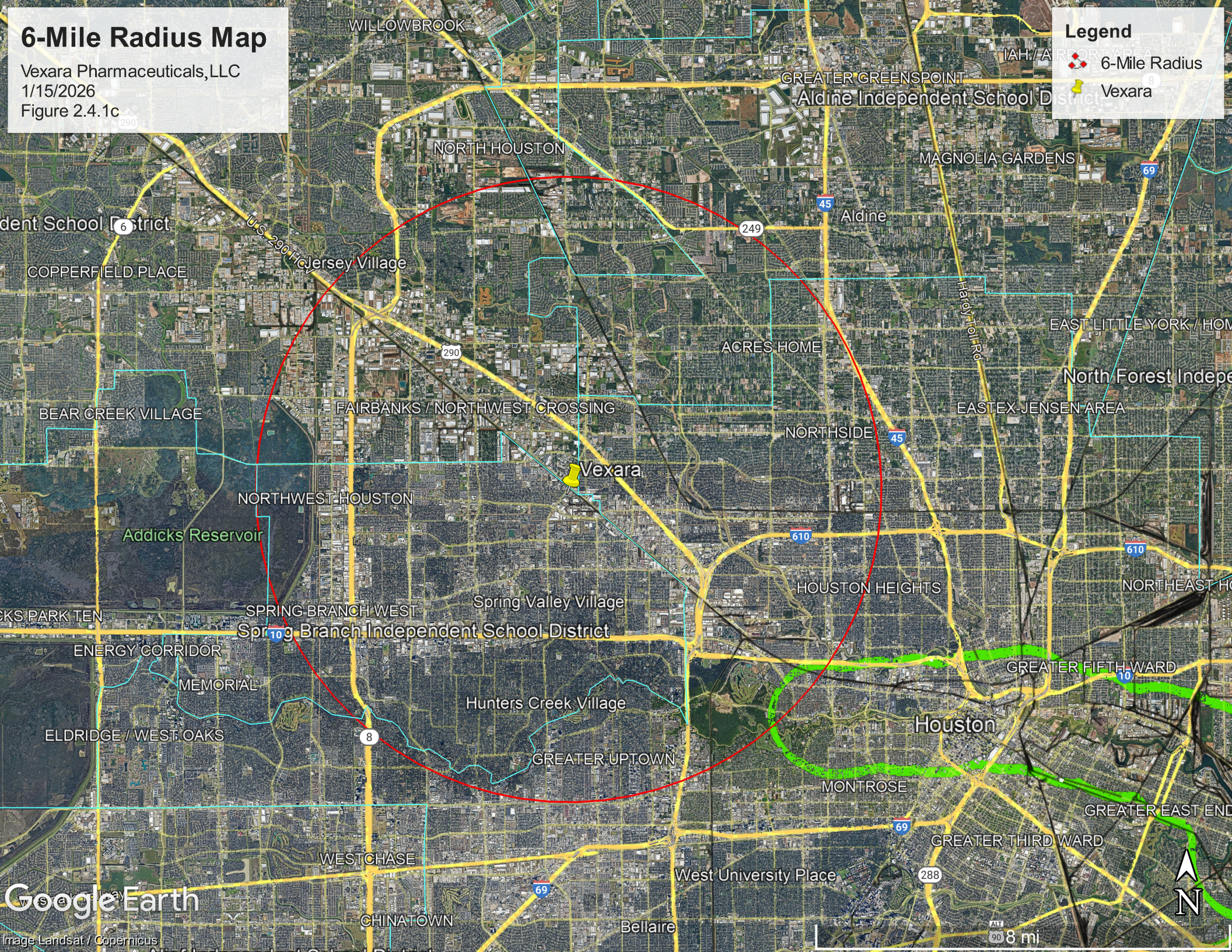
1-Mile Radius Map

Vexara Pharmaceuticals, LLC
1/15/2026 Revised 4/29/2026
Figure 2.4.1b



6-Mile Radius Map

Vexara Pharmaceuticals,LLC
1/15/2026
Figure 2.4.1c



AT A GLANCE
PRECINCT 4

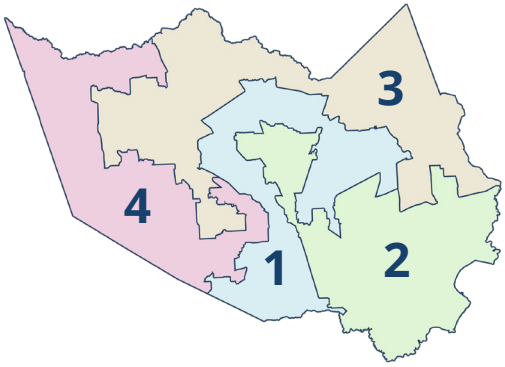
Commissioner
Lesley Briones

406 square miles including
34,101 acres of greenspace

Home to: the Energy Corridor and Texas' largest shopping mall: The Galleria

Geography

Harris County Commissioner Precincts



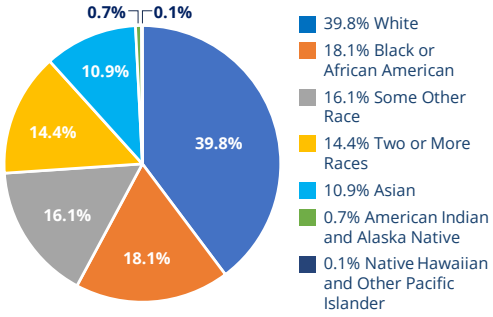
Population

1.2 Million
Total Population

36.7%
Foreign Born

34.4 Years
Median Age

Race & Ethnicity



42.6% Hispanic or Latino
(of any race)

Education

82.0%
High School Graduate or Higher

37.1%
Bachelor's Degree or Higher

Labor Force

716,137
Total Employees

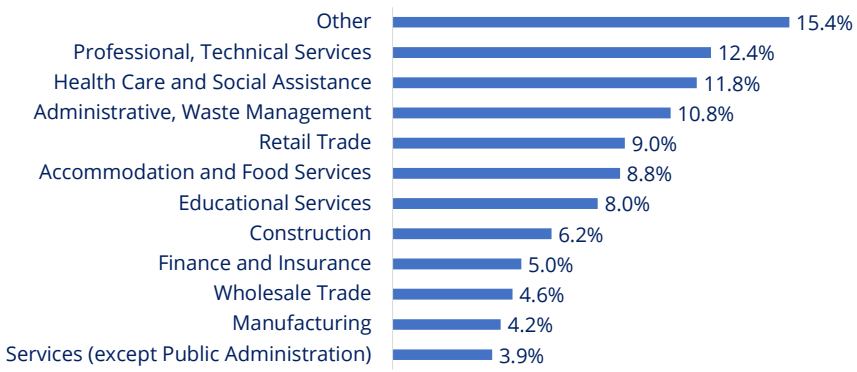
$66,600
County Average Annual Wage

20,316
Engineers & Architects

29,065
Healthcare Practitioners

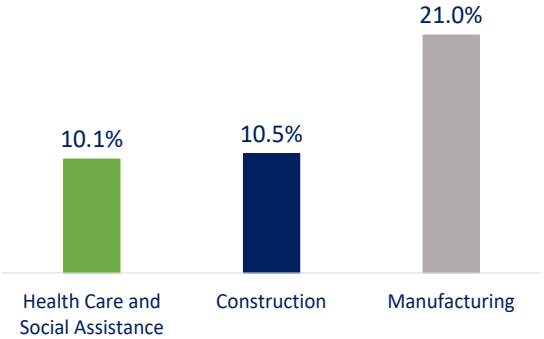
Industry

Employment by Industry



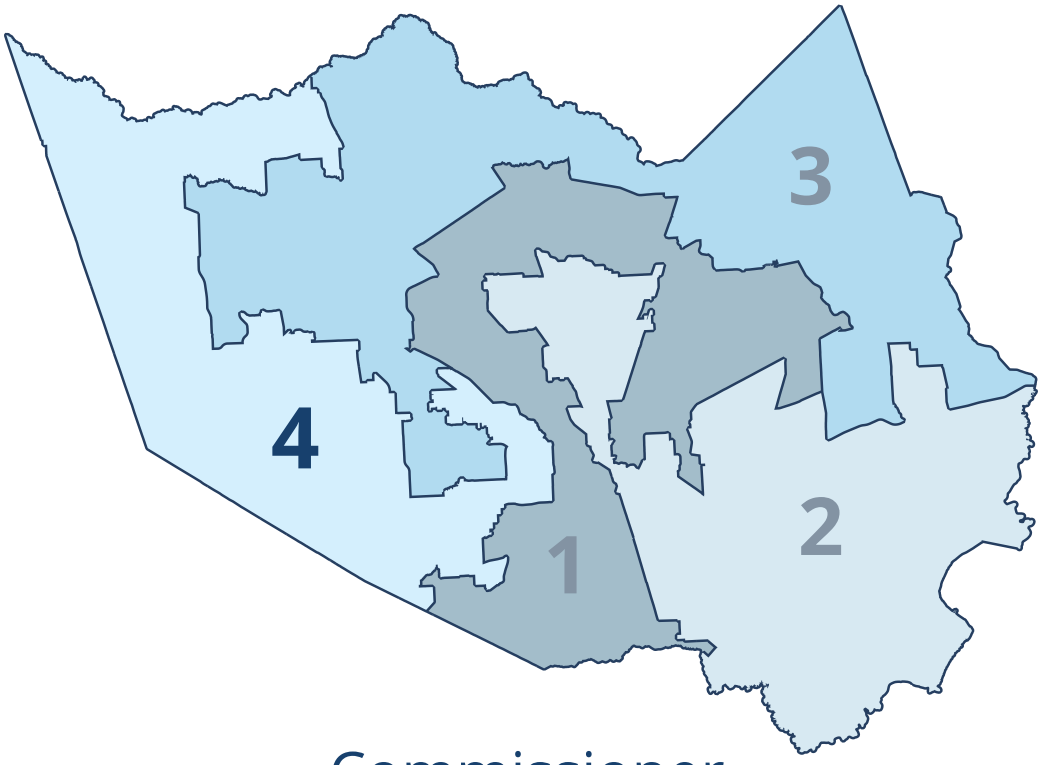
Employment by Growth

2018 to 2023



Sources: Harris County, JobsEQ (ACS 2018-2022, QCEW 2023Q4). Note: Sums may not total due to rounding. *7/2024*

HARRIS COUNTY
PRECINCT



Commissioner
Lesley Briones

Figure 2.4.1e
Major Development within a 5-mile radius from Vexara Pharmaceuticals

South

Retail & Lifestyle Development – "The Aviary"

A major retail project is underway at **1045 Bingle Rd, Houston, TX 77055**, part of the Spring Branch trade area near Memorial City.

- **The Aviary at Spring Valley Village** will feature **25,080 sq ft of retail space** in a contemporary, two-story design with expansive glass storefronts LoopNet.
- The site offers **two dedicated patio spaces** for outdoor dining and lifestyle concepts, with prime frontage at I-10 and Bingle Road for high visibility.
- Spaces range from 6,000–6,540 sq ft, with rental rates around $38–$55 per sq ft annually, available from February 2027 LoopNet.
- The project is positioned to attract boutique retailers, cafés, and wellness operators seeking an upscale, indoor-outdoor experience.

Spring Valley, TX – Official Website

Regional Development Context

Hunters Creek Village is part of the broader Houston–Memorial Villages area, which is seeing **mixed-use and tech-driven growth**. Nearby, developers like Cawley Partners are acquiring large tracts of land (e.g., 5,200-acre South Creek Ranch near Ferris) for residential, data center, and advanced manufacturing projects Chron. While not directly in Hunters Creek Village, these projects influence regional housing demand, infrastructure upgrades, and economic activity that can impact the village.

East

Swift BLDG (Former Swift & Co. Refinery Complex)

A landmark adaptive reuse project turning a 1909–1917 cottonseed oil refinery and later meatpacking plant into a **60,000 sq. ft. mixed-use hub** along the Heights Hike-and-Bike Trail. The redevelopment will feature:

- **Five chef-driven restaurants** with trail-facing patios
- **Creative offices** in renovated lofts above retail spaces
- **Revamped greenspace** with landscaped pathways and pedestrian-friendly design

- **Rooftop cocktail lounge** and multiple outdoor areas
- **Pre-leasing** includes a local restaurant, ice cream shop, wellness spa, fitness studio, real estate firm, and medical spa kiecke-becker.com**+1**
  Construction began late 2024, with completion expected Q2 2026 and tenant openings in 2027. The site is protected as a historic landmark and is pursuing historic tax credits Triten Real Estate Partners.

COOP @ Heights
A **184-unit multifamily residential project** in the Heights, part of Berkadia's Central Houston construction pipeline. It offers a mix of housing types and is designed to integrate with the neighborhood's walkable, mixed-use environment Berkadia.

Other Notable Heights Projects

- **Elev8 Downtown** – 372 units, a large-scale residential tower in the Heights district Berkadia.
- **The Langley** – 200 units, another multifamily addition in the Heights Berkadia.
- **Residences on Westheimer** – 229 units, a high-rise residential project near the Heights boundary Berkadia.
- **The RO Parcel** – Multiple parcels with mixed-use and residential potential Berkadia.

North

Inwood Forest Regional Detention Basin Project

- **Purpose:** Major flood protection and stormwater management for the White Oak Bayou and Vogel Creek watersheds.
- **Scale:** $81.9M budget, starting Winter 2023, completion Spring 2026 Houston Public Works.
- **Impact:** Will protect over 4,400 structures from flooding, create 12 detention basins with ~1,200 acre-feet of storage, and convert the former Inwood Forest Golf Course into a resilient green space Houston Public Works.
- **Amenities:** Trails, trailheads, exercise stations, benches, signage, and landscaping in partnership with the Houston Parks Board Houston Public Works.

Inwood Recreation Project – Phase One

- **Focus:** 1-mile Vogel Creek Greenway with recreation and landscaping elements Houston Parks Board.

- **Integration:** Designed to be built alongside the detention basins, maximizing efficiency and community benefit.
- **Community Engagement:** Supported by Be Well™ Acres Homes to ensure equitable, inclusive park stewardship and long-term usage Houston Parks Board.

Greater Inwood Neighborhood Resilience Plan

- **Context:** Developed in response to Hurricane Harvey flooding, Winter Storm Uri impacts, and aging infrastructure City of Houston eGovernment Center.
- **Goals:** Implement 50 neighborhood resilience plans by 2030, addressing flood risk, heat severity, winter vulnerability, and economic opportunity.
- **Approach:** Combines people-based and place-based strategies, with community input from public meetings, surveys, and working sessions City of Houston eGovernment Center.

Stormwater Detention and Flood Control

- **C-59 Inwood Forest Stormwater Detention Basin Project** (Harris County Flood Control District) is part of the broader flood mitigation strategy, using structural tools like detention basins to reduce flood risk Flood Control District.

West

Constellation Mills Road Industrial Park
Constellation Real Estate Partners is developing a **422,452 sq. ft. industrial park** on a 37-acre site at 8175–8225 Mills Road. It will include a 334,447 sq. ft. cross-dock building and an 88,005 sq. ft. front-loading building, with 32–36 ft. clear heights, combined parking for 268 cars and 91 trailers. Construction is set to begin in July 2026 and finish in Q2 2027 REBusinessOnline.

Texas High-Speed Rail Houston Station
The long-abandoned **Northwest Mall** (45 acres) is being demolished to make way for the Houston terminus of the proposed **Texas high-speed rail line** to Dallas. The project aims for passenger travel in under 90 minutes. Demolition is expected to take about 12 months, with plans for a world-class multi-use site beyond the rail station Click2Houston**+1**.

Innerbelt Northwest Logistics Park (Phase Two)
Transwestern is building **1.37 million sq. ft. of Class A industrial space** in Phase Two of Innerbelt Northwest Logistics Park. The four-building phase (deliverable Q3 2026) includes

pre-leased and available facilities for logistics, distribution, and manufacturing. The Northwest submarket is one of Houston's most active industrial corridors Transwestern.

Ingrasys Technology USA Facility
Taiwan-based **Ingrasys Technology USA** (Foxconn subsidiary) plans a **$20M, 73,687 sq. ft.** tech facility off Fairbanks North Houston Road. The site is part of a larger 1.02M sq. ft. industrial park and will produce AI accelerators and server equipment, aligning with Apple and Nvidia's nearby expansions Chron.

Toro District Mixed-Use Development
The **Houston Texans** are developing an **83-acre mixed-use "Toro District"** in Bridgeland. It will include the team's new headquarters and practice facility, two new bridges, expanded roadways, drainage improvements, sidewalks, parks, a shopping center, sports training facilities, and a county services hub. Funded via a Tax Increment Reinvestment Zone, it's projected to create over 17,000 jobs Click2Houston.

Northwest 99 Business Park
Clay Development & Construction is building a **2.3M sq. ft. business park** on 172 acres at the Grand Parkway/SH99 and Mueschke Road intersection. Initial speculative buildings include a 425,360 sq. ft. distribution facility and a 70,000 sq. ft. manufacturing building, targeting logistics, last-mile distribution, and light manufacturing My Neighborhood News.

5/5/2026

2.4.2: City Coordination Letters & Council of Government Email

Figure 2.4.2

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO · STEPHENVILLE · ARTESIA

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
203 East Main Street
Artesia NM 88210

January 28, 2026

Via *Fed-Ex*

Houston Permitting Center
1002 Washington Avenue
Houston, TX 77002

Re: TCEQ Type V Municipal Solid Waste Permit Application Coordination
Vexara Pharmaceuticals LLC
Houston, Harris County, Texas

To Whom it May Concern,

Enviro-Ag Engineering, Inc. is preparing an application to the Texas Commission on Environmental Quality (TCEQ) for a Type V Municipal Solid Waste (MWS) permit for operation of a municipal liquid waste processing facility. Vexara Pharmaceuticals LLC will be located on 2.93 acres at 3300 Bingle Road, Houston, TX 77055. The facility will consist of an enclosed building. The site is located at Latitude 29.823804 and Longitude -95.494699. Please refer to the enclosed location map.

The facility's property is zoned for commercial use. The surrounding land use is comprised of industrial, commercial and residential properties. The facility will dewater grease, grit and household septage waste. The proposed plan is to have the liquids drain to the City of Houston sewage treatment system via underground lines. The facility will be applying for any required City of Houston permits and will comply with the conditions within these permits. This process reduces the weight and volume making it easier to store and dispose of in bulk amounts. The solids will be stored for a short period of time (no more than 24 hours) until the filter box container is full of the separated solids and then it will be transported to a landfill or composted.

This letter is to request a letter of confirmation with the City of Houston. The information will be used to document coordination with your agency, to show compliance with the Regional Solid Waste Plan and the local Council of Governments. Please e-mail you response to me at [redacted]

If you have any questions or require additional information, please contact me at 806-353-6123 or via the email provided above.

Sincerely,

Amy Peoples
Enviro-Ag Engineering, Inc.

Enclosures

Cc: Vexara Pharmaceuticals LLC
EAE file

Figure 2.4.2b

Outlook

Amy Peoples shared the folder "Vexara - Council of Governments" with you

From Amy Peoples [redacted]
Date Mon 3/2/2026 2:11 PM
To [redacted]

Amy Peoples shared a folder with you

Mr. Wemple,
Enviro-Ag Engineering, Inc. in Amarillo is preparing
an application to the Texas Commission on Environmental Quality (TCEQ) for a
Type V Municipal Solid Waste (MWS) permit for operation of a municipal liquid
waste processing facility, Vexara Pharmceuticals.
The information will be used to document
coordination with the local Council of Governments.
Please e-mail you response to me at apeoples@enviroag.com.

Thanks,
Amy Peoples

Vexara - Council of Governments

This link only works for the direct recipients of this message.

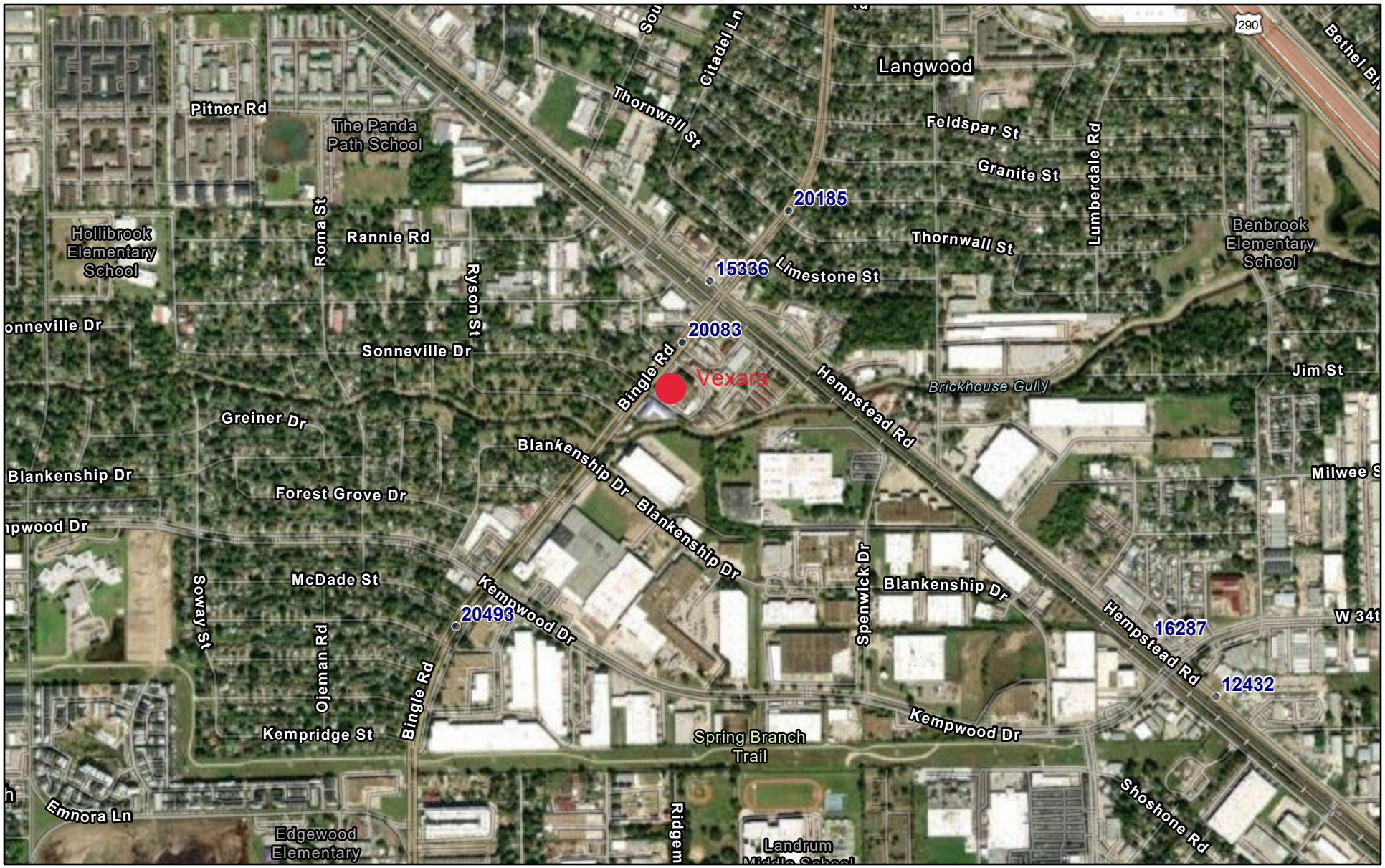
Open

This email is generated through Enviro-Ag Engineering's use of Microsoft 365 and may contain content that is controlled by Enviro-Ag Engineering.

2.5.1: Traffic Counts

Figure 2.5.1

Traffic Count Map



1/15/2026

- TxDOT Annual Average Daily Traffic Counts (Public)
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

1:13,847

0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

2.5.2: TX DOT Travel Maps

Houston Travel Map

Figure 2.5.2
1/15/2026

N

Vexara
HOUSTON
Jersey Village
North Houston
Aldine
Humble
Kingwood
Huffman
Crosby
Barrett
Sheldon
Highlands
Cedar Bayou
Channelview
Jacinto City
Galena Park
Baytown
Deer Park
La Porte
PASADENA
South Houston
Morgans Point
Beach City
Shoreacres
Seabrook
Taylor Lake Village
El Lago
Clear Lake Shores
Nassau Bay
Kemah
Webster
Friendswood
Pearland
Brookside Village
Almeda
HARRIS COUNTY
Fresno
Missouri City
Stafford
Sugar Land
Meadows Place
Bellaire
Southside Place
West University Place
Piney Point Village
Hunters Creek Village
Bunker Hill Village
Hedwig Village
Hilshire Village
Spring Valley
Addicks
Alief
Harris
Bayou
Bear Creek Park
Addicks Reservoir (Flood Control)
Barker Reservoir (Flood Control)
Bush Intercontinental Airport
Sheldon Lake State Park
Sheldon Reservoir
Lake Houston
Alexander Deussen Park
Eisenhower Park
Muleshoe Lake
George White Lake
Highlands Reservoir
Bird Lake
Bear Lake
Whites Lake
Burnett Bay
Crystal Bay
Scott Bay
Upper San Jacinto Bay
Alexander Island
Goat Island
Free Ferry
Tabbs Bay
Hog Island
Atkinson Island
Sylvan Beach County Park
Armand Bayou
Taylor Bayou
Mud Lakes
Clear Lake
Galveston Bay
Dickinson Bay
Moses Lake
Dollar Bay
Shell Island
Snake Island
Swan Lake
Pelican Island
Tiki Island
Jones Bay
Basford Bayou
Deer Islands
Offatts Bayou
Greens Lake
West Bay
Gulf of Mexico
Texas City Dike
Bolivar Peninsula
Port Bolivar
Crystal Beach
Free Ferry Galveston-Port Bolivar 24 Hour Service
PELICAN SPIT MILITARY RESERVATION
Intracoastal Waterway
GALVESTON
TEXAS CITY
La Marque
Hitchcock
Dickinson
League City
Santa Fe
Algoa
Hillcrest Village
Alvin
Liverpool
Manvel
Arcola
Booth
Texas A&M Univ at Galveston
Univ of Texas Med Branch at Galveston
Galveston College
Convention & Visitor Bureau
Lee College
San Jacinto College
San Jacinto College North
San Jacinto College South
Alvin Community College
College of the Mainland
Univ of Houston Research
Univ of Houston at Clear Lake City
Univ of St Thomas
Rice Univ
Texas Southern Univ
Univ of Houston
Houston Baptist University
San Jacinto Battleground
La Porte Mun Airport
Ellington Field
William P Hobby Airport
Schoales Mun Airport
NASA (LYNDON B JOHNSON SPACE CENTER)
North Harris County College
National VA Cemetery
TxDMV Office
TxDOT District Office
Memorial Park
City Hall
Civic Center
Police
Fire
Library
Post Office
Med Center
Toll Bridge
Free Tunnel
Brazoria County
Fort Bend County
Chambers County
Galveston County
Harris County
Sam Houston Tollway
Beltway 8
I-10
I-45
I-610
I-69
US 90
US 59
SH 146
SH 225
SH 288
SH 99
Loop 610
Loop 8
Loop 610 West
Loop 610 North
Loop 610 South
Loop 610 East
Westheimer
Kirby
Shepherd Dr
Main St
Broadway St
Almeda Rd
Gessner Dr
Fuqua Rd
Spencer Rd
Little York Rd
Tidwell
Crosstimbers St
Kelley
North Loop
Hardy Toll Rd
Hardy Airport Connector Toll Rd
Greens Rd
Rankin Rd
Spears Rd
Gears Rd
Aldine Bender Rd
Lauder Rd
Mt Houston Rd
North Sam Houston Pkwy
Lake Houston Pkwy
Deussen Pkwy
Garrett Rd
Crosby Fwy
Beaumont Hwy
Wallisville Rd
Market St
Baytown East Fwy
Pasadena Fwy
La Porte Fwy
Red Bluff Rd
Bay Area Blvd
Nasa Pkwy
Galveston Rd
Gulf Fwy
Edgebrook Dr
Fairmont Pkwy
Broadway
Seawall
Seawolf Pkwy
Port Rd
Bayport Blvd
Texas Ave
Texas Av
Emmett F Lowry Expwy
25th Av N
9th Av N
Bay St
Mainland Dr
Independence Pkwy
Decker Dr
Lynchburg Rd
Crosby-Lynchburg Rd
Highland
Mustang
Chocolate Bayou
Duck Res
Monsanto Reservoir
Mustang Lake
Halls
Clear Creek
Dickinson Bayou
Armand Bayou
Basford Bayou
Taylor Bayou
Greens Bayou
Sims Bayou
Brays Bayou
Keegans Bayou
Oyster Creek
Buffalo Bayou
Langham Cr
Hunting Bayou
Carpenter Bayou
Canal
Lynchburg
Goose Creek
Cedar
Gessner
Antoine
Jones Rd
Cypress Rd
Louetta Rd
Spring
Grant Rd
Montgomery Rd
Kuykendahl Rd
Stuebner Airline
Westfield
Townsend Blvd
Lee Rd
Houston
Beaumont
Harris
Canal
Main St
Lake Houston Pkwy
Sheldon Rd
Wallisville Rd
Market St
Baytown East Fwy
Pasadena Fwy
La Porte Fwy
Red Bluff Rd
Bay Area Blvd
Nasa Pkwy
Galveston Rd
Gulf Fwy
Edgebrook Dr
Fairmont Pkwy
Broadway
Seawall
Seawolf Pkwy
Port Rd
Bayport Blvd
Texas Ave
Texas Av
Emmett F Lowry Expwy
25th Av N
9th Av N
Bay St
Mainland Dr
Independence Pkwy
Decker Dr
Lynchburg Rd
Crosby-Lynchburg Rd
Highland
Mustang
Chocolate Bayou
Duck Res
Monsanto Reservoir
Mustang Lake
Halls
Clear Creek
Dickinson Bayou
Armand Bayou
Basford Bayou
Taylor Bayou
Greens Bayou
Sims Bayou
Brays Bayou
Keegans Bayou
Oyster Creek
Buffalo Bayou
Langham Cr
Hunting Bayou
Carpenter Bayou
Canal
Lynchburg
Goose Creek
Cedar
Gessner
Antoine
Jones Rd
Cypress Rd
Louetta Rd
Spring
Grant Rd
Montgomery Rd
Kuykendahl Rd
Stuebner Airline
Westfield
Townsend Blvd
Lee Rd
Houston
Beaumont
Harris
Canal
Main St

TxDOT Districts

1/15/2026

Houston District

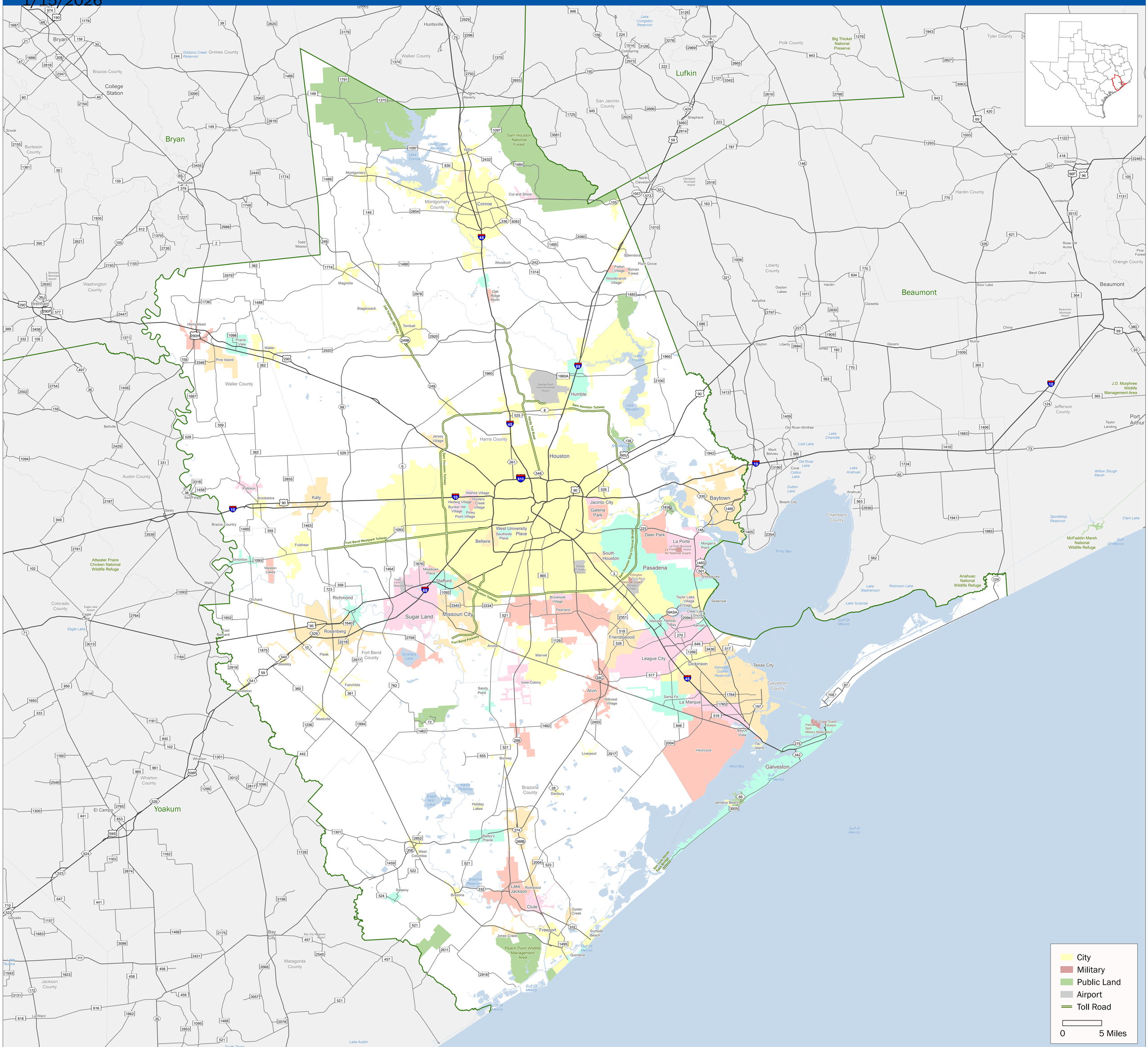


Figure 2.5.2

© 2024 TxDOT | Transportation Planning and Programming Division | December 05, 2024

Texas Department of Transportation

2.5.3: TX DOT Coordination Letter

Figure 2.5.3

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO · STEPHENVILLE · ARTESIA

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
203 East Main Street
Artesia NM 88210

January 28, 2026

Via *Fed Ex*

Mr. Hamoon Bahrami, P.E.
Area Engineer
Texas Department of Transportation
West Harris
14838 NW Freeway (US 290)
Houston, Texas 77040

Re: TCEQ Type V Municipal Solid Waste Permit Application Coordination
Vexara Pharmaceuticals LLC
Houston, Harris County, Texas

Dear Mr. Bahrami,

Enviro-Ag Engineering, Inc. is preparing an application to the Texas Commission on Environmental Quality (TCEQ) for a Type V Municipal Solid Waste (MWS) permit for operation of a municipal liquid waste processing facility. Vexara Pharmaceuticals LLC will be located on 2.93 acres at 3300 Bingle Road, Houston, TX 77055. The facility is proposing a building located on the existing cement pad just off Bingle Road. Truck traffic will access the facility via Hempstead Hwy from the North and then exit onto Bingle Road and turn into the existing driveway on the west side of the property. The site traffic will not use any residential streets. Bingle Road is a paved roadway. There are an estimated 10 vehicles/day generated by the facility to the normal traffic patterns. The site is located at Latitude 29.823804 and longitude -95.494699. Please refer to the enclosed location map.

The facility's property is zoned for commercial use. The surrounding land use is comprised of commercial, industrial and residential properties. The facility will dewater grease, grit and household septage waste. The liquids will be pumped into a holding tank for visual inspection to ensure the process is functioning as designed before entering a sampling station for city inspection and on to the City of Houston wastewater treatment system via underground lines. The facility has contacted and will be applying for the required City of Houston permits and will comply with the conditions within those permits as well. This process reduces the weight and volume making it

easier to store and dispose of in bulk amounts. The solids will be stored for a short period of time (no more than 7 business days) until the filter box container is full of the separated solids and then it will be transported to an approved sanitary waste disposal landfill or composting facility in the Houston area.

This letter is to request a letter of confirmation 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 a[redacted]

If you have any questions or require additional information, please contact me at 806-353-6123 or via the email provided above.

Sincerely,

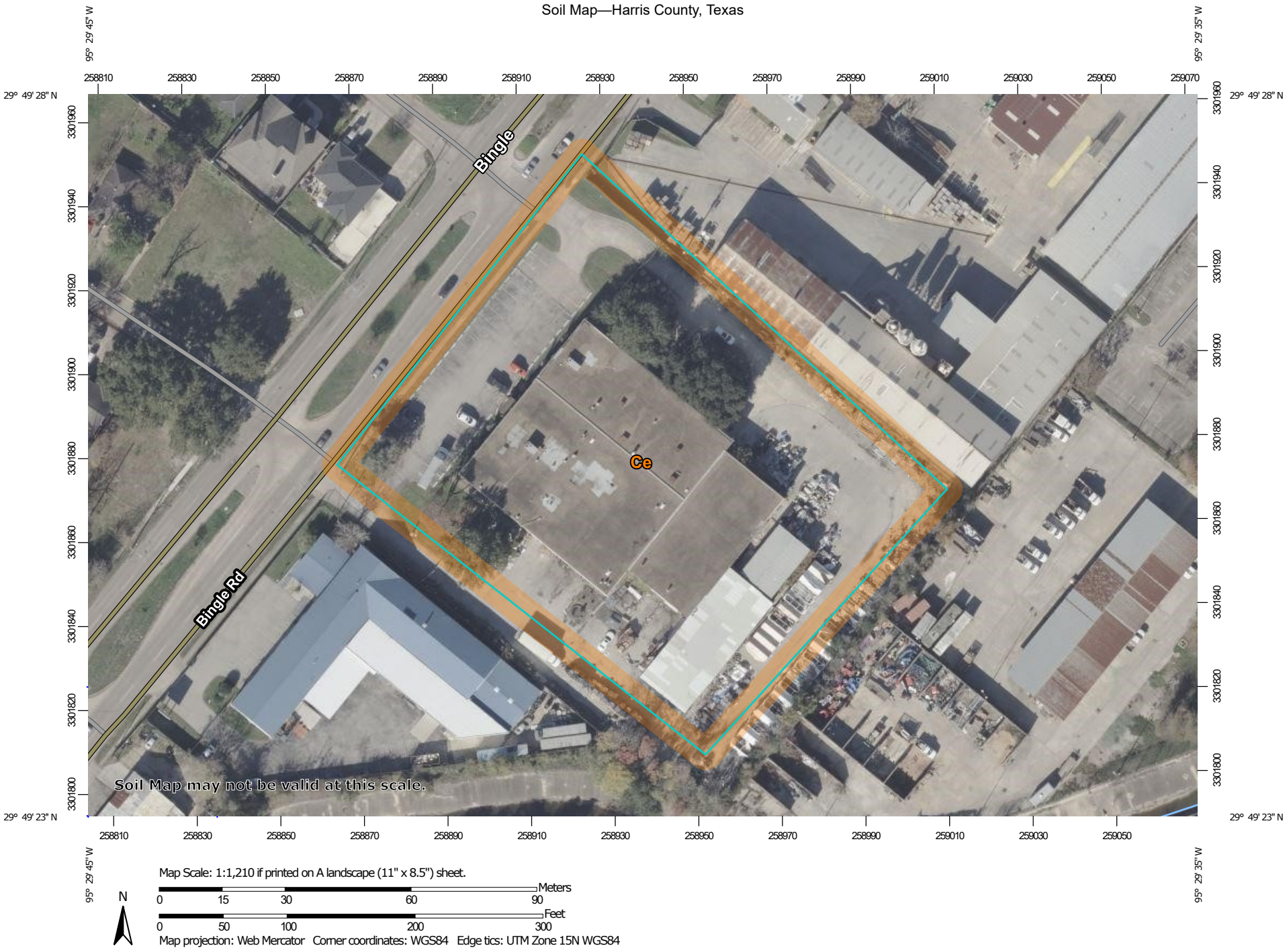
Amy Peoples
Enviro-Ag Engineering, Inc.

Enclosures

Cc: Vexara Pharmaceuticals LLC
EAE file

2.6.1: Soil Map & Map Unit Description

Figure 2.6.1


Soil Map—Harris County, Texas
95° 29' 45" W
95° 29' 35" W
29° 49' 28" N
29° 49' 23" N
258810
258830
258850
258870
258890
258910
258930
258950
258970
258990
259010
259030
259050
259070
3301960
3301940
3301920
3301900
3301880
3301860
3301840
3301820
3301800
Bingle
Bingle Rd
Ce
Soil Map may not be valid at this scale.
Map Scale: 1:1,210 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 15 30 60 90
Feet
0 50 100 200 300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Harris County, Texas
Survey Area Data: Version 27, Sep 4, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ce	Clodine-Urban land complex, 0 to 1 percent slopes	2.6	100.0%
Totals for Area of Interest		**2.6**	**100.0%**

Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The component descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the associated soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas (components) for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the soil components that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief)

Harris County, Texas

Map Unit: Ce—Clodine-Urban land complex, 0 to 1 percent slopes

Description Category: PHG

8E2 - WET UPLAND - Very deep to deep, wet, loamy uplands with possible depressed or ponded areas or seasonal water table; tight subsoils; medium natural fertility; Very high to high water holding capacity but poor plant-soil-moisture relationship; medium production potential.

Description Category: RNG

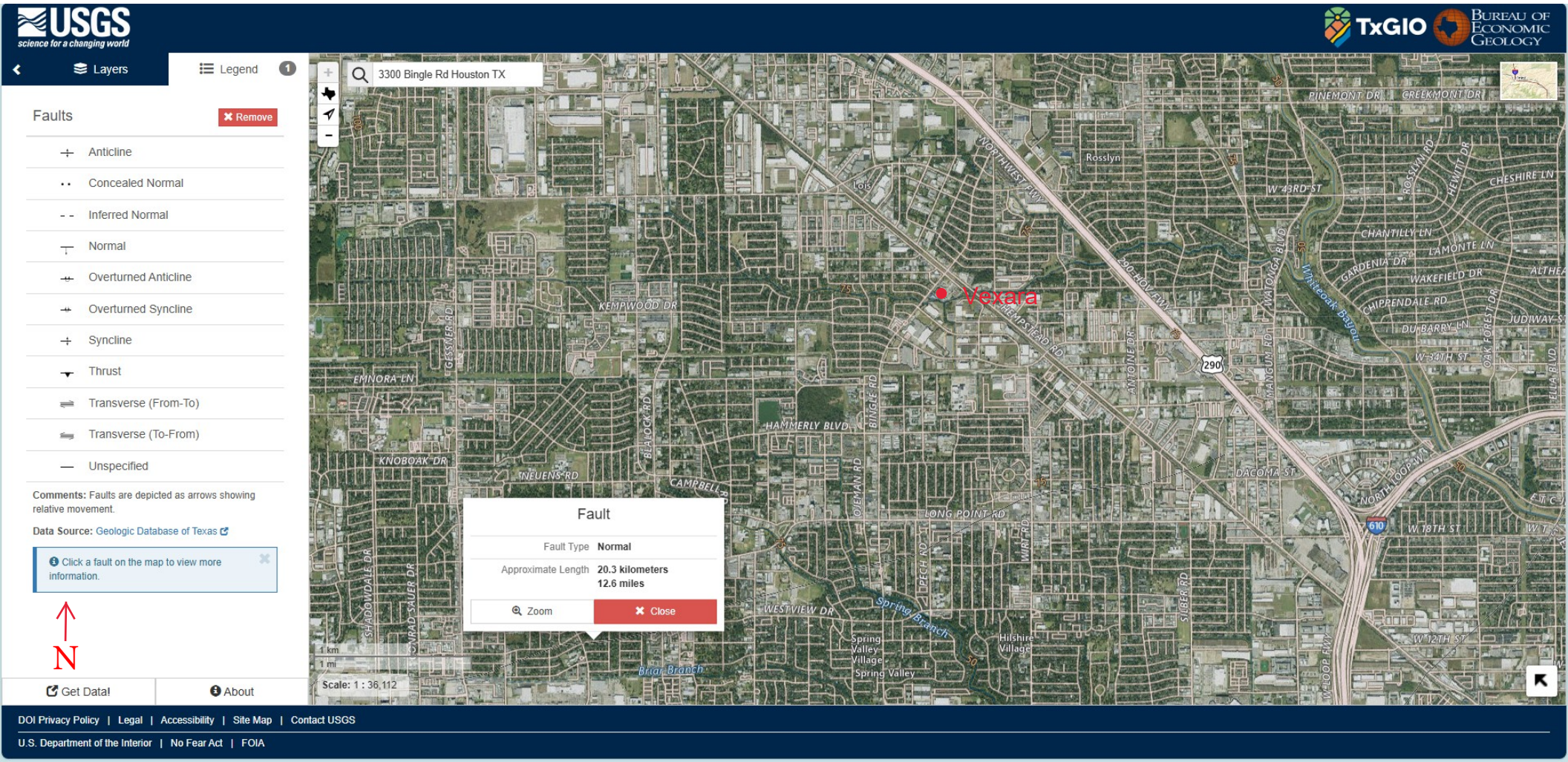
LOWLAND SITE - Deep, acid soils in low flats, poorly drained. Indigenously, a wet prairie including eastern gamagrass, maidencane, switchgrass, longtom, sedges and rushes, snakeroot, smartweed, camphorweed, coneflower, and sunflower. Sesbania, waxmyrtle, baccharis, chinese tallow, vaseygrass, smutgrass, and carpetgrass are invaders.

Data Source Information

Soil Survey Area: Harris County, Texas
Survey Area Data: Version 27, Sep 4, 2025

2.6.2: Fault Line Map

Fault Line Map



https://webapps.usgs.gov/txgeology/
Figure 2.6.2
1/19/2026

2.7.1: Texas Water Development Board Map

Figure 2.7.1

Vexara Pharmaceuticals

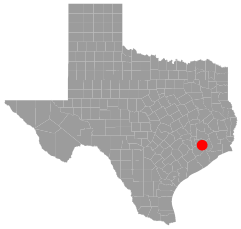
Texas Water Development Board

January 19, 2026

Well Reports

TWDB Groundwater

N



0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

1:4,514

Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap

The data in Water Data Interactive represents the best available information provided by the TWDB and third-party cooperators of the TWDB. The TWDB provides information via this web site as a public service. Neither the State of Texas nor the TWDB assumes any legal liability or responsibility or makes any guarantees or warranties as to the accuracy, completeness or suitability of the information for any particular purpose. The TWDB systematically revises or removes data discovered to be incorrect. If you find inaccurate information or have questions, please contact WDI-Support@twdb.texas.gov.

TEXAS WATER DEVELOPMENT BOARD

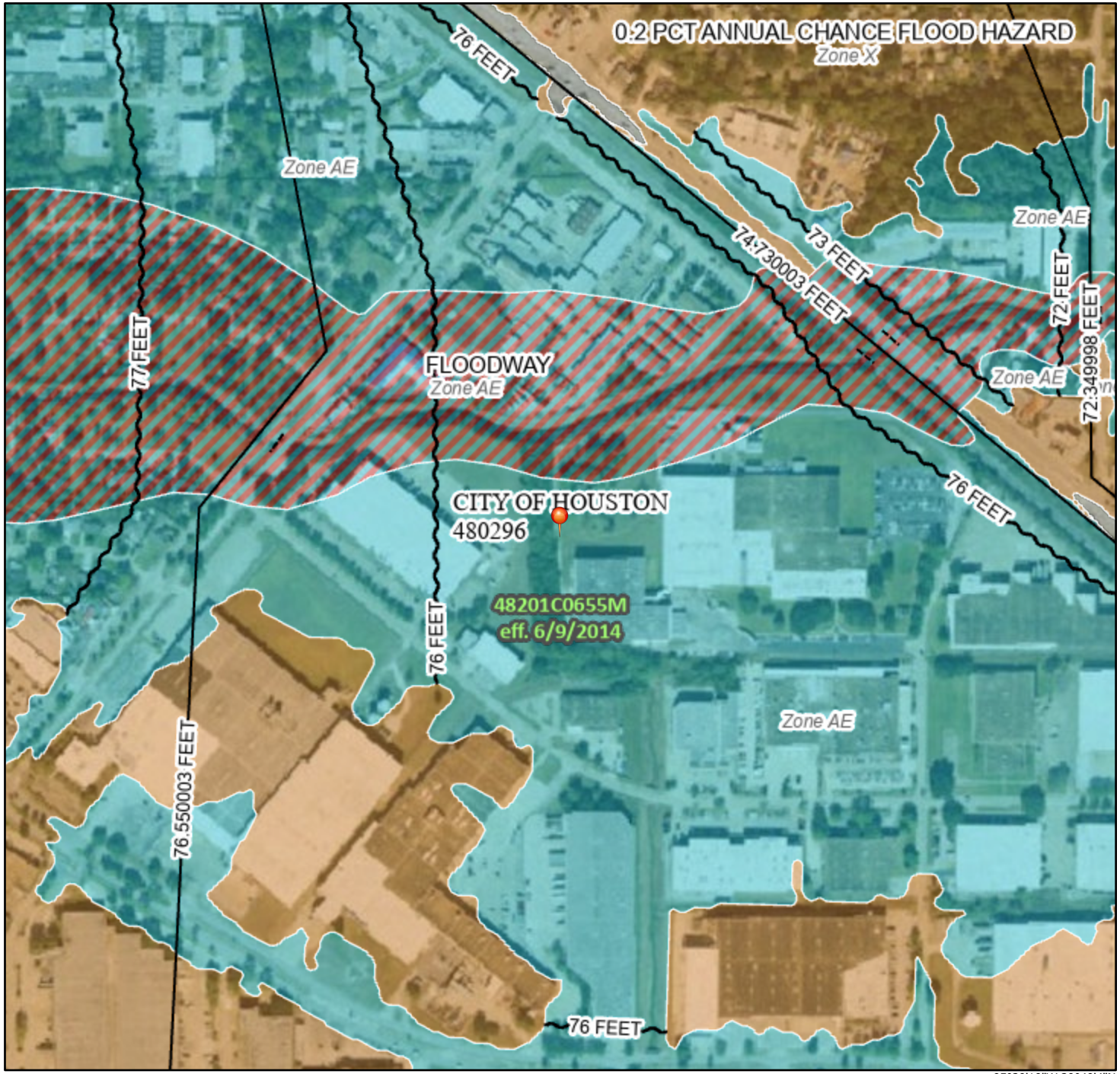
2.8.1: FIRM Map

Figure 2.8.1

National Flood Hazard Layer FIRMette

FEMA

95°29'56"W 29°49'35"N



95°29'19"W 29°49'4"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/19/2026 at 4:59 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

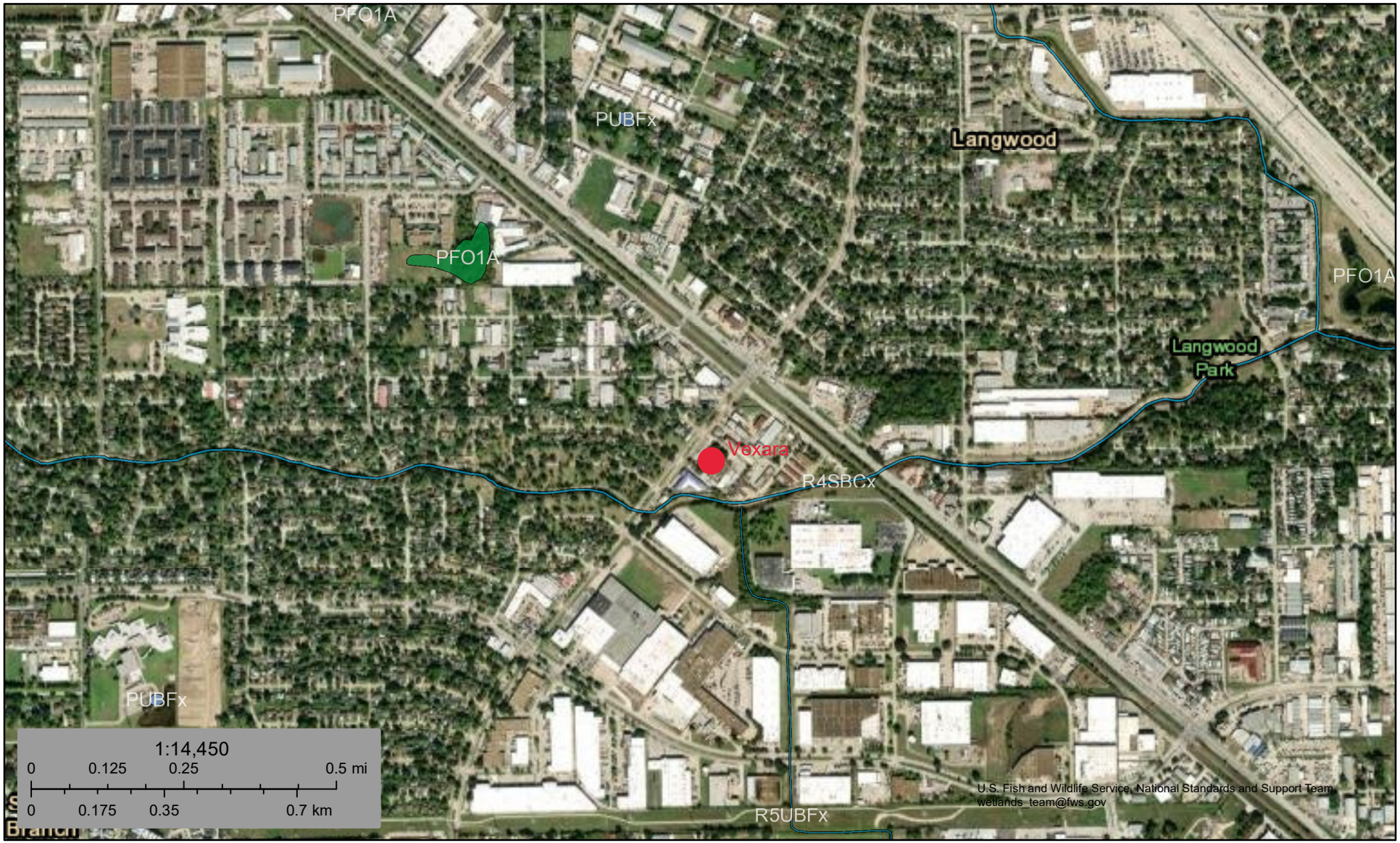
2.8.2: Wetland Map

U.S. Fish and Wildlife Service

National Wetlands Inventory

Figure 2.8.2 - Wetland Map

N



January 19, 2026

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

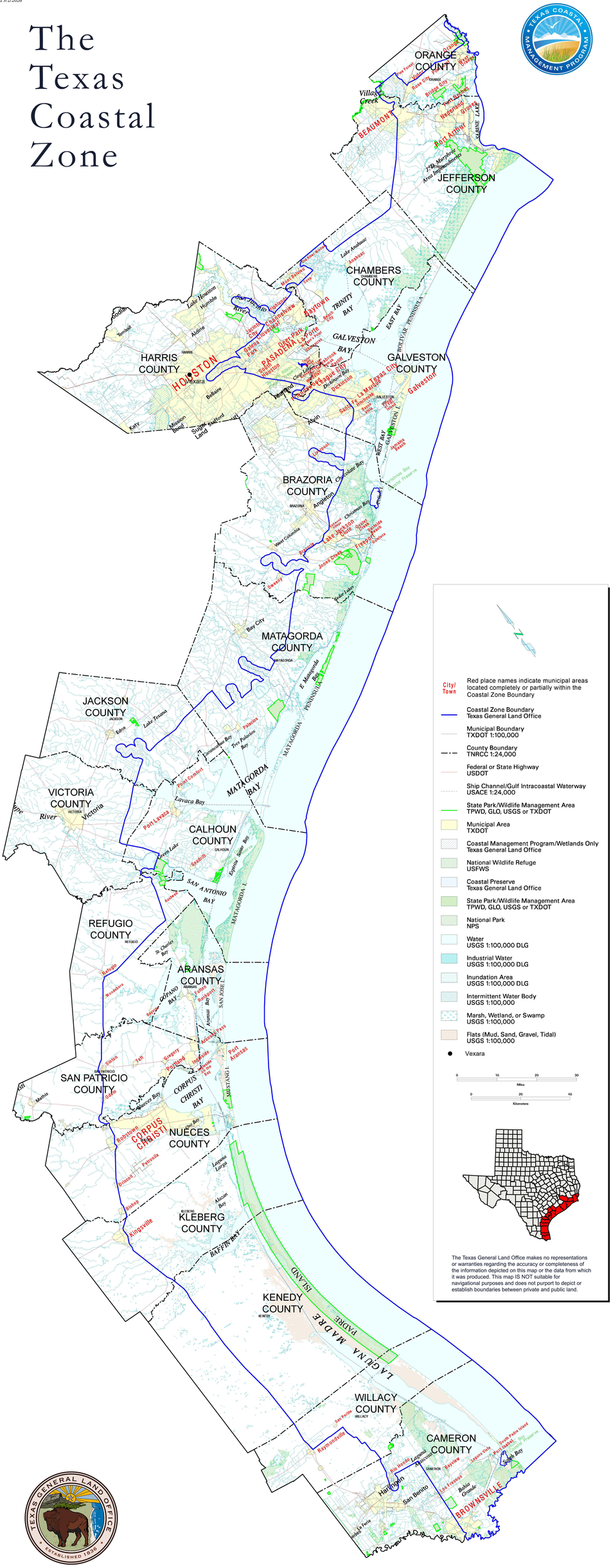
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

2.8.3: Coastal Map

Figure 2.8.3
1/19/2026
Revised 3/2/2026

The Texas Coastal Zone



City/Town — Red place names indicate municipal areas located completely or partially within the Coastal Zone Boundary

- Coastal Zone Boundary — Texas General Land Office
- Municipal Boundary — TXDOT 1:100,000
- County Boundary — TNRCC 1:24,000
- Federal or State Highway — USDOT
- Ship Channel/Gulf Intracoastal Waterway — USACE 1:24,000
- State Park/Wildlife Management Area — TPWD, GLO, USGS or TXDOT
- Municipal Area — TXDOT
- Coastal Management Program/Wetlands Only — Texas General Land Office
- National Wildlife Refuge — USFWS
- Coastal Preserve — Texas General Land Office
- State Park/Wildlife Management Area — TPWD, GLO, USGS or TXDOT
- National Park — NPS
- Water — USGS 1:100,000 DLG
- Industrial Water — USGS 1:100,000 DLG
- Inundation Area — USGS 1:100,000 DLG
- Intermittent Water Body — USGS 1:100,000
- Marsh, Wetland, or Swamp — USGS 1:100,000
- Flats (Mud, Sand, Gravel, Tidal) — USGS 1:100,000
- Vexara

0 10 20 30 Miles
0 20 40 Kilometers

The Texas General Land Office makes no representations or warranties regarding the accuracy or completeness of the information depicted on this map or the data from which it was produced. This map IS NOT suitable for navigational purposes and does not purport to depict or establish boundaries between private and public land.

2.9.1: Species List

Figure 2.9.1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (281) 286-8282 Fax: (281) 488-5882

In Reply Refer To: 01/19/2026 18:05:52 UTC
Project Code: 2026-0038022
Project Name: Vexara - R

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies threatened, endangered, proposed, and candidate species, as well as designated and proposed critical habitat, that may occur within the boundary of your project area and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Project related correspondence or questions should be directed to the appropriate field office based on the county of occurrence (refer to the map of Texas field office jurisdictions for contact information).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the attached list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether

projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal action agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant.?This determination requires formal section 7 consultation.

More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook.

Non-Federal entities may coordinate under Sections 9 and 10 of the Act. Section 9 and Federal regulations prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such

conduct. Should the proposed project have the potential to take listed species, the Service recommends that the applicant develop a Habitat Conservation Plan and obtain a section 10(a)(1)(B) permit (see the Habitat Conservation Planning Handbook Toolbox for more information).

Migratory Birds and Eagles:

The attached list also provides information on the potential occurrence of migratory birds and eagles, which are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. For more information, including contacts for our Migratory Bird Offices, visit the Migratory Bird Program page.

We appreciate your concern for threatened and endangered species. The Service encourages Federal action agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
(281) 286-8282

PROJECT SUMMARY

Project Code: 2026-0038022
Project Name: Vexara - R
Project Type: Commercial Development
Project Description: Liquid Waste Processing Facility
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@29.82395395,-95.49469756784993,14z

Counties: Harris County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle *Macrochelys temminckii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Texas Prairie Dawn-flower *Hymenoxys texana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6471	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

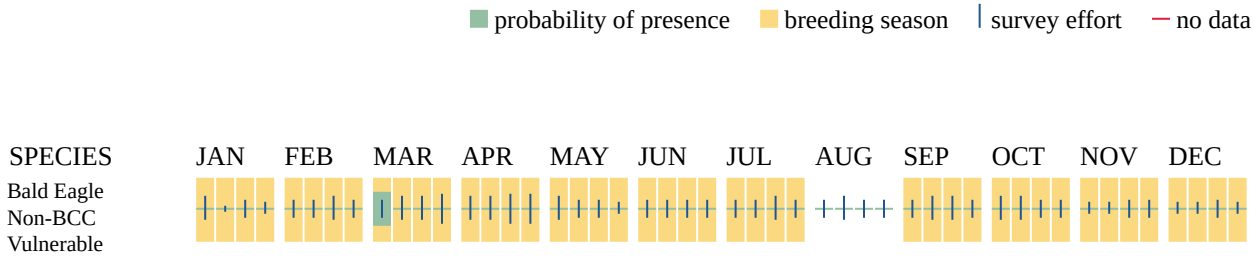
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Dickcissel *Spiza americana* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9453	Breeds May 5 to Aug 31

NAME	BREEDING SEASON
Forster's Tern *Sterna forsteri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11953	Breeds Mar 1 to Aug 15
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Painted Bunting *Passerina ciris* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9511	Breeds Apr 25 to Aug 15
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prairie Loggerhead Shrike *Lanius ludovicianus excubitorides* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8833	Breeds Feb 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

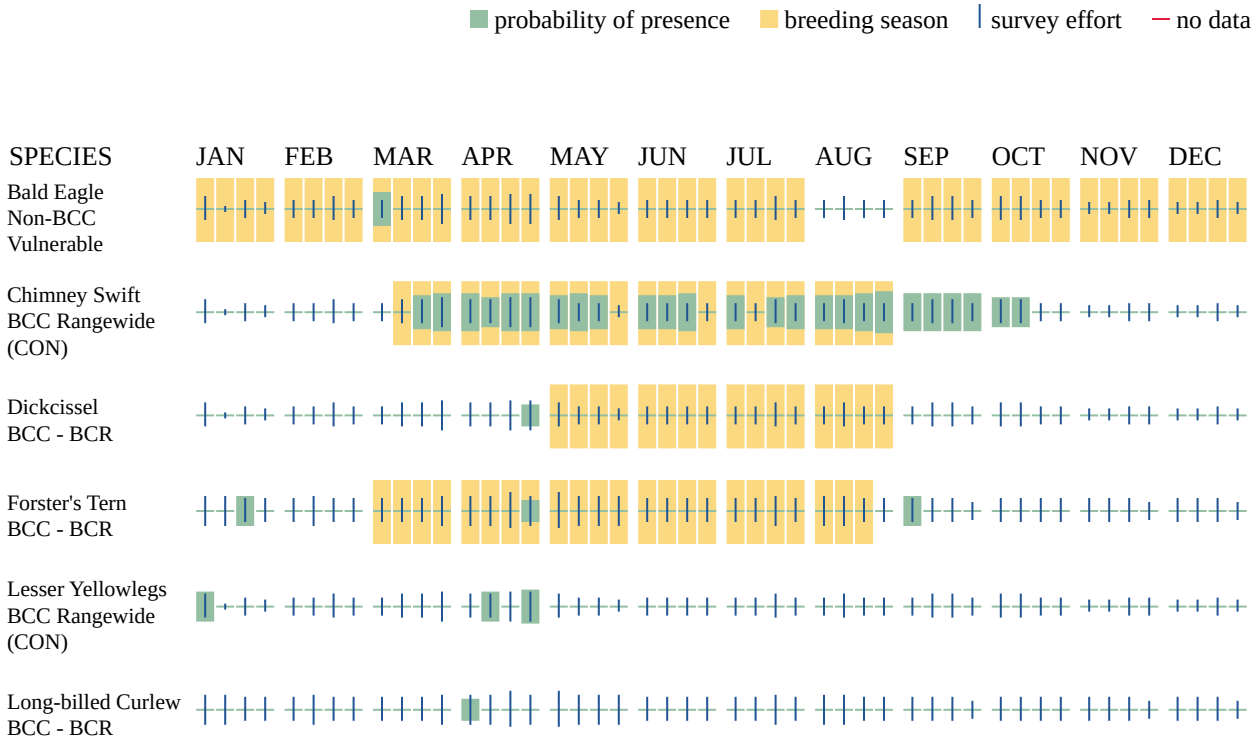
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Amy Peoples
Address: 3404 Airway Blvd
City: Amarillo
State: TX
Zip: 79118
Email [redacted]
Phone: 6204170525

2.9.2: TPWD Packet

Figure 2.9.2

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO · STEPHENVILLE · ARTESIA

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
203 East Main Street
Artesia NM 88210

May 1, 2026

Via *FedEx*

Texas Parks & Wildlife Department
Wildlife Division
Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, TX 78744-3291

Re: Request for Wildlife Habitat Assessment
Vexara Pharmaceuticals, Harris County, Texas

Wildlife Habitat Assessment Team,

Enclosed, please find the request for a Wildlife Habitat Assessment with attachments for the proposed Vexara Pharmaceuticals LLC Facility located on 2.9 acres at 3300 Bingle Road, Houston, TX 79055. The facility is an existing 127,706 sq ft concrete slab surrounded by asphalt on the east side of Bingle Road.

The project work description includes the following:
The proposed facility will dewater grease, grit and household septage waste. The liquids will be pumped into the City of Houston sewage treatment system via underground lines. The facility has contacted and will be applying for a City of Houston permit and will comply with the conditions within that permit as well. This process reduces the weight and volume making it easier to store and dispose of in bulk amounts. The solids will be stored for a short period of time (no more than 7 business days) until the filter box container is full of the separated solids and then it will be transported to an approved disposal site in the Houston, TX area.

A desktop analysis has been completed for the proposed location. This included a review of the attached IPAC. IPAC shows there is not any critical habitats within the project area or any wetlands. Given this site has been zoned as industrial by the City of Houston and location was formerly a discount retail store, there is low risk of environmental issues at the proposed location of the facility. The surrounding land use is comprised of industrial, commercial and residential properties.

If you have any questions or require additional information, please give me a call at 806-353-6123 or 620-417-0525 (cell).

Sincerely,

Amy Peoples
Enviro-Ag Engineering, Inc.

Enclosures

Cc: Vexara Pharmaceuticals LLC
EAE file

WILDLIFE HABITAT ASSESSMENT PROGRAM
Review Requests
(Including Threatened and Endangered Species)

Name: **Amy Peoples** Date: **5/1/2026**

Your Company: **Enviro-Ag Engineering, Inc** Phone: (**620**) **417-0525**

Your Company Address: **3404 Airway Blvd** Fax: ( )

City, State, Zip: **Amarillo TX 79118** E-mail: [redacted]

Project Title, Number and Site Location: **Vexara Pharmaceuticals** County(ies): **Harris**

1. **Scope of Project:**
   (a) What regulations will this review help you to comply with? OR, if not regulatory, why is the review being requested? Who is the project sponsor?

   Municipal Waste Permitting

   (b) What and where is the project site? What activities will be conducted at the site? (Especially activity types, extent, boundaries, length & width, waterways, vegetation disturbance, and total acreage of site and acreage of the site that will be disturbed)

   3300 Bingle Rd, Houston, TX - Zoned industrial by the City and is surrounded by concrete and asphalt

   (c) If this request is for a site investigation or risk assessment, why is the site being investigated? If applicable, what contaminant pathways are being evaluated?

   Facility will be enclosed and have a 2' retaining wall around outside tanks to contain contaimination

   (d) Schedule of activities – Approximately when (which calendar months, how many years) will the project be active on the site?

   End of 2026

2. **Vegetation:** Species, dominant plants, structure and composition, vegetation layers, height of layers, natural vegetation community types.

   None

3. **Other Natural Resources/Physical Features:**
   (a) Soils, geology, watercourses, aquifers, flood zones, etc.

   Located in flood plain

   (b) Habitat, animals, animal assemblages, other sensitive features, etc.

   IPAC say no critical habitats or wetlands - attached

4. **Existing Site Development:** Extent of pavement, gravel, shell, or other cover; buildings, landscaped, xeriscaped, drainage system, etc.

   Existing retail store surrounded by concrete and asphalt

5. **Historic Use/Function of Site:** Pasture, forest, urban, row crops, rangeland, wetland, etc. If the request is for a risk assessment, when was, or for how long, has the site been active, inactive? Are cultural resources present on the site or will the project cross or impact state or federal lands, local parklands?

   Attached email from the Texas Historical Commission

6. **Has a threatened and endangered species survey or assessment,** wetland delineation, or other biological assessment already been performed? (In general, TPWD recommends an on-site habitat assessment be performed.) ☐ Yes ☐ No
   (a) If yes, provide surveyor name, qualifications, methods or protocols, acreage surveyed, level of effort, weather conditions, time of day, and dates the survey was performed.

   IPAC has been completed

WILDLIFE HABITAT ASSESSMENT PROGRAM
Review Requests (Continued)
(Including Threatened and Endangered Species)

6. (b) If yes, please provide results and copy of survey/assessment report.

7. **Could current on-site or adjacent habitat support rare species?** ☐ Yes ☐ No
Specifically, explain why or why not.

NO

8. **Provide a description of potential negative direct and indirect impacts** from proposed project activities or former and current site activities, such as types of habitat and acreage to be degraded or lost, temporarily and permanently. Also, describe cumulative effects that could be anticipated from the project on the natural environment.

Because it is in a flood plain - please see survey

9. **Provide a description of planned beneficial mitigation and enhancements** or restoration efforts. Be sure to note the avoidance, minimization, and compensatory mitigation measures planned to address the threat of negative impacts (e.g. which erosion control measures will be used, what will site restoration activities encompass, etc.).

The proposed facility is a solid separating facility for municipal waste (grease traps/grit/septage) using an existing concrete slab.

10. **Include copies of coordination with other agencies** relevant to impacts or enhancements of natural resources for this project, or agency & contact name.

11. **Clearly delineate exact location of site and its boundaries** using an applicable USGS quad (most preferable) as the base layer or best map available. The topographic map citation should include the USGS quad name. The map must contain identifiable features and a scale that allows us to find your site **and** accurately pinpoint your site boundaries. When using internet maps, provide both a location map (zoomed out for highway reference) and a layout map (zoomed in for site features, boundaries, and neighboring street reference)

12. **Originals or color-copy photographs** of site and surrounding area with captions or narratives.

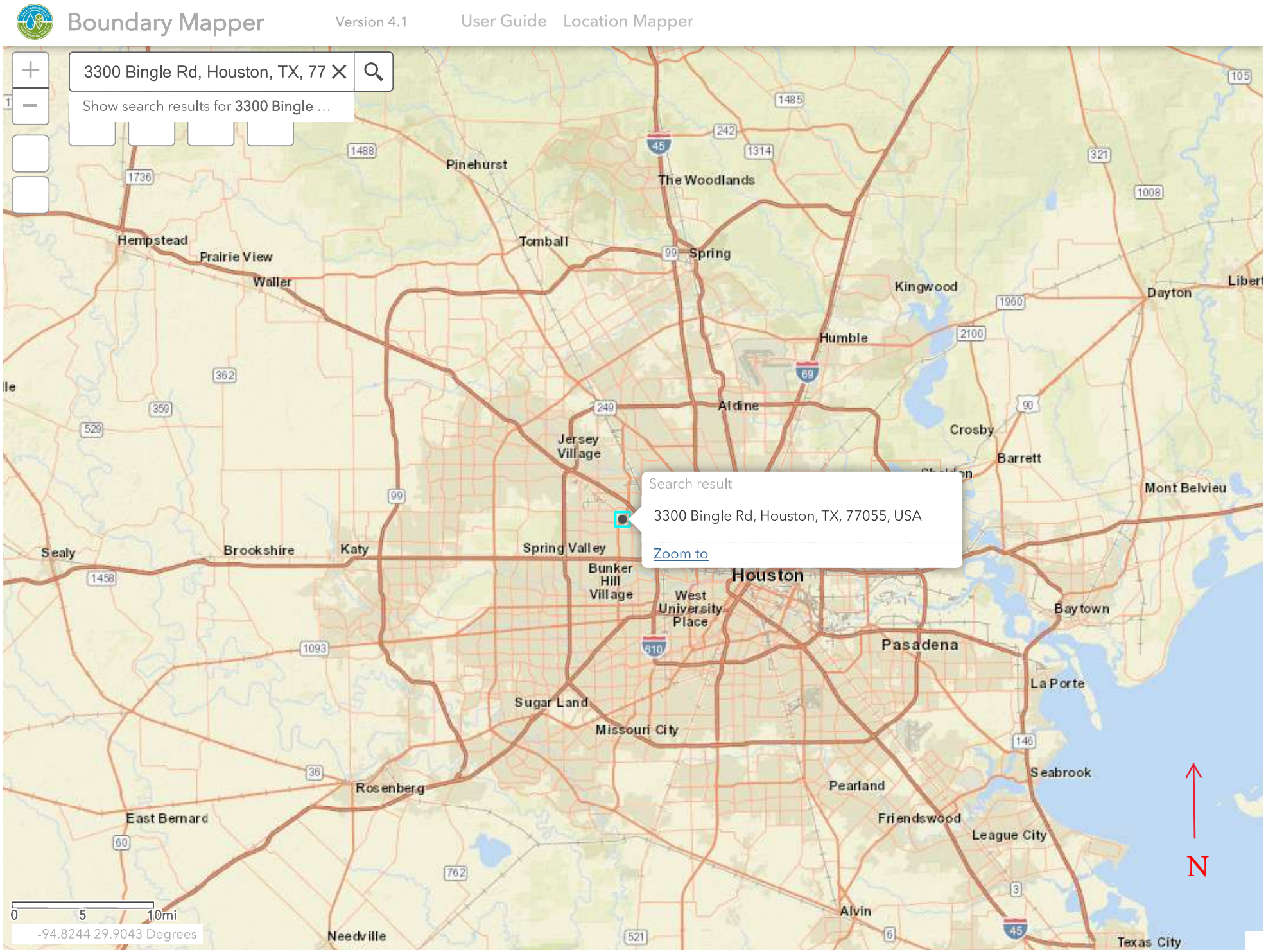
13. **Aerial photographs with pertinent features labeled**. Aerials should show the year photograph was taken.

Send completed form to:

Texas Parks and Wildlife Department
Wildlife Division
Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, Texas 78744-3291
(512) 389-4571 (Phone) (512) 389-4599 (Fax)

Texas Parks and Wildlife Department maintains the information collected through this form. With few exceptions, you are entitled to be informed about the information we collect. Under Sections 552.021 and 552.023 of the Texas Government Code, you are also entitled to receive and review the information. Under Section 559.004, you are also entitled to have this information corrected.

Figure 1.7 - Vicinity Map



1/22/2026

USGS
science for a changing world

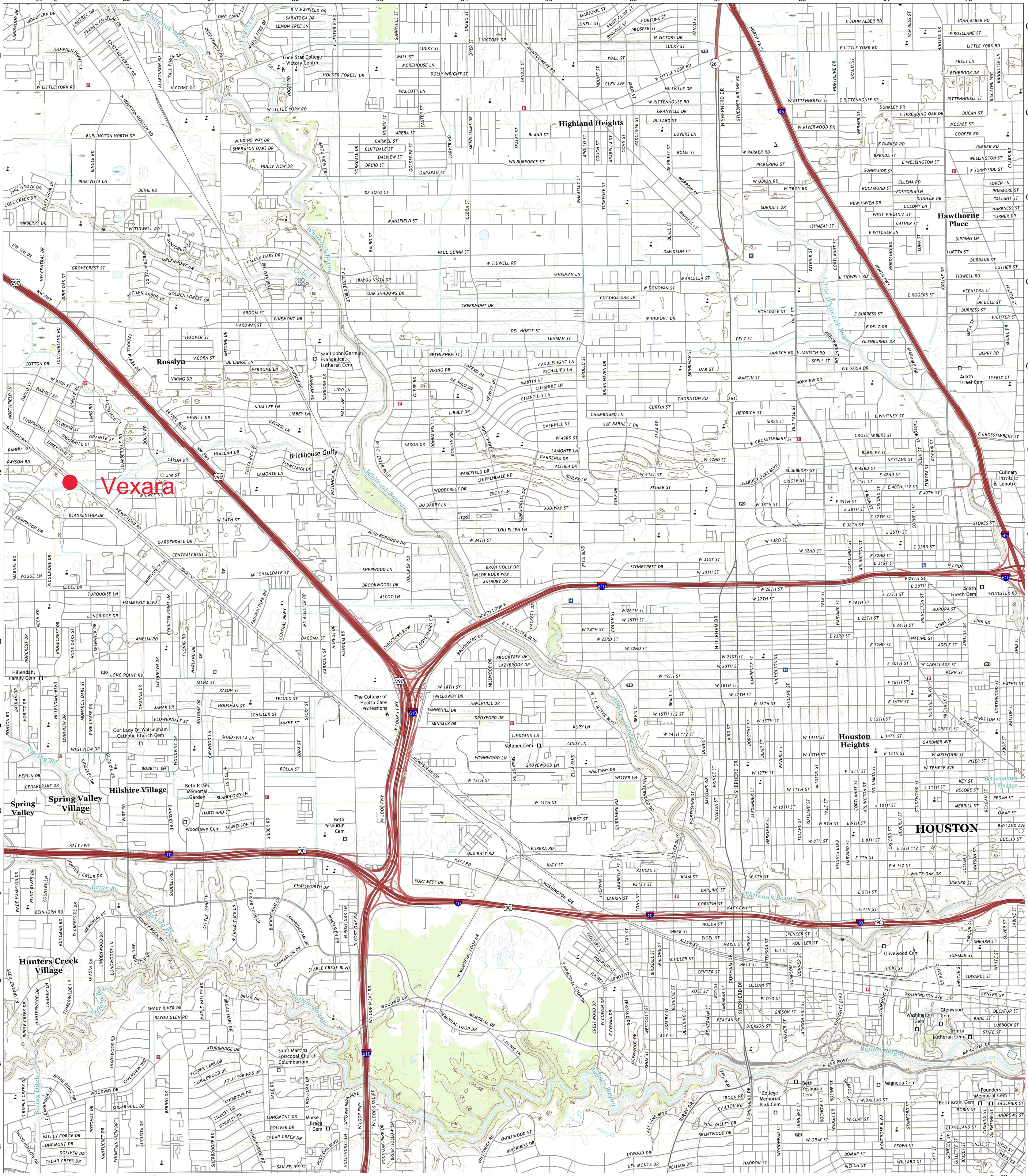
1/15/2026

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

HOUSTON HEIGHTS QUADRANGLE
TEXAS - HARRIS COUNTY
7.5-MINUTE SERIES

N



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 15R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may be shown. Obtain permission before entering private lands.

Imagery....NAIP, September 2016 - November 2016
Roads....U.S. Census Bureau, 2015 - 2019
Names....GNIS, 1979 - 2022
Hydrography....National Hydrography Dataset, 2002 - 2018
Contours....National Elevation Dataset, 2010
Boundaries....Multiple sources; see metadata file 2019 - 2021
Wetlands....FWS National Wetlands Inventory Not Available

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

KILOMETERS / METERS / MILES / FEET

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

QUADRANGLE LOCATION

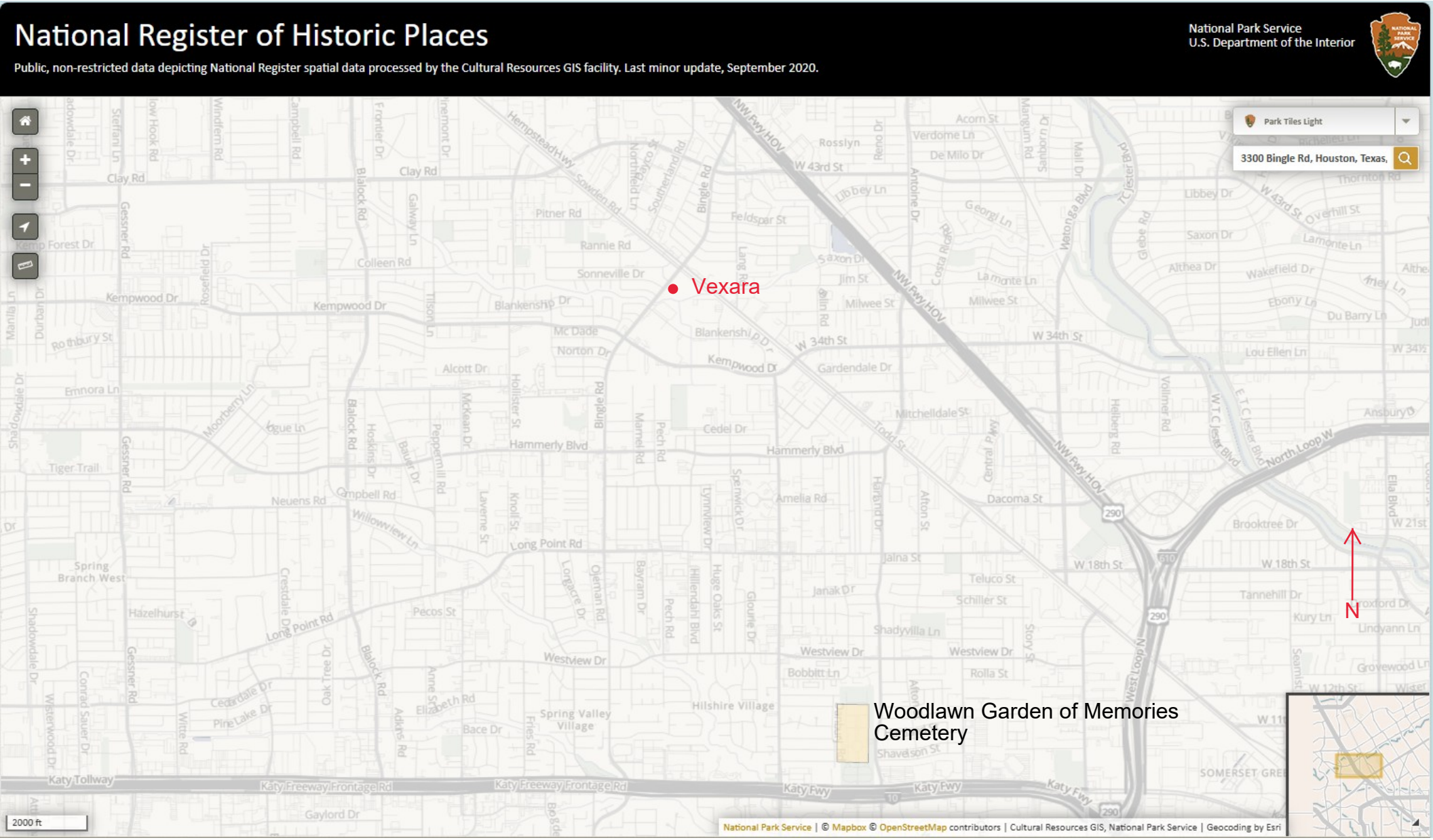
ADJOINING QUADRANGLES
1 Satsuma
2 Aldine
3 Humble
4 Hedwig Village
5 Settegast
6 Alief
7 Bellaire
8 Park Place

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

HOUSTON HEIGHTS, TX
2022

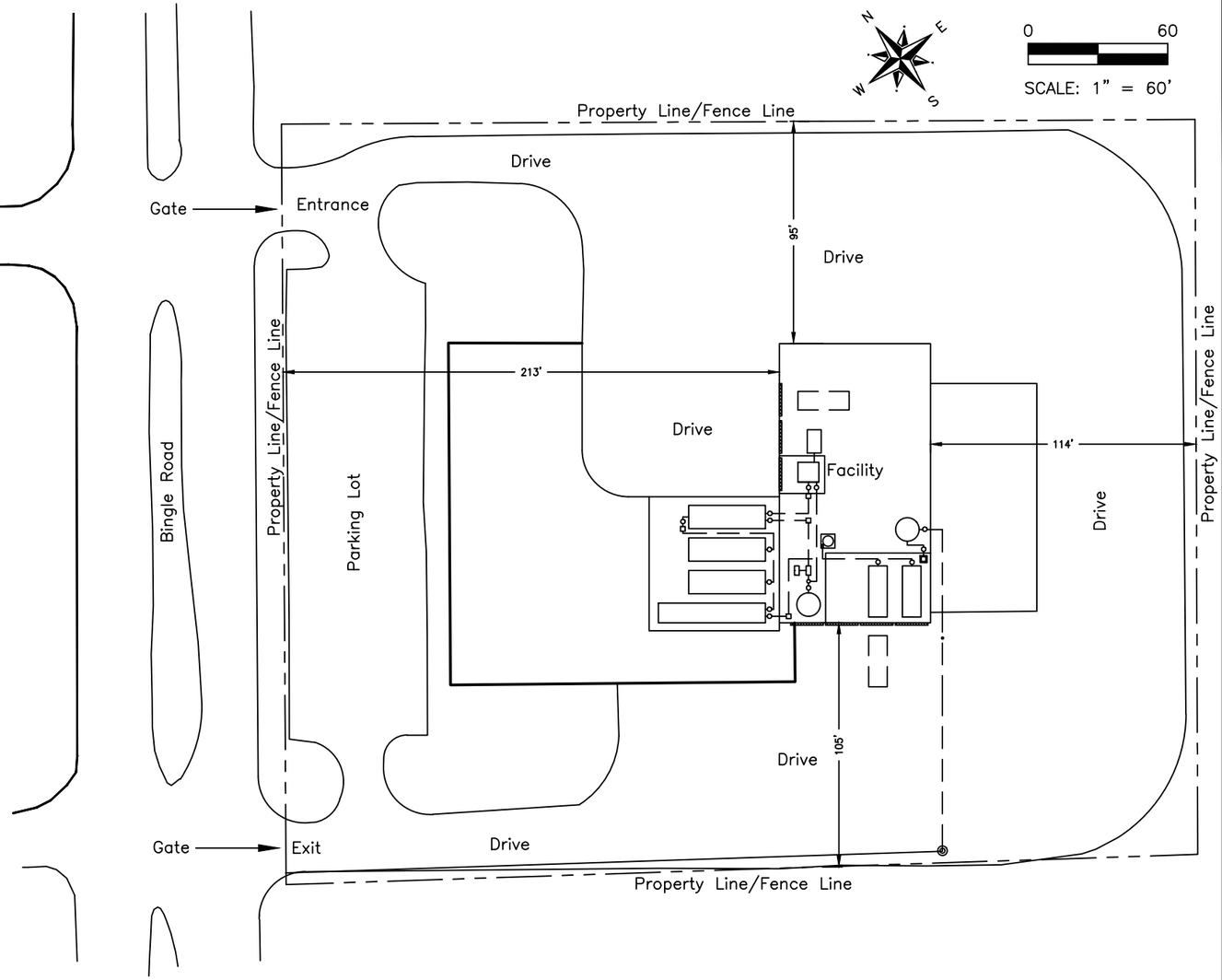
NSN. 7643016396533
NGA REF NO. USGSX24K22388

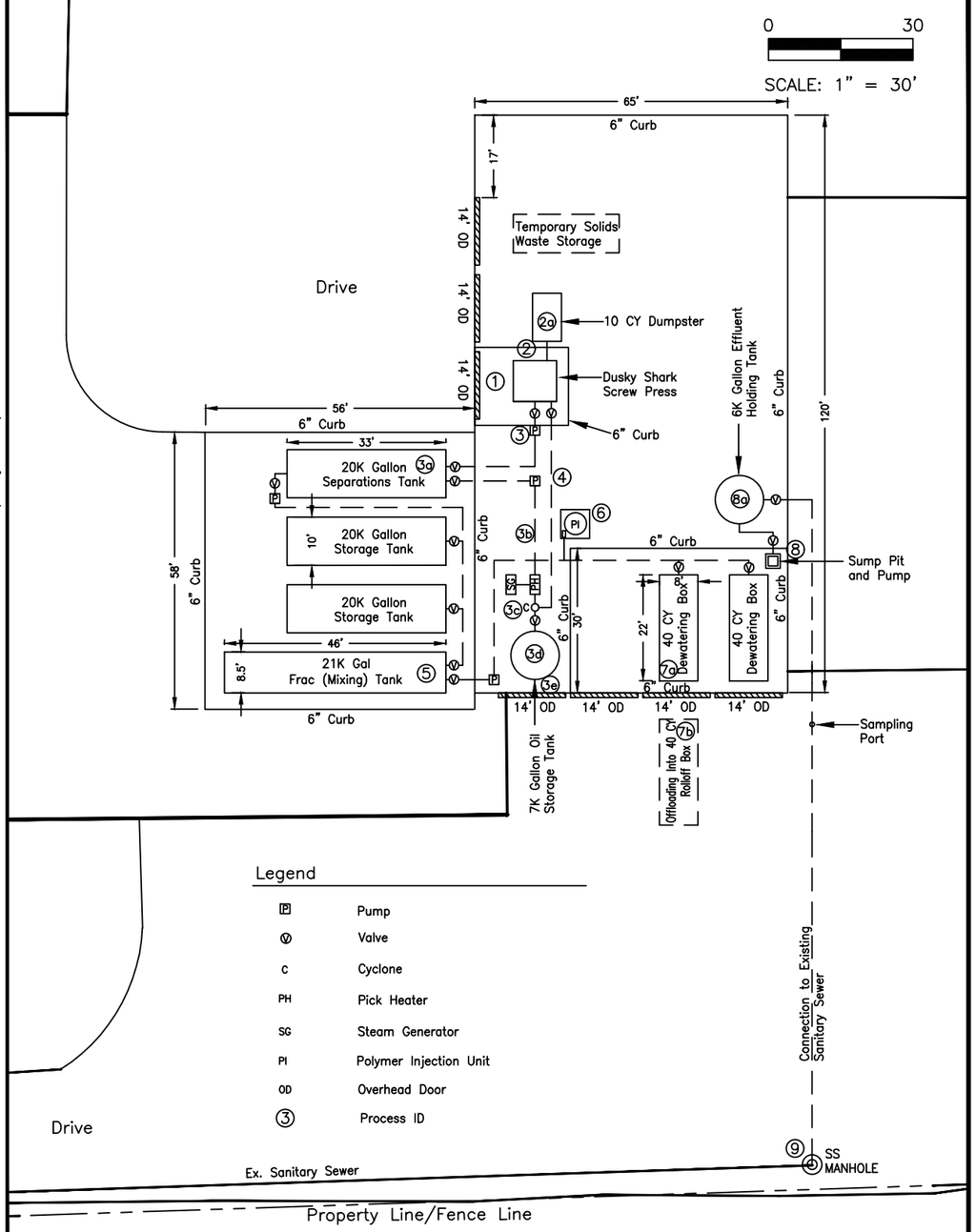
Figure 2.11.2



https://www.nps.gov/maps/full.html?mapID=7ad17cc9-b808-4ff8-a2f9-a99909164466
1/19/2026

Legend
Vexara
National Registered Historic Places



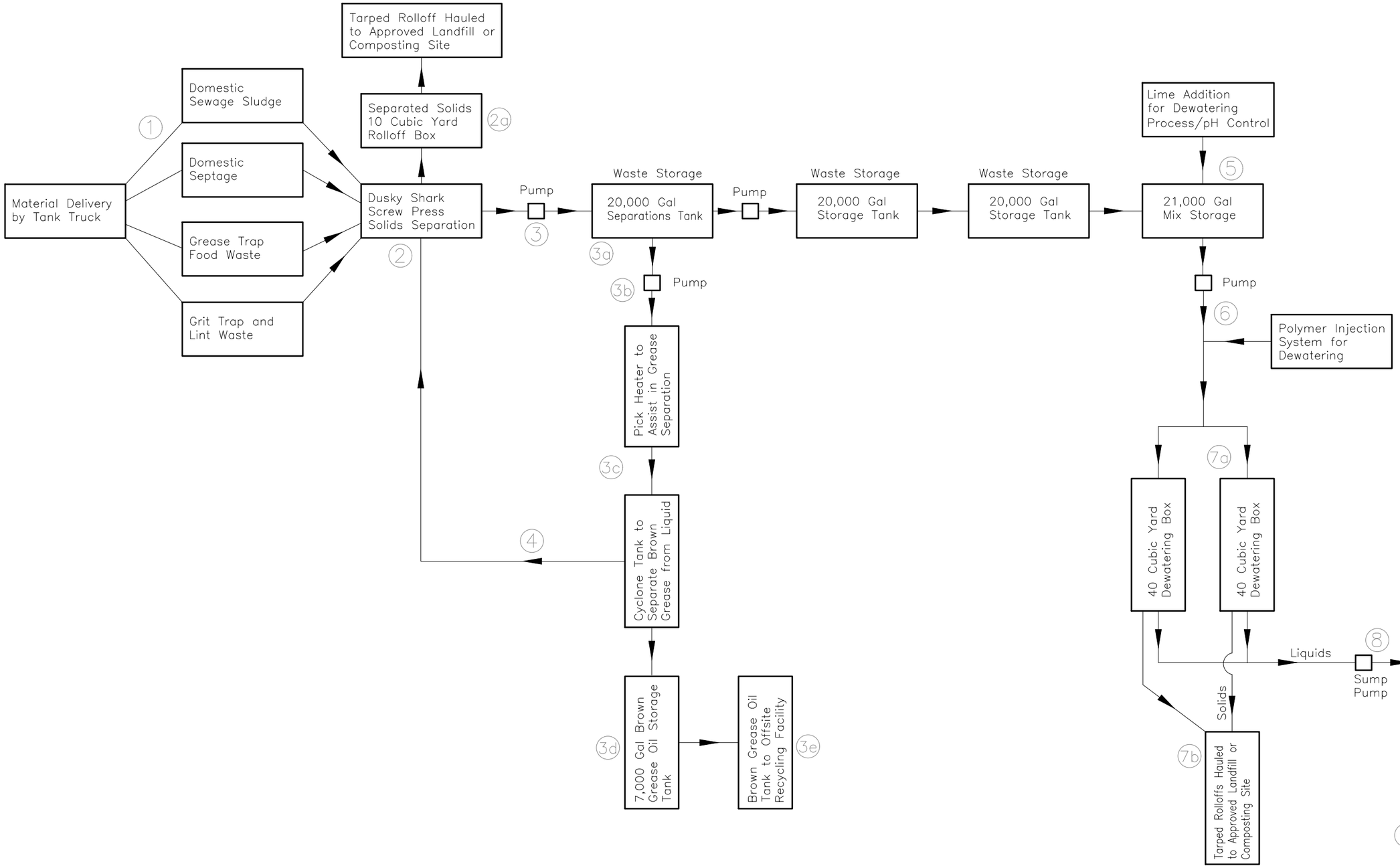


Vexara Pharmaceuticals LLC
Domestic Liquid Waste Processing Facility
Houston, TX

Liquid Waste Processing Layout
Figure 2.1.3
April 2026

ENVIRO-AG ENGINEERING, INC.
Enviro-Ag Engineering, Inc.
ENGINEERING CONSULTANTS
3404 Airway Boulevard
AMARILLO, TEXAS 79118
TEL (806) 353-6123 FAX (806) 353-4132

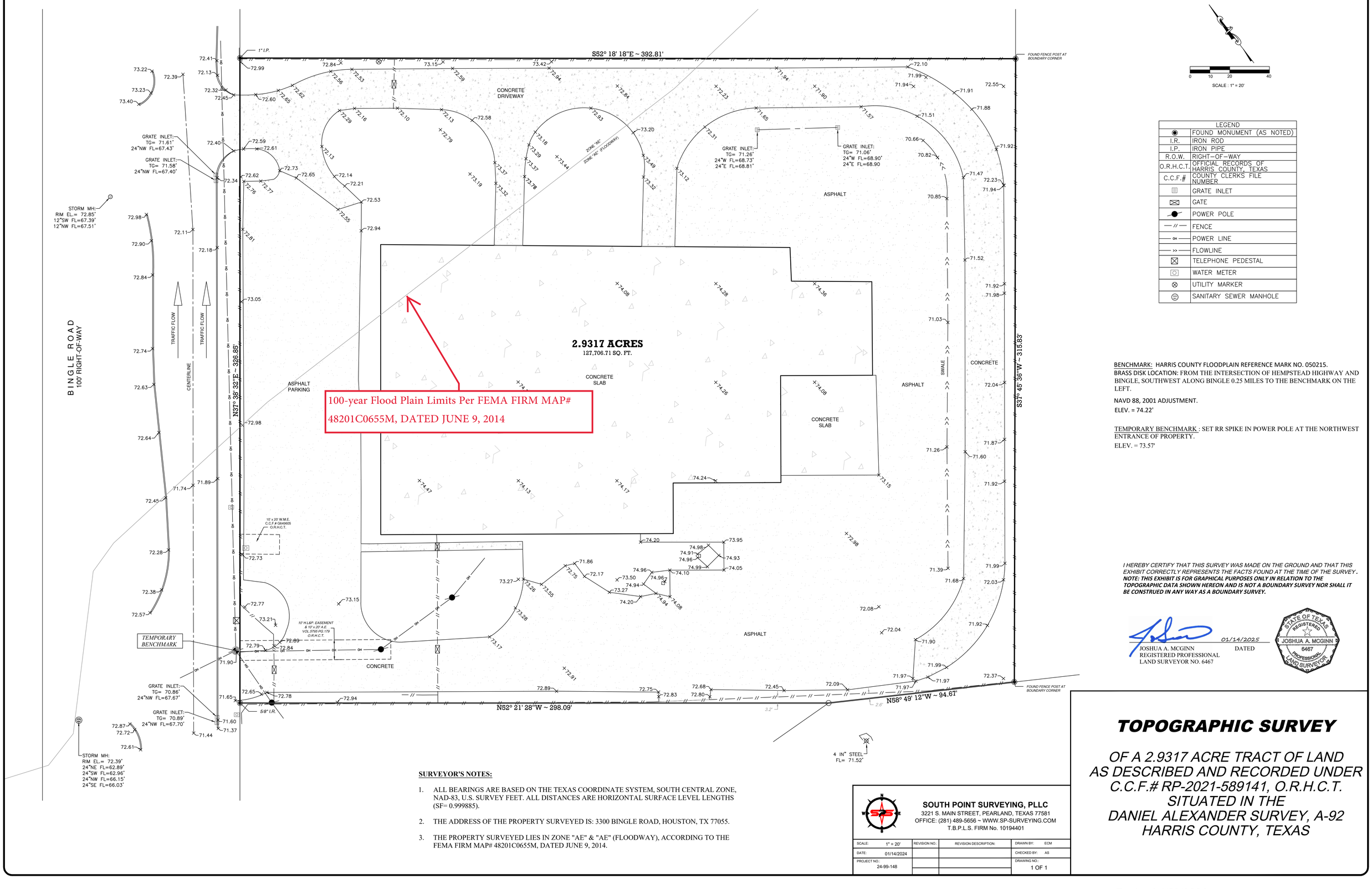
Revised 4/29/2026



Vexara Pharmaceuticals LLC Harris County Houston, TX	Process Flow Diagram Figure 3.2.1 April 2026	ENVIRO–AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Revised 4/30/2026

Figure 2.1.1



LEGEND	
◉	FOUND MONUMENT (AS NOTED)
I.R.	IRON ROD
I.P.	IRON PIPE
R.O.W.	RIGHT-OF-WAY
O.R.H.C.T.	OFFICIAL RECORDS OF HARRIS COUNTY, TEXAS
C.C.F.#	COUNTY CLERKS FILE NUMBER
	GRATE INLET
	GATE
	POWER POLE
— // —	FENCE
— OH —	POWER LINE
— >> —	FLOWLINE
	TELEPHONE PEDESTAL
	WATER METER
	UTILITY MARKER
	SANITARY SEWER MANHOLE

BENCHMARK: HARRIS COUNTY FLOODPLAIN REFERENCE MARK NO. 050215.
BRASS DISK LOCATION: FROM THE INTERSECTION OF HEMPSTEAD HIGHWAY AND BINGLE, SOUTHWEST ALONG BINGLE 0.25 MILES TO THE BENCHMARK ON THE LEFT.

NAVD 88, 2001 ADJUSTMENT.
ELEV. = 74.22'

TEMPORARY BENCHMARK : SET RR SPIKE IN POWER POLE AT THE NORTHWEST ENTRANCE OF PROPERTY.
ELEV. = 73.57'

SURVEYOR'S NOTES:

1. ALL BEARINGS ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD-83, U.S. SURVEY FEET. ALL DISTANCES ARE HORIZONTAL SURFACE LEVEL LENGTHS (SF= 0.999885).
2. THE ADDRESS OF THE PROPERTY SURVEYED IS: 3300 BINGLE ROAD, HOUSTON, TX 77055.
3. THE PROPERTY SURVEYED LIES IN ZONE "AE" & "AE" (FLOODWAY), ACCORDING TO THE FEMA FIRM MAP# 48201C0655M, DATED JUNE 9, 2014.

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND THAT THIS EXHIBIT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF THE SURVEY.
NOTE: THIS EXHIBIT IS FOR GRAPHICAL PURPOSES ONLY IN RELATION TO THE TOPOGRAPHIC DATA SHOWN HEREON AND IS NOT A BOUNDARY SURVEY NOR SHALL IT BE CONSTRUED IN ANY WAY AS A BOUNDARY SURVEY.

JOSHUA A. MCGINN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6467

01/14/2025
DATED

STATE OF TEXAS · REGISTERED · JOSHUA A. MCGINN · 6467 · PROFESSIONAL LAND SURVEYOR

SOUTH POINT SURVEYING, PLLC
3221 S. MAIN STREET, PEARLAND, TEXAS 77581
OFFICE: (281) 489-5656 ~ WWW.SP-SURVEYING.COM
T.B.P.L.S. FIRM No. 10194401

SCALE: 1" = 20'	REVISION NO.:	REVISION DESCRIPTION:	DRAWN BY: ECM
DATE: 01/14/2024			CHECKED BY: AS
PROJECT NO.: 24-99-148			DRAWING NO.: 1 OF 1

TOPOGRAPHIC SURVEY

OF A 2.9317 ACRE TRACT OF LAND
AS DESCRIBED AND RECORDED UNDER
C.C.F.# RP-2021-589141, O.R.H.C.T.
SITUATED IN THE
DANIEL ALEXANDER SURVEY, A-92
HARRIS COUNTY, TEXAS

Revised 4/29/2026

Docusign Envelope ID: 6A197B3C-4946-42D6-B6D9-E082CDA6EF59

EXHIBIT B

LEGAL DESCRIPTION OF THE LEASED PREMISES

Being a tract or parcel of land containing 2.9317 acres of land or 127,706 square feet, located in the Daniel Alexander Survey, Abstract 92, Harris County, Texas; Said 2.9317 acre tract of record in the name of Almeda/Pearland Warehouses, Ltd. in Harris County Clerk's File (H.C.C.F.) Number V360555; Said 2.9317 acre tract being more particularly described as follows (bearings based on said deed):

BEGINNING at a 5/8 inch iron rod found for the west corner of the herein described tract, being the north corner of a called 0.979 acre tract of record in the name of Rockstar Empire, LLC in H.C.C.F. Number RP-2019-426766 and being on the southeast Right-of-Way (R.O.W.) line of Bingle Road (100 feet wide);

THENCE, coincident the northwest line of the herein described tract and the southeast R.O.W. line of aforesaid Bingle Road, North 39 degrees 36 minutes 00 seconds East, a distance of 326.85 feet to a 5/8 inch iron rod with "Gruller" cap set for the north corner of the herein described tract and being the west corner of a called 1.6098 acre tract of record in the name of Isolatek International in H.C.C.F. Number T438235;

THENCE, coincident the southwest line of aforesaid 1.6098 acre tract and the northeast line of the herein described tract, South 50 degrees 20 minutes 50 seconds East, a distance of 392.81 feet to a 5/8 inch iron rod with "Gruller" cap set for the east corner of the herein described tract, being the south corner of said 1.6098 acre tract and being on the northwest line of a called 5.3649 acre tract of record in the name of the City of Houston in H.C.C.F. Number BB479954;

THENCE, coincident the southeast line of the herein described tract and the northwest line of aforesaid 5.3649 acre tract, South 39 degrees 43 minutes 04 seconds West, a distance of 315.83 feet to a 5/8 inch iron rod with "Gruller" cap set for the south corner of the herein described tract, being the west corner of said 5.3649 acre tract and being on the northeast line of Brickhouse Gully;

THENCE, coincident the southwest line of the herein described tract and the northeast line of aforesaid Brickhouse Gully, North 56 degrees 51 minutes 44 seconds West, a distance of 94.67 feet to a 5/8 inch iron rod with "Gruller" cap set, being the east corner of aforesaid 0.979 acre tract;

THENCE, coincident the southwest line of the herein described tract and the northeast line of aforesaid 0.979 acre tract, North 50 degrees 24 minutes 00 seconds West, a distance of 298.09 feet to the **POINT OF BEGINNING** and containing 2.9317 acres of land.

Figure 2.9.1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (281) 286-8282 Fax: (281) 488-5882

In Reply Refer To: 01/19/2026 18:05:52 UTC
Project Code: 2026-0038022
Project Name: Vexara - R

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies threatened, endangered, proposed, and candidate species, as well as designated and proposed critical habitat, that may occur within the boundary of your project area and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Project related correspondence or questions should be directed to the appropriate field office based on the county of occurrence (refer to the map of Texas field office jurisdictions for contact information).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the attached list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether

projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal action agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant.?This determination requires formal section 7 consultation.

More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook.

Non-Federal entities may coordinate under Sections 9 and 10 of the Act. Section 9 and Federal regulations prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such

conduct. Should the proposed project have the potential to take listed species, the Service recommends that the applicant develop a Habitat Conservation Plan and obtain a section 10(a)(1)(B) permit (see the Habitat Conservation Planning Handbook Toolbox for more information).

Migratory Birds and Eagles:

The attached list also provides information on the potential occurrence of migratory birds and eagles, which are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. For more information, including contacts for our Migratory Bird Offices, visit the Migratory Bird Program page.

We appreciate your concern for threatened and endangered species. The Service encourages Federal action agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
(281) 286-8282

PROJECT SUMMARY

Project Code: 2026-0038022
Project Name: Vexara - R
Project Type: Commercial Development
Project Description: Liquid Waste Processing Facility
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@29.82395395,-95.49469756784993,14z

Counties: Harris County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle *Macrochelys temminckii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Texas Prairie Dawn-flower *Hymenoxys texana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6471	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

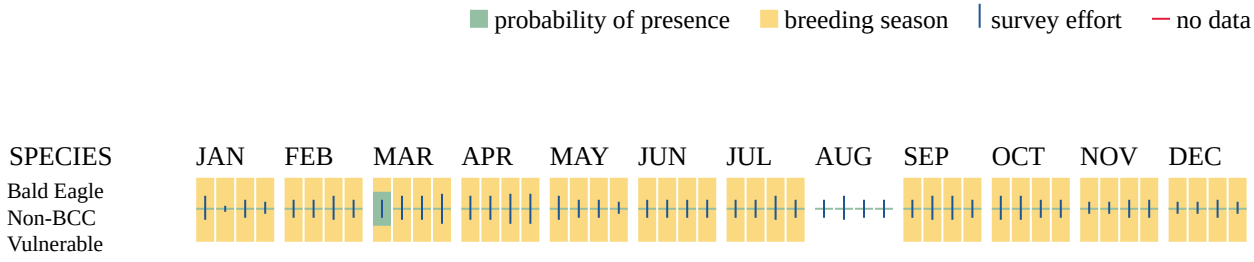
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Dickcissel *Spiza americana* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9453	Breeds May 5 to Aug 31

NAME	BREEDING SEASON
Forster's Tern *Sterna forsteri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11953	Breeds Mar 1 to Aug 15
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Painted Bunting *Passerina ciris* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9511	Breeds Apr 25 to Aug 15
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prairie Loggerhead Shrike *Lanius ludovicianus excubitorides* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8833	Breeds Feb 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

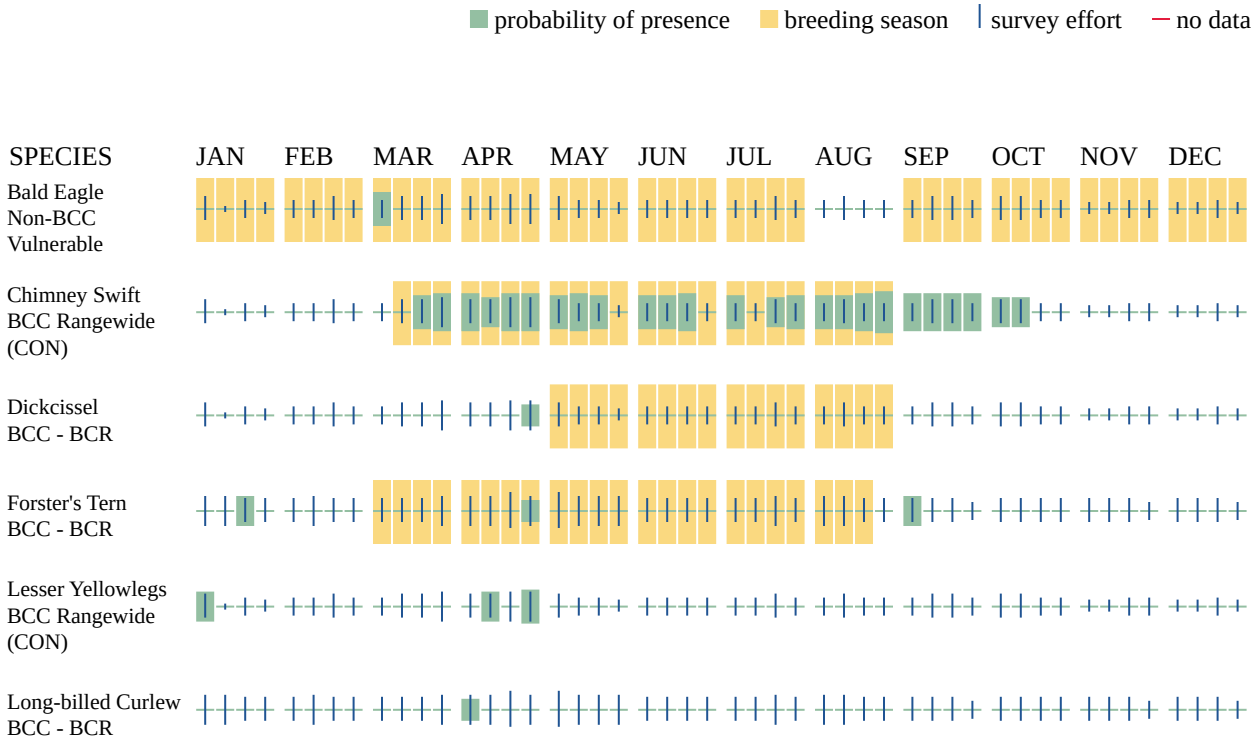
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Amy Peoples
Address: 3404 Airway Blvd
City: Amarillo
State: TX
Zip: 79118
Email [redacted]
Phone: 6204170525

Figure 2.11.3

Outlook

Vexara Pharmaceuticals, LLC

From [redacted]
Date Tue 2/17/2026 10:07 AM
To [redacted]

CAUTION: This email originated from outside of Enviro-Ag Engineering. Do not click links or open attachments unless you have verified the sender and know the content is safe.

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under the Antiquities Code of Texas
THC Tracking #202605462
Date: 02/17/2026
Vexara Pharmaceuticals, LLC
3300 Bingle Road
Houston,TX

Description: Construction of grease/grit trap and septic processing facility

Dear Amy Peoples:
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 Caitlin Brashear and Tracy Lovingood, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- No further review of potential effects to above-ground historic resources is required under the Antiquities Code of Texas. However, should this project ultimately include any federal involvement, additional consultation with THC/SHPO under Section 106 of the National Historic Preservation Act will be required.

Archeology Comments

- No effect on identified archeological sites or other cultural resources. 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: caitlin.brashear@thc.texas.gov, tracy.lovingood@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 Joseph Bell, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

Vexara Pharmaceuticals, LLC

Northside of property – Looking North

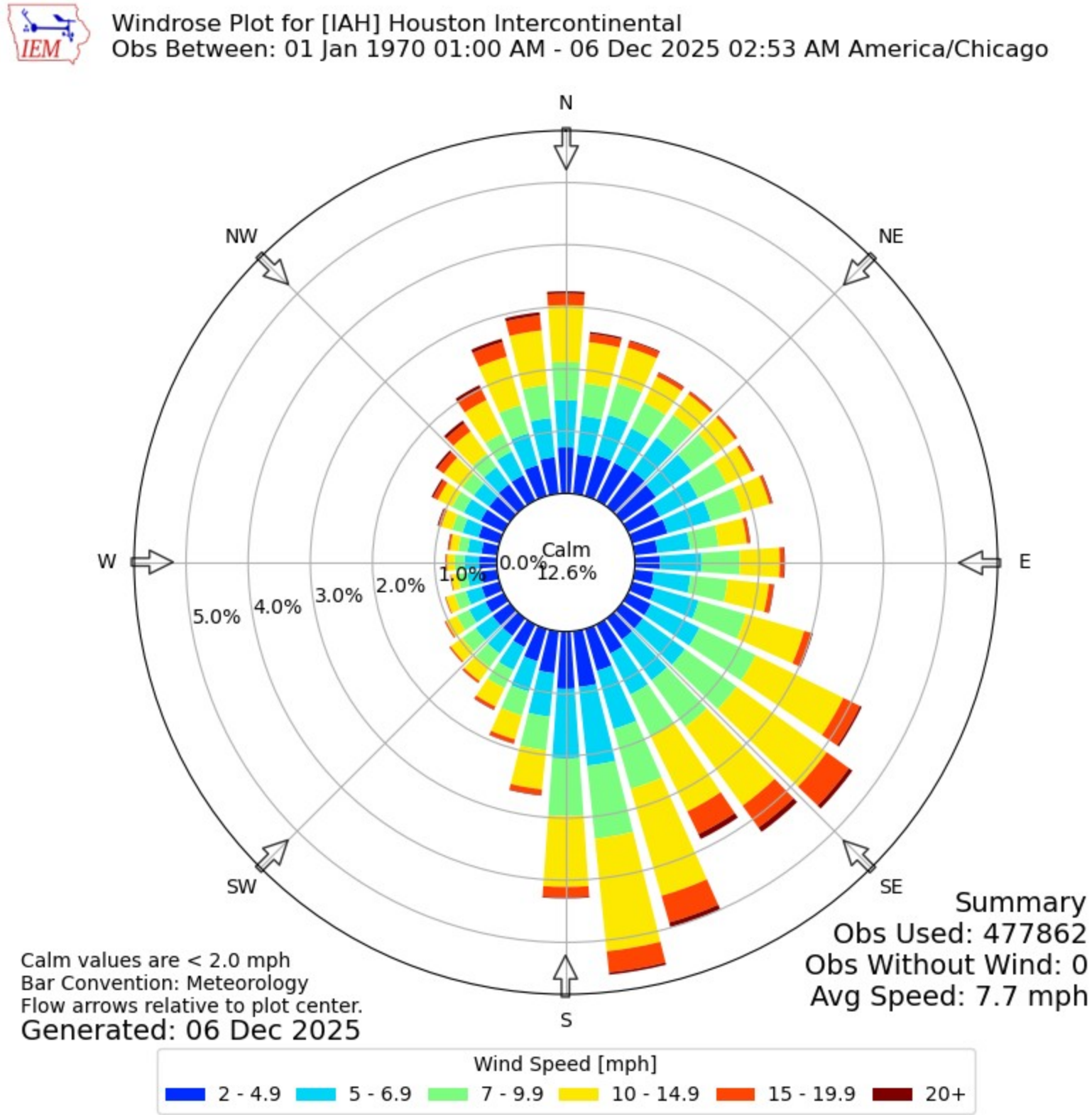
East side of property – Looking East

West side of Property - Looking West

South side of Property – Looking South

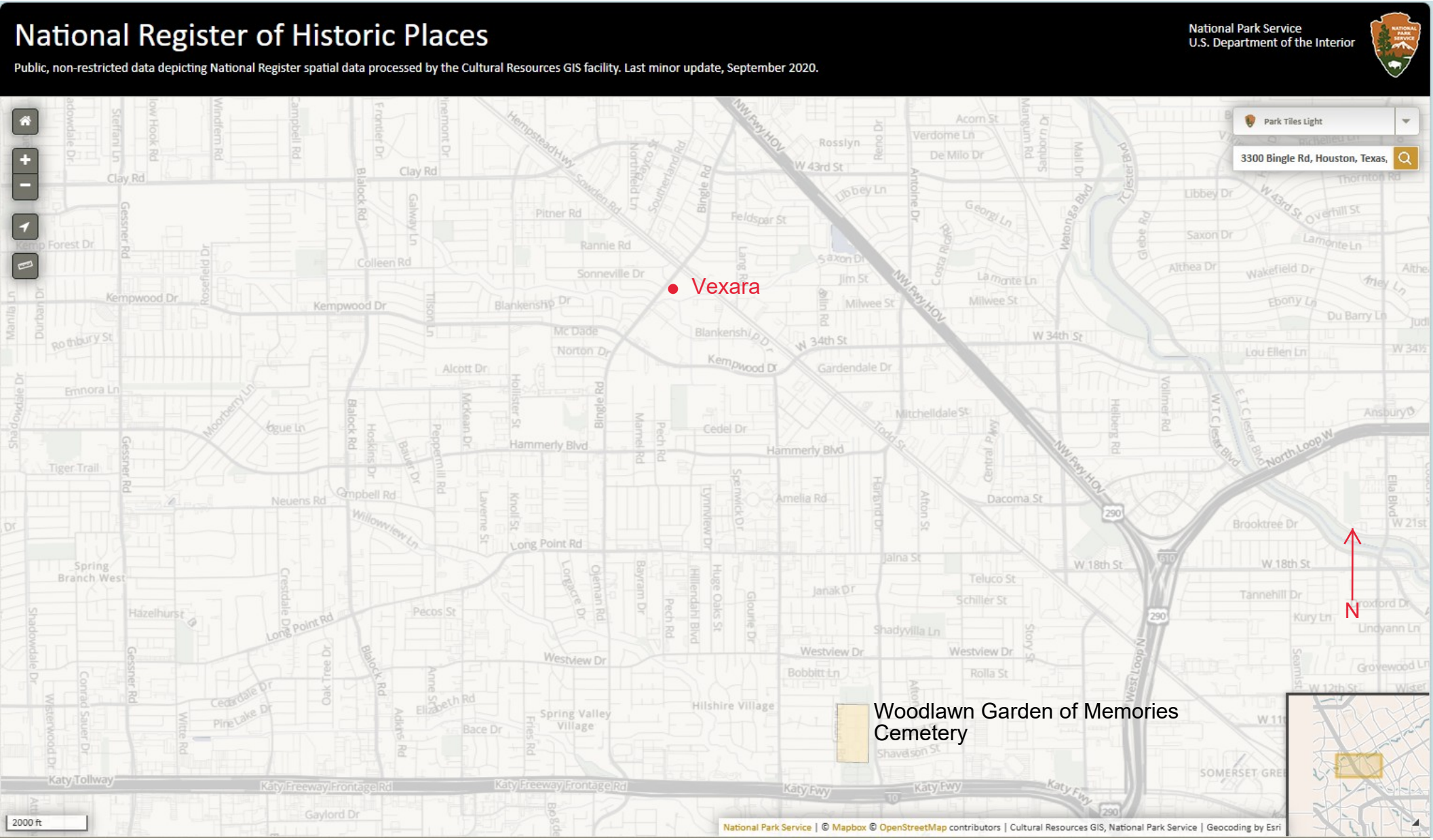
2.10.1: Houston Wind Rose

Figure 2.10.1


Windrose Plot for [IAH] Houston Intercontinental
Obs Between: 01 Jan 1970 01:00 AM - 06 Dec 2025 02:53 AM America/Chicago
N
NE
E
SE
S
SW
W
NW
Calm
0.0%
12.6%
1.0%
2.0%
3.0%
4.0%
5.0%
Summary
Obs Used: 477862
Obs Without Wind: 0
Avg Speed: 7.7 mph
Calm values are < 2.0 mph
Bar Convention: Meteorology
Flow arrows relative to plot center.
Generated: 06 Dec 2025
Wind Speed [mph]
2 - 4.9
5 - 6.9
7 - 9.9
10 - 14.9
15 - 19.9
20+

2.11.1: National Register of Historic Places

Figure 2.11.2



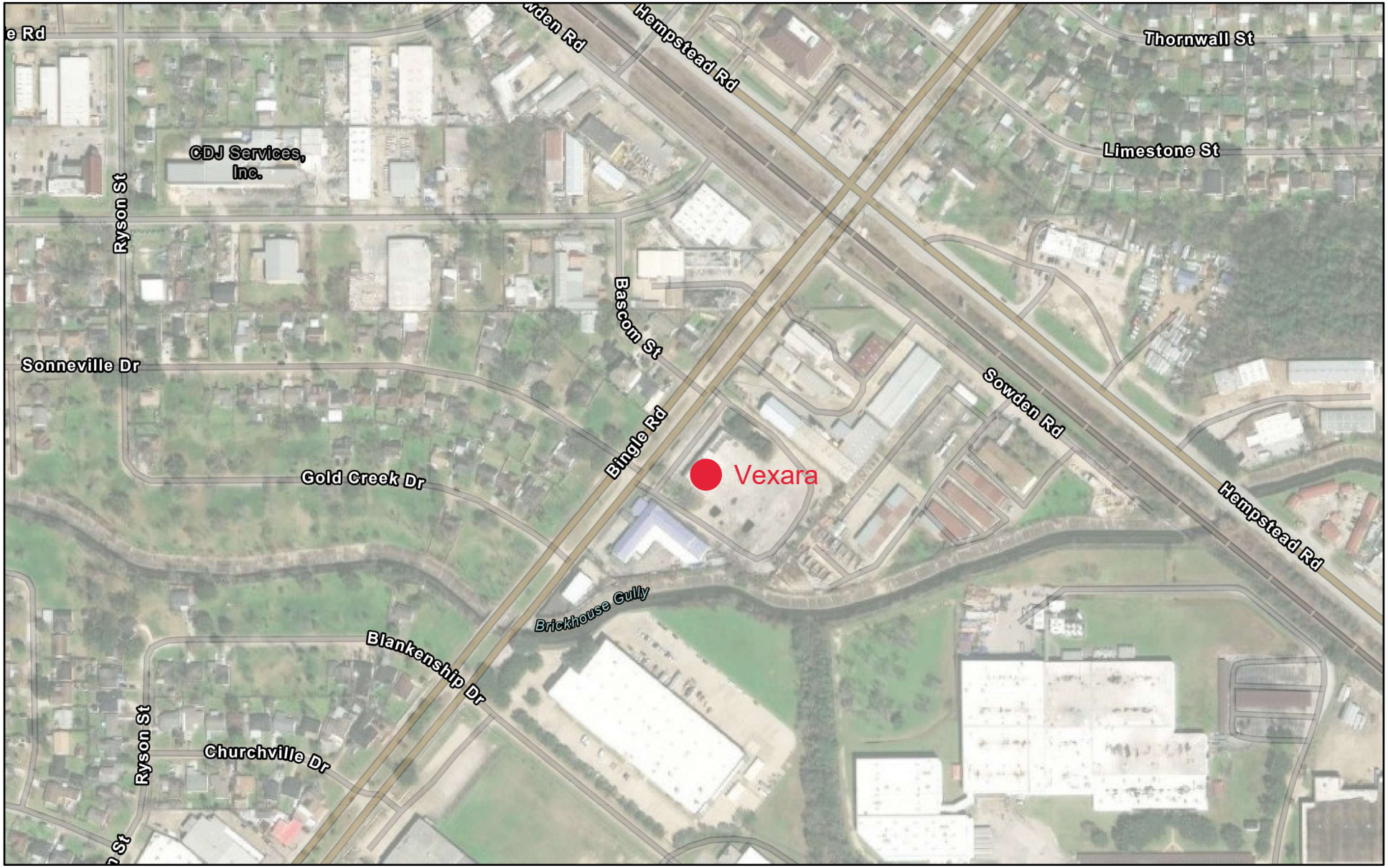
https://www.nps.gov/maps/full.html?mapID=7ad17cc9-b808-4ff8-a2f9-a99909164466
1/19/2026

Legend
Vexara
National Registered Historic Places

2.11.2: TxDOT PALM Map

Figure 2.11.2

TxDOT PALM Map



1/19/2026

PALM Legend Layer Houston

- 0-water
- 1-Survey
- 2-Survey
- 3-Survey
- 3-No Survey
- 3a-No Survey
- 4-No Survey

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

1.2m Resolution Metadata

1:4,752

0 0.04 0.07 0.14 mi

0 0.05 0.1 0.2 km

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

2.11.3: SHPO Consultation Request & Response

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO · STEPHENVILLE · ARTESIA

Corporate Office:
3404 Airway Blvd.
Amarillo TX 79118

Central Texas:
9855 FM 847
Dublin TX 76446

New Mexico:
203 East Main Street
Artesia NM 88210

January 28, 2026

Via *FedEx*

Mark Wolfe
State Historic Preservation Officer
Texas Historical Commission
108 W. 16th Street
Austin, TX 78701

Re: Request for SHPO Consultation
Vexara Pharmaceuticals, Harris County, Texas

Dear Mr. Wolfe,

Enclosed, please find the request for an SHPO consultation with attachments for the proposed Vexara Pharmaceuticals LLC Facility located on 2.9 acres at 3300 Bingle Road, Houston, TX 79055. The facility is an existing 127,706 sq ft concrete slab surrounded by asphalt on the east side of Bingle Road.
The project work description includes the following:
The proposed facility will dewater grease, grit and household septage waste. The liquids will be pumped into the City of Houston sewage treatment system via underground lines. The facility has contacted and will be applying for a City of Houston permit and will comply with the conditions within that permit as well. This process reduces the weight and volume making it easier to store and dispose of in bulk amounts. The solids will be stored for a short period of time (no more than 7 business days) until the filter box container is full of the separated solids and then it will be transported to an approved disposal site in the Houston, TX area.

A desktop analysis has been completed for the proposed location. This included a review of the National Register of Historic Places (See attached map). According to the HPALM map there is a low amount of negligible potential for archeological deposits at the proposed location of the facility. This location was formerly a discount retail store. The proposed facility's property is zoned for commercial use. The surrounding land use is comprised of industrial, commercial and residential properties.

After our desktop review, we recommend a finding of no historic properties affected and ask for concurrence from the SHPO.

If you have any questions or require additional information, please give me a call at 806-353-6123.

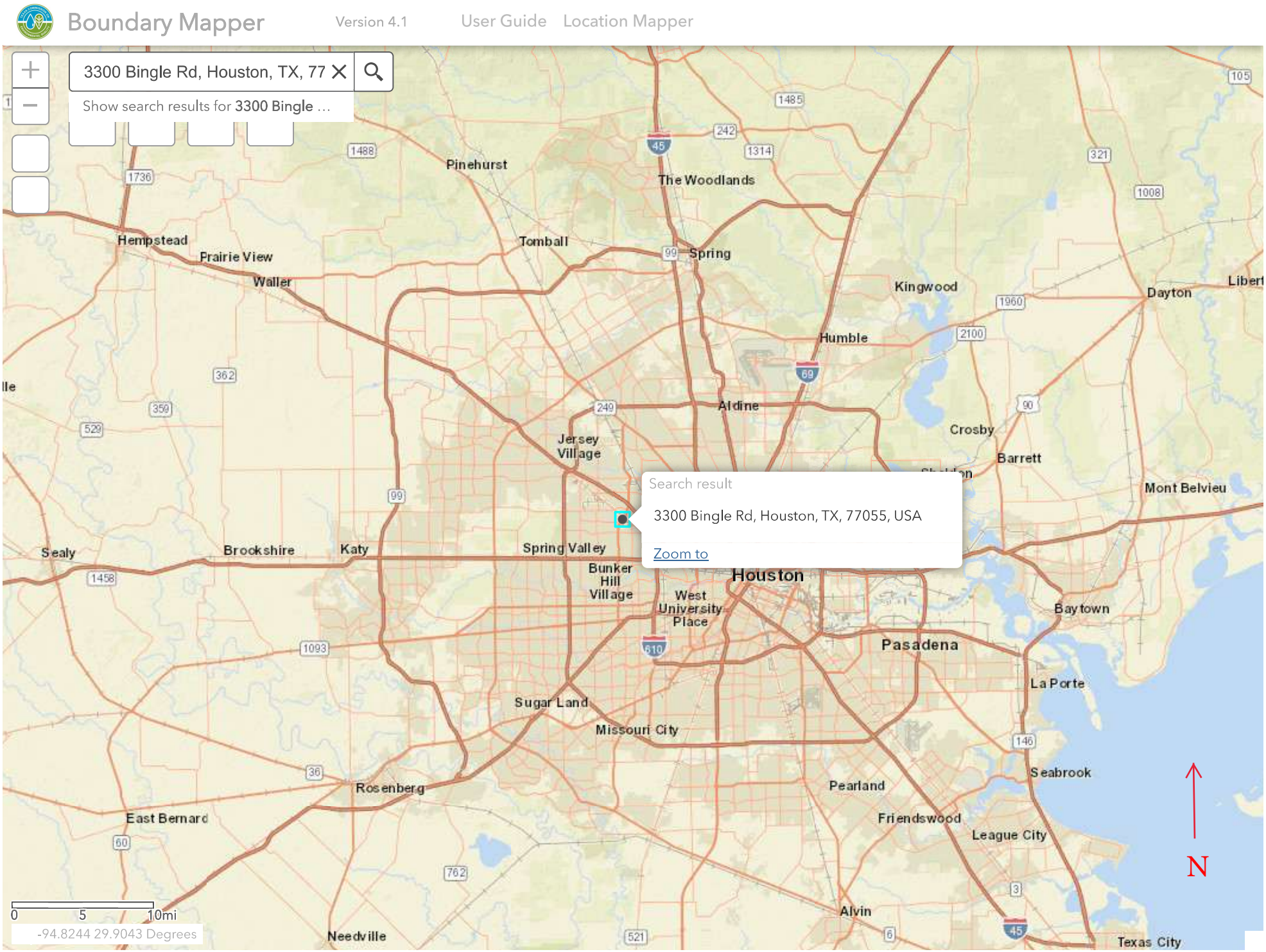
Sincerely,

Amy Peoples
Enviro-Ag Engineering, Inc.

Enclosures

Cc: Vexara Pharmaceuticals LLC
EAE file

Figure 1.7 - Vicinity Map



1/22/2026

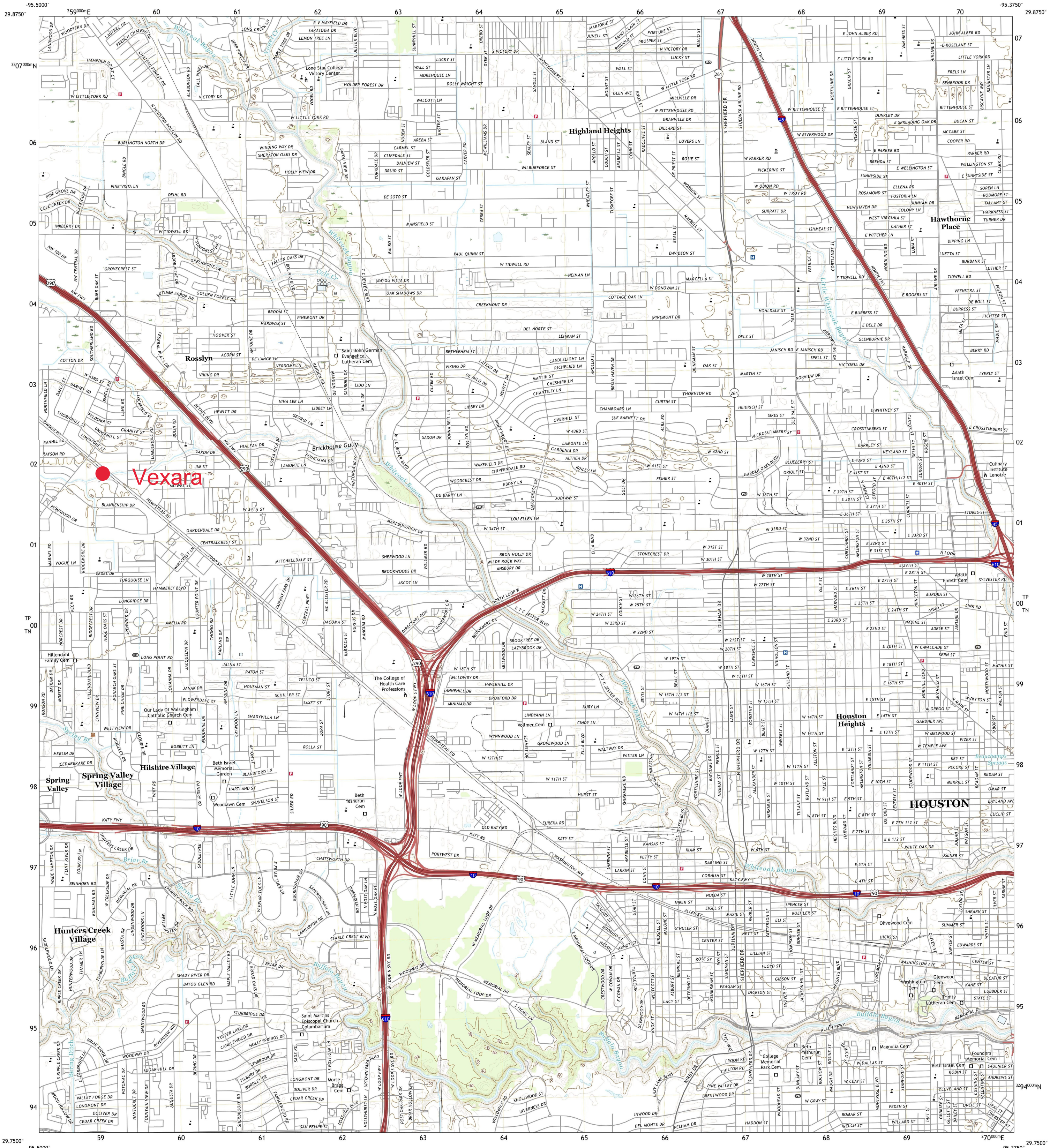
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

USGS science for a changing world

1/15/2026

The National Map US Topo

HOUSTON HEIGHTS QUADRANGLE
TEXAS - HARRIS COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 15R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, September 2016 - November 2016
Roads..... U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2010
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
2°24´ 43 MILS
1°13´ 22 MILS

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
TP
00
TN
Grid Zone Designation 15R

SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard.

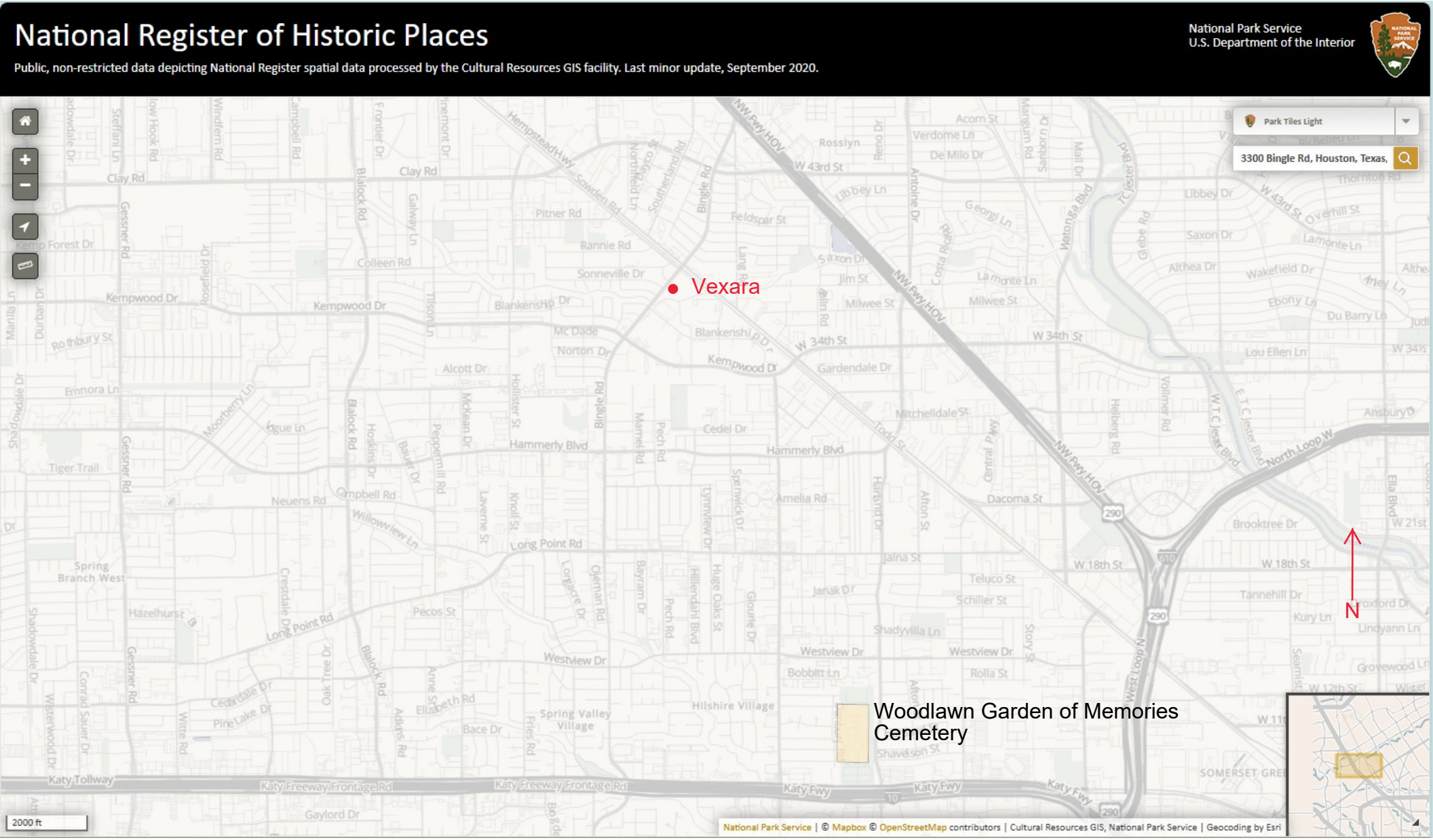
TEXAS
QUADRANGLE LOCATION

ADJOINING QUADRANGLES
1 Satsuma
2 Aldine
3 Humble
4 Hedwig Village
5 Settegast
6 Alief
7 Bellaire
8 Park Place

ROAD CLASSIFICATION
Expressway — Local Connector
Secondary Hwy — Local Road
Ramp — 4WD
Interstate Route — US Route — State Route

HOUSTON HEIGHTS, TX
2022

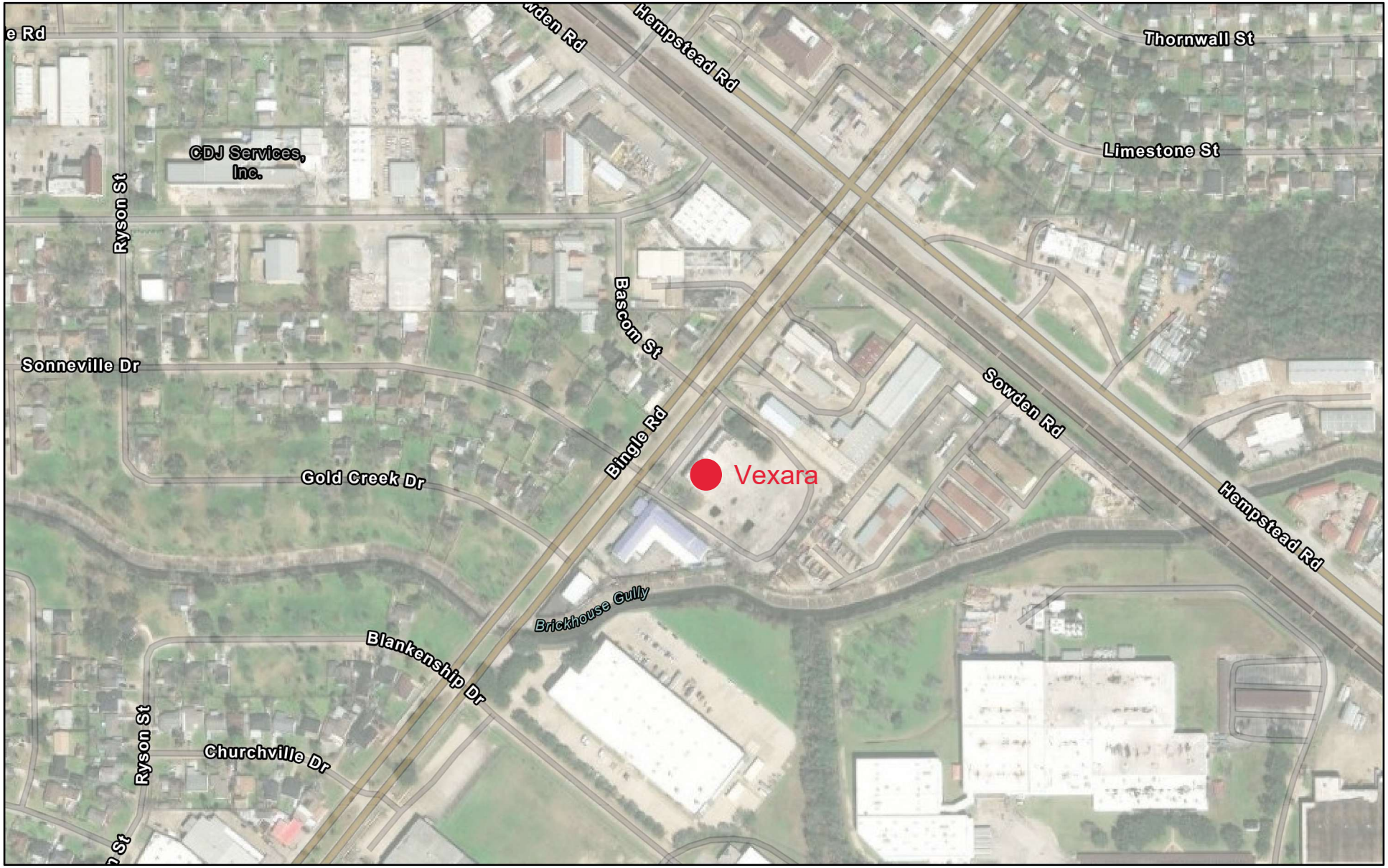
Figure 2.11.2



https://www.nps.gov/maps/full.html?mapID=7ad17cc9-b808-4ff8-a2f9-a99909164466
1/19/2026

Legend
Vexara
National Registered Historic Places

TxDOT PALM Map



1/19/2026

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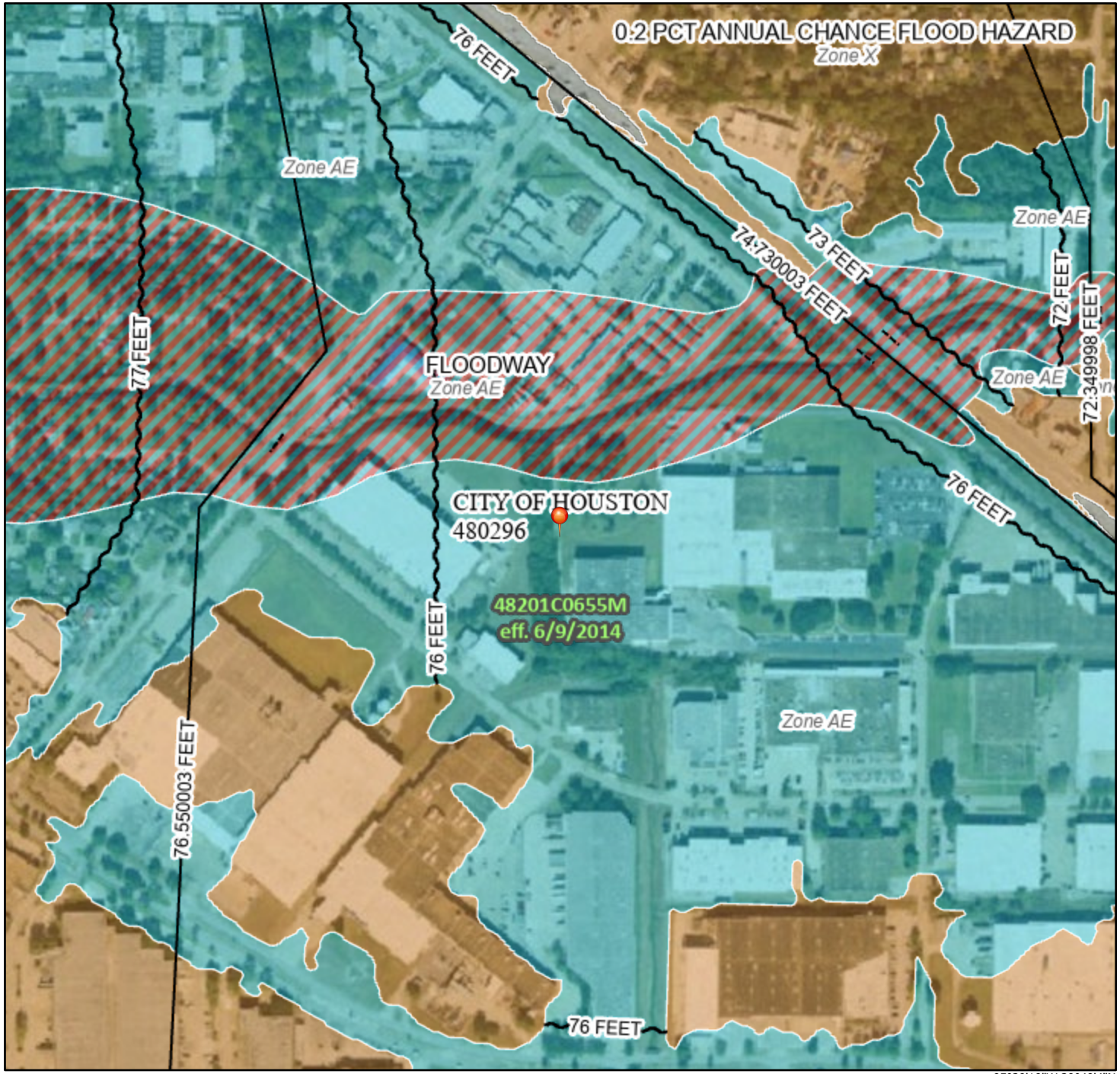
0 0.05 0.1 0.2 km

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

National Flood Hazard Layer FIRMette

FEMA

95°29'56"W 29°49'35"N



95°29'19"W 29°49'4"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/19/2026 at 4:59 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 2.11.3

Outlook

Vexara Pharmaceuticals, LLC

From [redacted]
Date Tue 2/17/2026 10:07 AM
To [redacted]

CAUTION: This email originated from outside of Enviro-Ag Engineering. Do not click links or open attachments unless you have verified the sender and know the content is safe.

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under the Antiquities Code of Texas
THC Tracking #202605462
Date: 02/17/2026
Vexara Pharmaceuticals, LLC
3300 Bingle Road
Houston,TX

Description: Construction of grease/grit trap and septic processing facility

Dear Amy Peoples:
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.

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Archeology Comments

- No effect on identified archeological sites or other cultural resources. 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: caitlin.brashear@thc.texas.gov, tracy.lovingood@thc.texas.gov.

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Sincerely,

for Joseph Bell, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

References

REFERENCES

Ashworth and Flores, June 1991. Delineation Criteria for the Major and Minor Aquifer Maps of Texas. Report LP-212, Texas Water Development Board.

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APPLICATION TO THE TCEQ FOR NEW PERMIT FOR A MUNICIPAL SOLID WASTE FACILITY

Part III – Site Development Plan - MSW Permit No. 2430

Vexara Pharmaceuticals

3300 Bingle Road

Houston, TX 77055

Prepared For:

Vexara Pharmaceuticals, LLC

1800 West Loop South Suite 1110

Houston, TX 77027

1-281-830-0284

February 1, 2026

Revision Date: February 27, 2026, April 29, 2026

F# 2507

STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED
PROFESSIONAL ENGINEER

05-06-2026

`Prepared By:

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO - STEPHENVILLE- ARTESIA

3404 Airway Boulevard ♦ Amarillo, Texas 79118 ♦ Tel 806/353-6123 ♦ Fax 806/353-4132

Table of Contents

F#2507

05-06-2026

List of Supporting Documents

3.0 Site Plan

This is a grease/grit trap, lint and septic waste processing facility. The proposed facility is an enclosed 7800 sq ft building with roll-up doors. Access to the facility is controlled by a perimeter fence, consisting of a four-foot barbed wire fence or a 6-foot chain link fence or equivalent with lockable gates. An attendant will be on-site during operating hours. The operating area and transport unit storage will be enclosed by walls or fence. Trucks full of grease, lint, grit and human waste from septic tanks and municipal sewage water will be offloaded by hose at a receiving station inside the building and surrounded by a curb to contain small spills. The liquid and biosolid waste will be processed for brown grease removal to recycle, and the remaining liquid and biosolid waste will be pumped through a series of storage tanks to a mixing tank where the waste will be mixed with lime for pH adjustment and then pumped into one of two dewatering boxes where a polymer will be added that works to separate the liquid from the solids. The liquid will drain off into a sump pump pit and be pumped to a holding tank for inspection and necessary testing and then drain into the City of Houston sanitary sewer system via underground lines. The biosolids will remain in the filter box container until it is full of the separated solids and then it will be offloaded into a 40-cubic yard rollbox and transported to an approved domestic solid waste disposal site landfill or composting site in the Houston area. Based on 50,000 gallons per day with an expected percentage of waste stream solids at 0.5%, it is anticipated that on average it may take up to 32 days to fill a dewatering box of solids prior to disposal. Operating at maximum capability of 150,000 gallons per day it would be projected that it would take 21 days to fill two dewater boxes of solids prior to disposal.

The areas surrounding the facility are asphalt and concrete. The facility will be designed to comply with the requirements of 30 TAC 330.303(a)-(b). A proposed facility layout is included in the Supporting Documents -Figure 2.1.3.

3.1 Facility Access

The waste acceptance hours of the facility will be between 4:00 a.m. and 6:00 p.m., Monday-Friday and Saturday 4:00am-noon. The operating hours for operating heavy equipment and transporting materials on- or off-site will be between 5:00am and 9:00 pm Monday-Friday. Access to the facility will be limited to employees and authorized visitors. Unauthorized visitors will be allowed when employees are present. A 4' x 4' sign with 3" letters will be placed at the entrance of the facility displaying the facility name and type, hours and days of operation, authorization number, facility rules and unloading area location.

3.2 Waste Movement

Liquid waste (grease from restaurants, grit from commercial car washes, septage) is delivered to the facility by truck. The load/material will be inspected to make sure no

prohibited or unauthorized waste is delivered to the facility. The wastewater will be offloaded from the truck via hose into a receiving station with an automated trash separating screen. The large trash will be separated out and put into a 10 cubic yard dumpster to be hauled to the landfill. The liquid waste with suspended solids will then go through a 4" trash pump into a 20,000-gallon separation tank (10' diameter x 33' long) where the grease floats to the top. The grease will be pumped into a pick heater and cyclone tank by a 25 gpm pump to separate out the brown grease. The brown grease will be stored in an oil storage tank so it can be recycled. The separated waste liquids and bio-solids that fall out of the bottom of the cyclone will be discharged through the reject port where under residual pressure will flow back into the receiving station for re-processing. The remaining separated wastewater and biosolids will be pumped through a series of 2 storage tanks until it reaches the mixing tank where lime will be added to the mixture. This mixture will be pumped into the dewatering boxes. As it is being pumped over, the polymer will be injected into the solution to start the separation process. The solids flocculate and separate from the liquids. The liquid will drain through openings in the wall of the box and collect in a sump pump pit where it will be pumped to a holding tank to be visual inspected, sampled as needed and pumped to the City of Houston sewer treatment system via underground lines. The facility will follow the requirements set forth in the City of Houston permit. Once a dewatering box is full of waste solids, the solids will be offloaded into a 40-cubic yard rollbox and hauled to an approved domestic solid waste disposal site landfill or composting facility.

The dewatering process is complete after the solids drain for several hours. The dewatering process can produce solid material that will pass the Paint Filter Liquid Test (EPA Method 9095B) for landfill acceptance.

A process flow chart (Figure 3.2.1) for the proposed facility is in the supporting documents.

3.3 Process Wastes

The products of this process include treated water and dewatered solids.

- Brown grease: Brown grease is composed of fats, oils and grease (FOG). It can clog sewer lines and interfere with septic systems and sewage treatment operations. Recognition of its value for production of fertilizer, biodiesel and other products, as well as stringent EPA regulations, are driving a trend of brown grease recycling.
- Water: The wastewater will be pumped into a holding tank for visual inspection to ensure the process is functioning as designed before entering a sampling station for city inspection and on to the city of Houston wastewater treatment plant.
- Solids: Dewatered solids in the dewatering boxes will be transferred from the facility by a roll-off truck. It will be delivered to an approved disposal site or composting site in the Houston area.

3.4 Odor Control and Ventilation

The facility is completely enclosed to prevent nuisance odors from leaving the property by minimizing the contact between unprocessed waste and air. All liquid and solid waste will be stored in odor retaining containers and vessels. The storage tanks are enclosed. Liquid from the storage tanks will be pumped to the dewatering box. Four of the five pumps will be capable of 400 gpm at 30 psi. The pick heater pump will require 25 gpm at 40 psi. The number of pumps for the project will be five. Typically, solids will not remain in the boxes long enough to create an odor problem. Tarps will be used to cover the boxes as needed to limit the odors. The boxes will be stored inside the enclosed building.

The enclosed facility will have a large exhaust fan on the south end that would expel the odorous air higher into the atmosphere for odor abatement. The empty containers will be washed down with hot water and degreaser.

The facility will not be in operation on Sunday.

3.5 Sanitation

It is anticipated that all storage tanks, pumps and other equipment within the process will require routine inspection and maintenance to ensure proper functioning and removal of solids build up within all the storage tanks. The equipment will be regularly inspected and cleaned to minimize solid loading. All working surfaces that are in contact with waste material will be washed at least 2-3 times per week. All solids removed from the storage tanks will be processed through the dewatering boxes and all wash water for cleaning will make its way to sump pump pit. Washing will consist of power wash equipment (See Equipment Specifications). Wash water will be conveyed to the sump pump pit inside the building. The sump pump will be the primary means to remove wash water. The building will have a curb inside the entire building walls to ensure full containment of wash water waste as it makes it way to sump pump pit and goes to the city sewer system via underground lines located on the west side of the building. The curb inside the building will provide full containment of the operation/process. The outside slope of the building is sloped away to prevent run-on of stormwater into the building.

3.6 Water Pollution Control

Water pollution from the dewatering process is minimized. The building will have 20 ft walls with a 6" curb around all the equipment inside the building. The outside tanks will have a two-foot tall and five-inch-thick containment surrounding them. This will hold the amount of the largest tank at 21,000 gallons and a significant storm event.Wastewater effluent from the dewatering process will be discharged into the sewer line via underground lines on the west of the property in accordance with the City of Houston Sanitary Sewer Department requirements. Based on the design, the waste management unit can sufficiently control and contain a worst-case scenario spill

or release from the unit. The spill or release will be contained inside the building with a 6" curb or containment wall. There will be no contaminated groundwater or surface water.

3.7 Drinking Water Protection

All areas of the facility are enclosed and are on asphalt or concrete surfaces. It is designed to contain liquids in the event of a spill.

3.8 Endangered Species

See Part 2.9 of this application. The proposed facility is in a building on a concrete slab surrounded by asphalt and concrete. There are no critical habitats within the project area.

3.9 Runoff Management, Site Drainage and Drainage Structures

The facility is in an enclosed 7,800 square foot building with 20' walls and surrounded by a curb. If a release of waste were to occur, it would be contained inside the building or curb. The roll-offs will have screens to filter out the trash and debris and no trucks will be allowed to uncap their discharge ports outside of the receiving station area. The surrounding area is sloped to drain away from the building.

3.10 Discharge of Wastes

If a spill were to occur, it would be contained inside the building or curb. A portable vacuum trailer will be kept inside to clean up the spill and return the waste to the receiving station.

Wastewater effluent from the dewatering process is discharged into the sewer line at the west of the property boundary in accordance with the City of Houston Sanitary Sewer Department requirements.

3.11 Storage Requirements

Liquid waste (grease from restaurants, grit from commercial car washes, septage) is delivered to the facility by truck. The load/material will be inspected to make sure no prohibited or unauthorized waste is delivered to the facility. The wastewater will be offloaded from the truck via hose into a receiving station with an automated trash separating screen. The large trash will be separated out and put into a 10 cubic yard dumpster to be hauled to the landfill. The liquid waste with suspended solids will then go through a 4" trash pump into a 20,000-gallon separation tank (10' diameter x 33' long)

where the grease floats to the top. The grease will be pumped into a pick heater and cyclone tank by a 25 gpm pump to separate out the brown grease. The brown grease will be stored in an oil storage tank (7,000 gallons) so it can be recycled. The separated waste liquids and bio-solids that fall out of the bottom of the cyclone will be discharged through the reject port where under residual pressure will flow back into the receiving station for re-processing. The remaining separated wastewater and biosolids will be pumped through a series of 2 storage tanks (20,000 gallons each) until it reaches the mixing tank (21,000 gallons) where lime will be added to the mixture. This mixture will be pumped into one of two dewatering boxes with tarps(40 cubic yards each or 8,078 gallon capacity), *providing* adequate design capacity to process waste without delays. As it is being pumped over, the polymer will be injected into the solution to start the separation process. The solids flocculate and separate from the liquids. The liquid will drain through openings in the wall of the box and collect in a sump pump pit where it will be pumped to a holding tank (6,000 gallons) to be visual inspected, sampled as needed and pumped to the City of Houston sewer treatment system via underground lines. The facility will follow the requirements set forth in the City of Houston permit. Once a dewatering box is full of waste solids, the solids will be offloaded into a 40-cubic yard rollbox and hauled to an approved domestic solid waste disposal site landfill or composting facility within 7 business days where it will be tarped and stored inside the enclosed facility. The maximum allowable time to store unprocessed waste is 72 hours.

All solids sent to the landfill will pass the Paint Filter Liquids Test (EPA Method 9095B). Any testing required by the landfill for classification of waste will be followed and records of all analyses will be retained on-site for a minimum of three years.

3.12 Noise Pollution and Screening

The sources of noise will include trucks entering and leaving the property as well as small engines that operate the pumps or other equipment. Truck traffic will be minor. Proper operation and maintenance of pumps and machinery with help to minimize noise pollution. The facility is enclosed and curbed. The hours of operation are Monday-Friday 4am-6pm, Saturday 4am-noon.

3.13 Employee Sanitation Facilities

A restroom facility is provided for the use of employees and visitors in the designated office area.

3.14 Operating Life of the Facility

There is no limit to the operating life of this facility since site capacity is not consumed during operations like at a landfill.

3.15 Facility Closure Plan

Domestic Liquid Waste Processing Facility

Future Closure Plan and Cost Estimate

Vexara Pharmaceuticals, LLC – 3300 Bingle Rd., Houston TX 77055

Introduction

This closure plan and cost estimate has been provided for the future closure of a pumped domestic septic tank waste, grease and grit processing facility for Vexara Pharmaceuticals LLC in Houston, Texas. This facility consists of an enclosed 8,000 sq-ft building with roll-up doors where contract vacuum trucks full of grease, grit and septic waste from households are offloaded into a receiving station being a screw press facility inside the building contained by a curb for spills. The screw press removes large non-biodegradable particulate/trash which is conveyed to a 5 cubic yard trash receptacle. The domestic waste liquids and solids are further processed by a series of process equipment that includes grease removal, pH adjustment, polymer addition for solids removal and dewatering to separate biosolids from the effluent wastewater. The dewatering units are configured with an arrangement of screens that allows effluent wastewater to escape into the designated collection space, then drain through drain ports where it is collected in a sump pit and pumped to a storage tank which gravity drains via underground sewer service piping to the City of Houston's wastewater sewer system. The resulting domestic waste solids are stored until the filter box container is full of separated solids and then it is transported to an approved domestic solid waste disposal site landfill or composting facility. The removed grease is stored in a tank inside the building and regularly picked up and transported to a recycling facility. This future closure plan and cost estimate was developed based on the provisions contained in Texas Administrative Code, Chapter 330, Subchapters K and L. For reference, the attached Vicinity and Location Map shows the location of the facility for Vexara Pharmaceuticals LLC facility. Generally, the facility exists as an enclosed 8,000 sq-ft metal building housing three 20,000 gal storage tanks (10' dia x 33' long), one 21,000 gal frac tank (46' x 10' x 8.5'), one 6,000 gal poly storage tank, one 7,000 gal poly storage tank, two 40 cubic yard (8,079 gal) dewatering boxes, one 40 cubic yard rolloff bin, one 10 cubic yard dumpster, piping, pumps, valves, screw press facility, steam generating equipment, cyclone, polymer injection equipment, curbs, etc.

The goal of this future closure plan and cost estimate is to ensure the proper decommissioning of the domestic liquid waste processing facility and ensure the State required financial security to be filed by Vexara Pharmaceuticals LLC in an amount that

is equal to or greater than the maximum amount necessary to close the facility at any time during the life of the permit term in accordance with all applicable State laws.

General Information

1) Facility Name & Address: Vexara Pharmaceuticals, LLC
   3300 Bingle Road
   Houston, TX 77055

2) Authorized Contact: Richard Seltzer, Ph: 281-830-0284
   1800 West Loop South Suite 1110
   Houston, TX 77027
   Email: [redacted]

Closure Plan and Cost Estimate Guidelines

This closure plan provides for the future closure of a pumped domestic septic tank waste, grease and grit processing facility for Vexara Pharmaceuticals, LLC in Houston, Texas. Closure will conform to following provisions also contained in Texas Administrative Code, Chapter 330, Subchapters K and L.

1) The operator will begin closure no later than 30 days after final receipt of waste or no later than one year if the unit has remaining capacity and additional waste may be received.
2) Closure activities to be completed within 180 days of initiation.
3) Suitable barriers shall be installed at all access points to adequately prevent the unauthorized dumping of solid waste at the closed facility.
4) At least one closure sign will be posted at every point of access and notify all persons who utilize the facility of the date of closure and the prohibition against further receipt of waste materials.
5) Submit a closure plan for Storage and Processing units to remove all waste, waste residues, and any recovered materials. Units shall be dismantled and removed off-site or decontaminated.
6) Provide plans for the evacuation of all material on-site to an authorized facility and the disinfecting of all contaminated water handling units, tipping areas, processing and post-processing areas (as applicable).
7) If there is evidence of a release, the TCEQ Executive Director may require an investigation, assessment, and or corrective action.

8) Acknowledge that following receipt of closure documents and the inspection report by the TCEQ region, the Executive Director may acknowledge termination of operation & closure & deem the facility properly closed.
9) A notice of closure shall be published in the newspaper of largest circulation 90 days prior to the initiation of a final facility closure. The notice shall provide the name, address, and physical location of the facility; the TCEQ authorization number; and the last date of intended receipt of waste.
10) The notice of closure shall be provided to the TCEQ Executive Director 90 days prior to the initiation of a final facility closure and that the owner or operator will also make available an adequate number of copies of the approved final closure and post-closure plans (if applicable) for public access and review.
11) An Affidavit to the Public shall be submitted to the TCEQ Executive Director by registered mail, if waste will remain onsite and that the Owner or Operator will also record a certified notation on the deed to the facility property that the land has been used as a landfill and submit a certified copy of the modified deed to the TCEQ Executive Director.
12) Certification, signed by a P.E., shall be provided within 10 days of final closure activities, verifying that final facility closure has been completed in accordance with the approved closure plan and shall include all applicable documentation necessary for certification.
13) The owner or operator may request permission from the TCEQ Executive Director to remove the notation from the deed if all wastes are removed from the facility.
14) Submit cost estimates for closure & post-closure. Existing facilities must submit a copy of the financial assurance documentation. New facilities must submit financial assurance within 60 days prior to receipt of waste.
15) The closure cost estimate shall equal the costs of closure of the facility, including disposition of the maximum inventories of all waste.
16) The closure cost estimate shall be based on the costs of hiring a third party that is not affiliated with the owner or operator; and is based on a per cubic yard and/or short ton measure for collection and disposition costs.
17) Provide for the closure cost estimate & financial assurance to be increased if conditions change which increase the maximum cost of closure at any time during the active life of the facility.
18) A reduction in the closure cost estimate and the amount of financial assurance may be approved if the cost estimate exceeds the maximum cost of closure at any time during the remaining life of the facility.
19) Provide for the maintenance of financial assurance until closure is approved by the TCEQ Executive Director.
20) Maintain documentation that the facility is in compliance with the conditions of the permit.
21) Establish criteria for delineating between waste material that will be hauled to active permitted waste disposal facilities versus that which is to remain.
22) None of the operator's equipment or facilities that may have otherwise been available at the time of the closure (e.g. treatment facilities, trucks, bulldozers, employees, etc.) shall be available to assist in the closure.
23) The facility shall be closed in accordance with the permit. Disposal of wastes should assume that storage tanks/processing units contain maximum permitting holding amounts of waste material.

24) Provide a list of the unit costs for all material, equipment, services, and labor needed to close the facility. The list must be specific and must state the source or basis for the specific unit cost.
25) Show the total quantity of each unit cost item and how the total quantity was determined (i.e. cubic yards of material divided by size of load equals total number of loads, etc.)
26) Show all calculations used to arrive at total maximum closure costs.
27) Include supporting maps and illustrations, such as: before and after topographical maps, facility plot plans and photographs that illustrate the current condition of the facility, and/or anticipated condition of the facility upon reaching maximum permit conditions at closure. All structures associated with the facility (including but not limited to all buildings, storage tanks, processing units, pipelines, pits, etc.) that are currently on site or will be upon reaching maximum permitted capacity. For instance, the estimate should assume all permitted but undeveloped pit capacity, treatment cells, or any other structures and/or equipment that would be in place under permitted operations whether such structures and equipment are in place at the time of the estimate or not. All such structures and the proposed method of demolition, disposal, and/or removal must be clearly identified in the closure cost estimate.

Attachments

Future Closure Cost Estimate

Vicinity Map

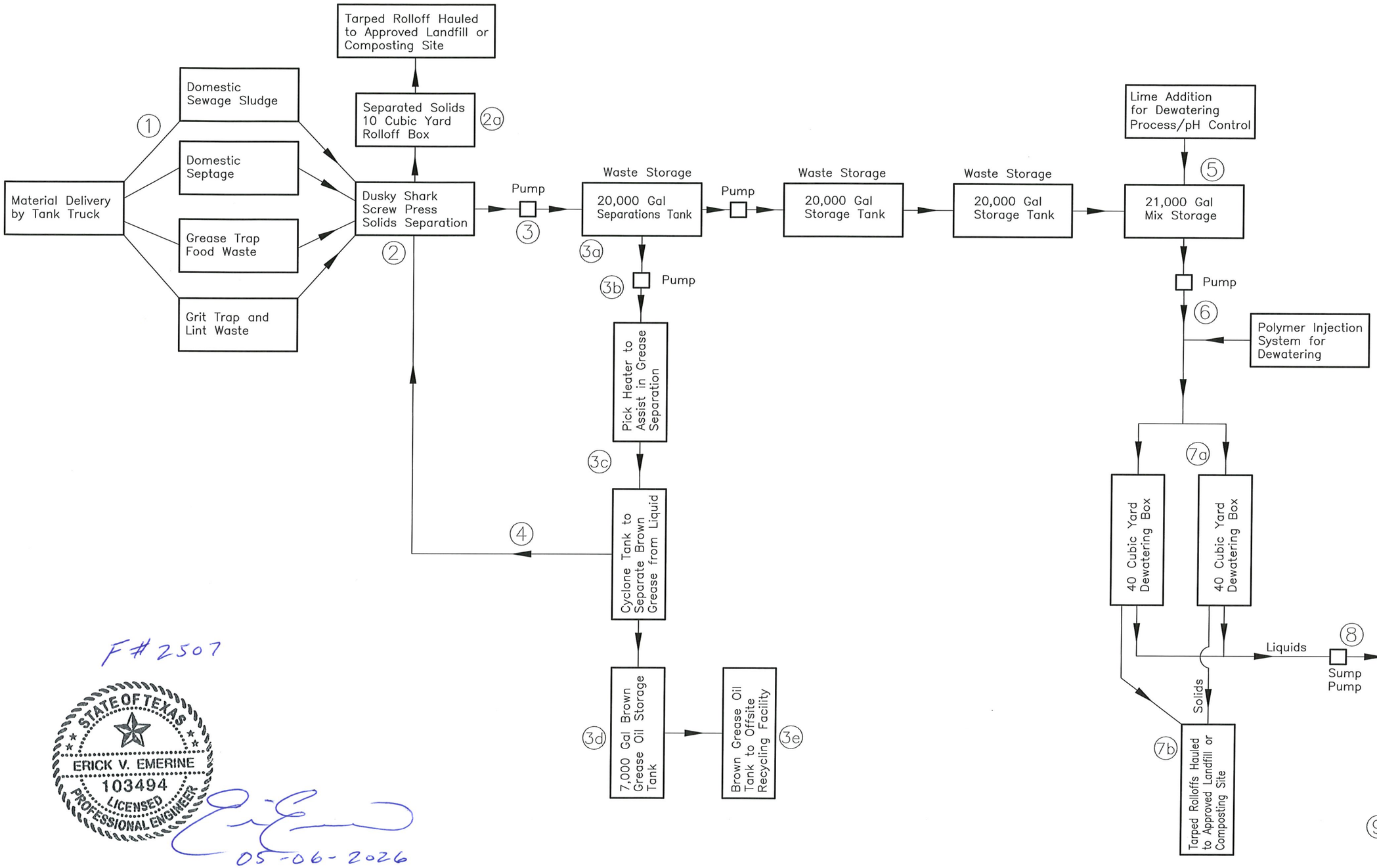
Location Map

Processing Facility Layout

Letter of Credit from Permittee's Financial Institution

Supporting Documents

3.2.1 Process Flow Chart



F#2507

STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED
PROFESSIONAL ENGINEER

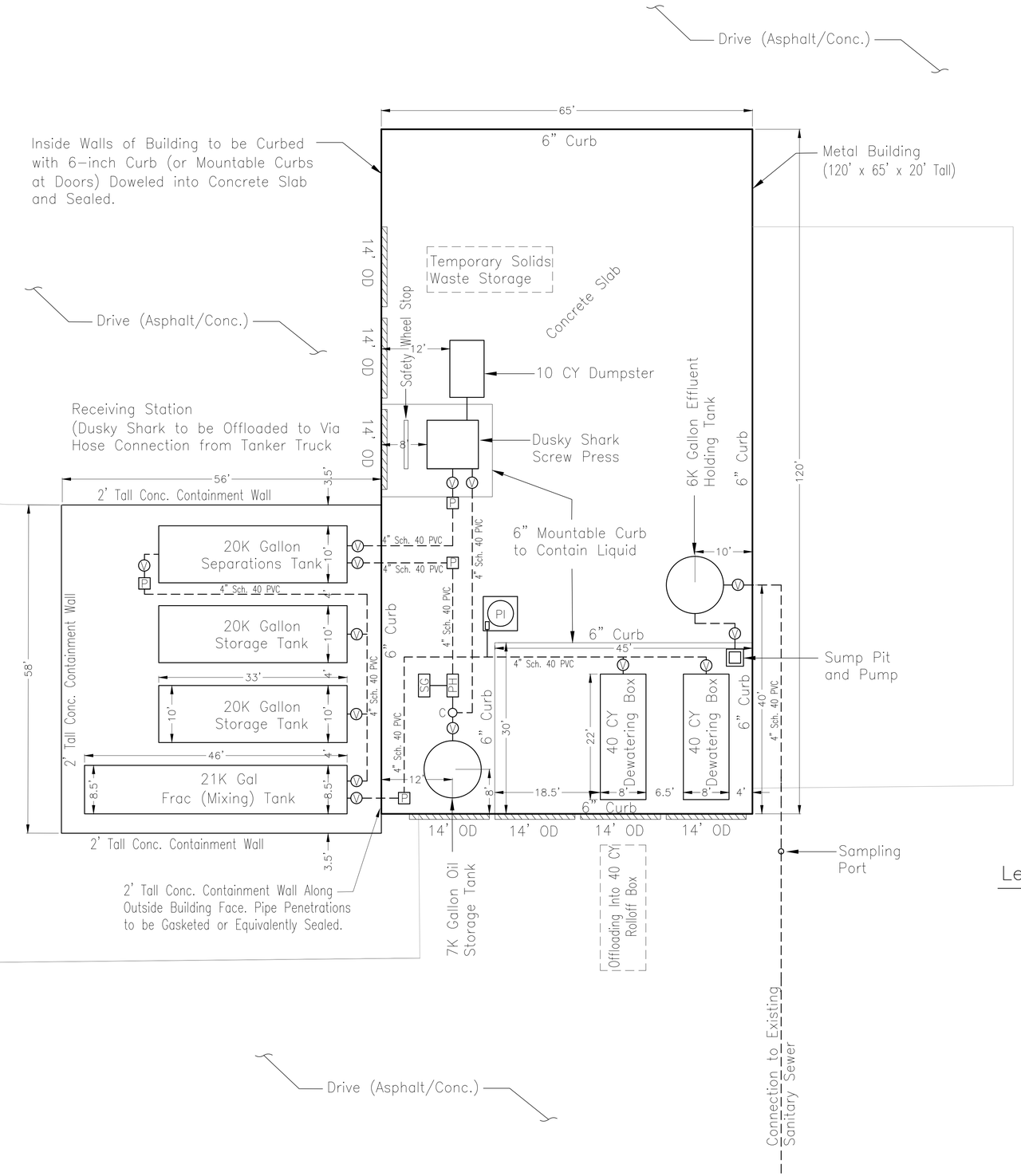
05-06-2026

Vexara Pharmaceuticals LLC Harris County Houston, TX	Process Flow Diagram Figure 3.2.1 April 2026	ENVIRO-AG ENGINEERING, INC. Enviro-Ag Engineering, Inc. ENGINEERING CONSULTANTS 3404 Airway Boulevard AMARILLO, TEXAS 79118 TEL (806) 353-6123 FAX (806) 353-4132

Revised 4/30/2026

Construction Drawings

Figure 4.1.1



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	INITIAL RELEASE		

N E S W

0 10 20

SCALE: 1" = 10'

Legend

P	Pump
V	Valve
C	Cyclone
PH	Pick Heater
SG	Steam Generator
PI	Polymer Injection Unit
OD	Overhead Door

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ENGINEERING CONSULTANTS
3404 Airway Blvd.
Amarillo, Texas
79118
TEL (806) 353-6123
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Vexara Pharmaceuticals LLC
Layout and Dimension Plan

DWG

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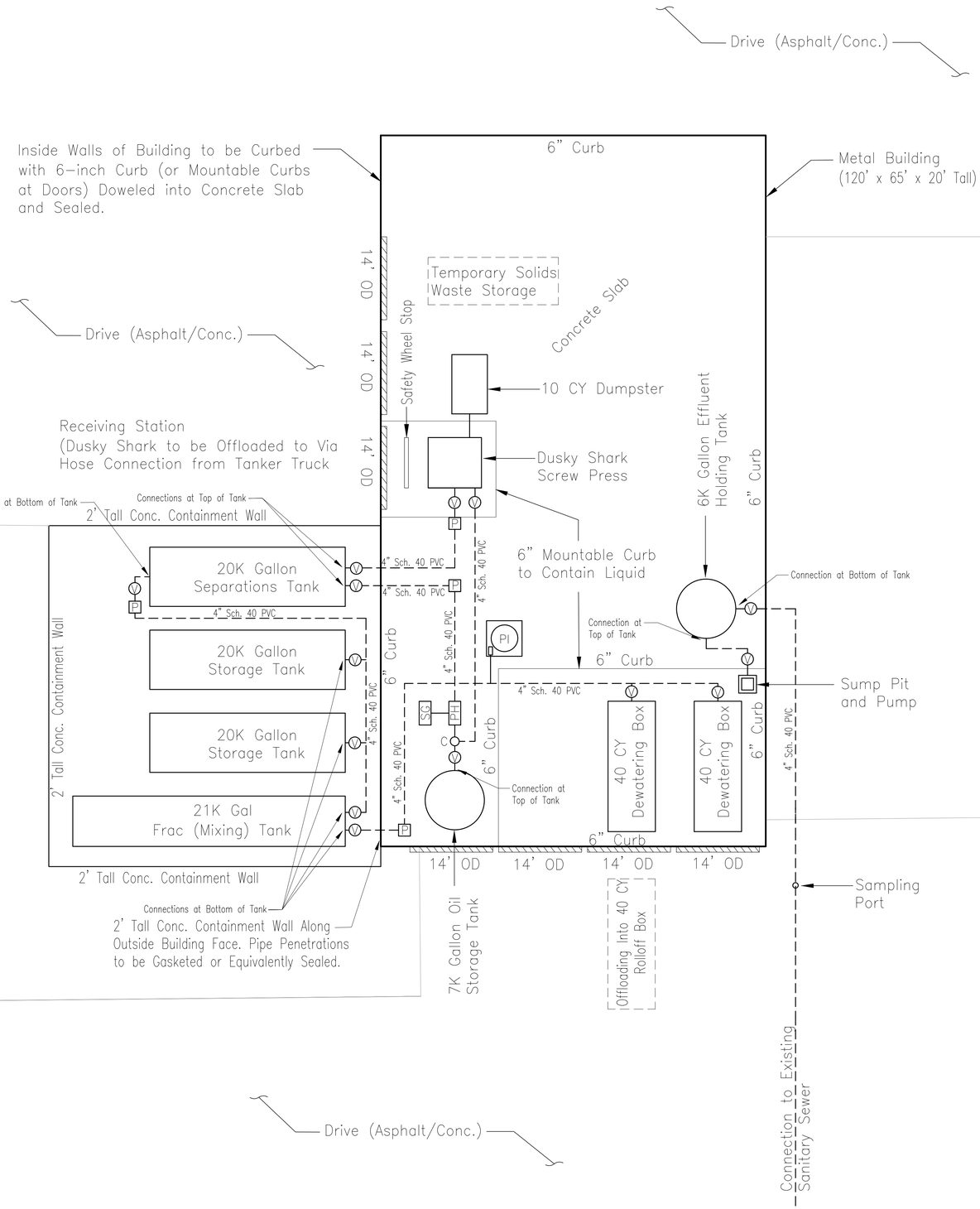

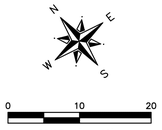

Notes:

1. All pressure piping for this project shall be minimum 4–inch Schedule 40 PVC. All PVC joints and couplings shall be solvent welded and properly thrust restrained. If steel is selected, joints and couplings shall be flanged, threaded and/or mechanical joint type.
2. All pumps (centrifugal and submersible) shall be capable of 200 gpm (maximum 400 gpm) at minimum 70' total dynamic head. All pumps shall be equipped with capability to throttle (decrease) flow rate.
3. Valves shall ball, gate or butterfly type.
4. All plumbing constuction shall be leak and pressure tested up to 80 psi.
5. Concrete construction work shall be watertight including all joints. Concrete shall be minimum 4,000 psi structural grade. Existing joints and/or cracks in slab shall be cleaned and filled with an appropriate high performance elastomeric joint sealant. Recommended product, Sikaflex–1a by Sika.
6. Entire concrete slab surface within operation area shall be cleaned and coated with an industrial grade bituminous epoxy by Carboline, product Bitumastic 300M per manufacturer's recommendations.
7. Inside of operation area along inside wall of building to be curbed with 6–inch reinforced concrete doweled into existing slab and sealed. At overhead doors, mountable curb to be installed to provide access.
8. Receiving station shall be a Dusky Shark septage screw press unit.
9. Heat injection and steam generation shall be a direct steam injection (DSI) BX Series by Pick Heater.
10. Cyclone oil/water separator shall be a 10–inch diameter by 2–ft tall cyclone by Park Process (or equivalent) and capable of performance at separation duty at 25 gpm at 40 psi.
11. Polymer injection system shall be by Aqua–Zyme or equivalent.
12. Metal storage tanks shall be of welded construction and coated on inside and outside to be protective of metal and resistant to corrosion.
13. 40 cubic yard dewatering boxes shall be by Flo Trend.
14. Frac tanks shall be industry standard 500 barrel horizontal tanks.
15. Power and controls are not part of these drawings and shall be performed by the MEP engineer or specialty electrical/control contractor.
16. Poly (HDPE) storage tanks shall be high density polyethylene material and suitable for oils and domestic wastewater liquids.
17. Sampling port shall be placed over sewer service connection for City inspection and sampling. Sampling port shall be Schier Sewer Viewer or equivalent or as directed by City.
18. All development work pertaining to City of Houston site planning ordinances are not part of these drawings. Site planning/property development work shall conform to the City of Houston development standards, processes and ordinances.

Legend

P	Pump
V	Valve
C	Cyclone
PH	Pick Heater
SG	Steam Generator
PI	Polymer Injection Unit
OD	Overhead Door

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Vexara Pharmaceuticals LLC
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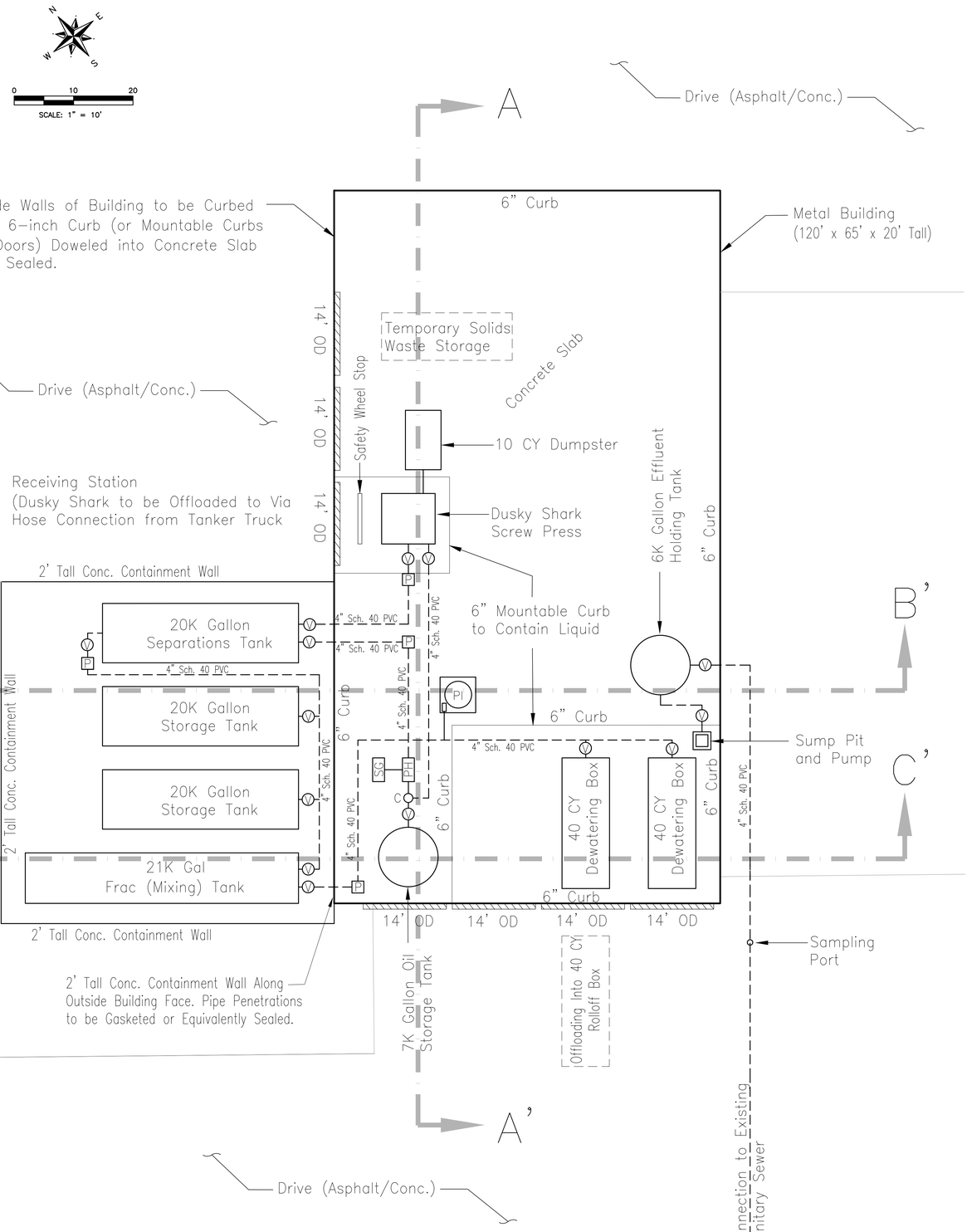
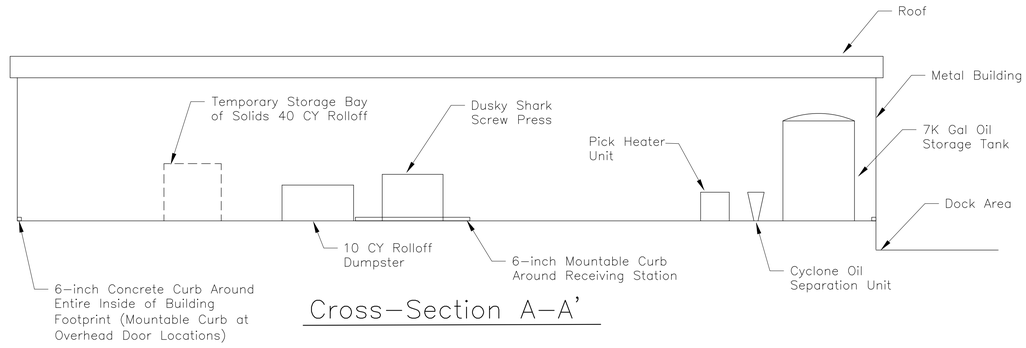
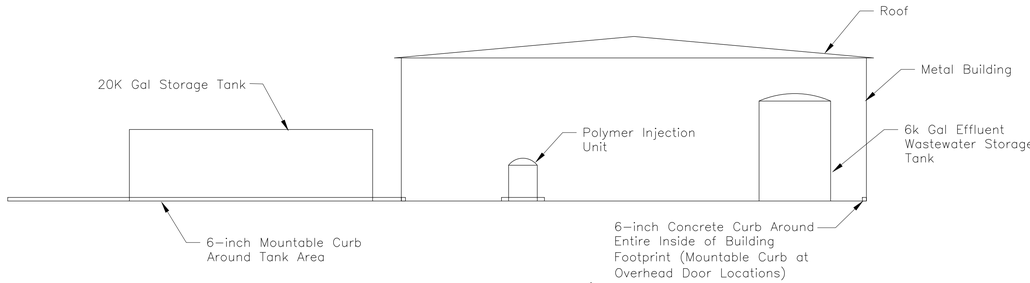




Cross-Section A-A'



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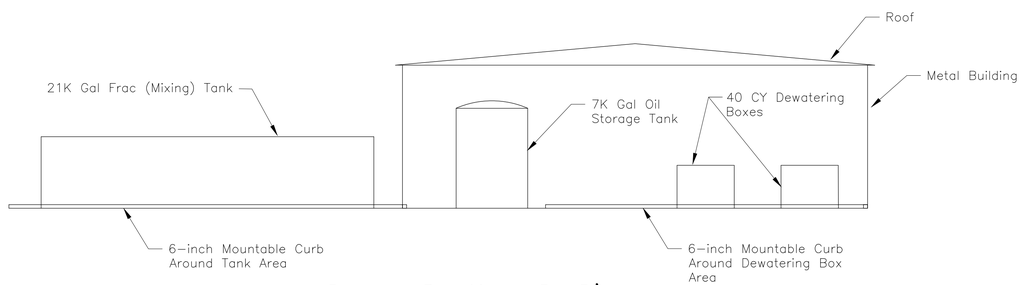

Cross-Section C-C'

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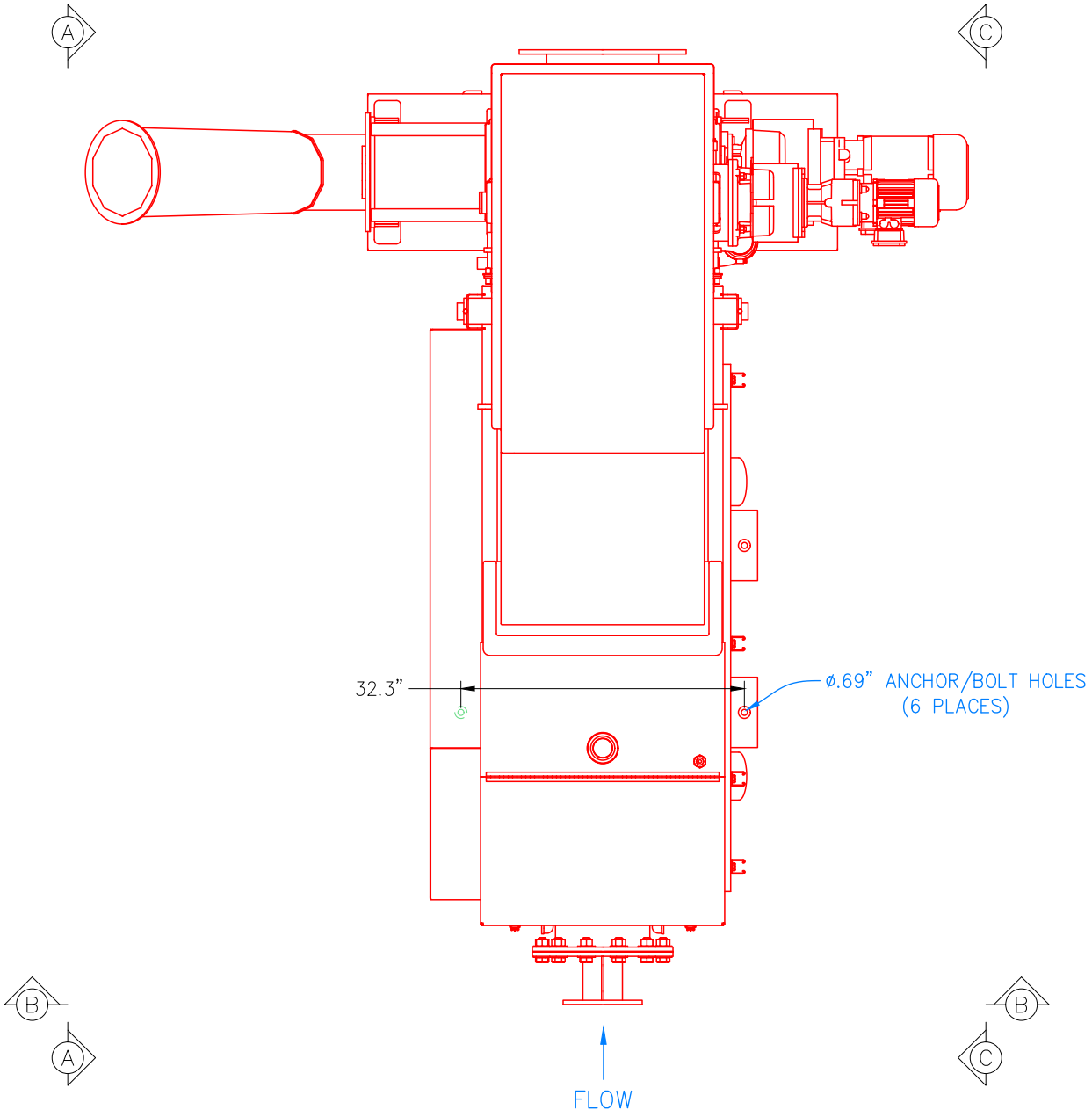
DWG
Vexara Pharmaceuticals LLC
Cross-Sections

Equipment Specifications

Receiving Station Specs (Dusky Shark)

(Identification No. 2 Per Process Flow Diagram)



ESTIMATED EQUIPMENT WEIGHTS
LFS (DRY) : 1,100 LBS
WCP8H (DRY) : 800 LBS
SRS (DRY) : 1,200 LBS
TOTAL: 3,100 LBS

PLAN VIEW

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.XXX	± .030"		
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SRS LFS PROPOSAL LAYOUT

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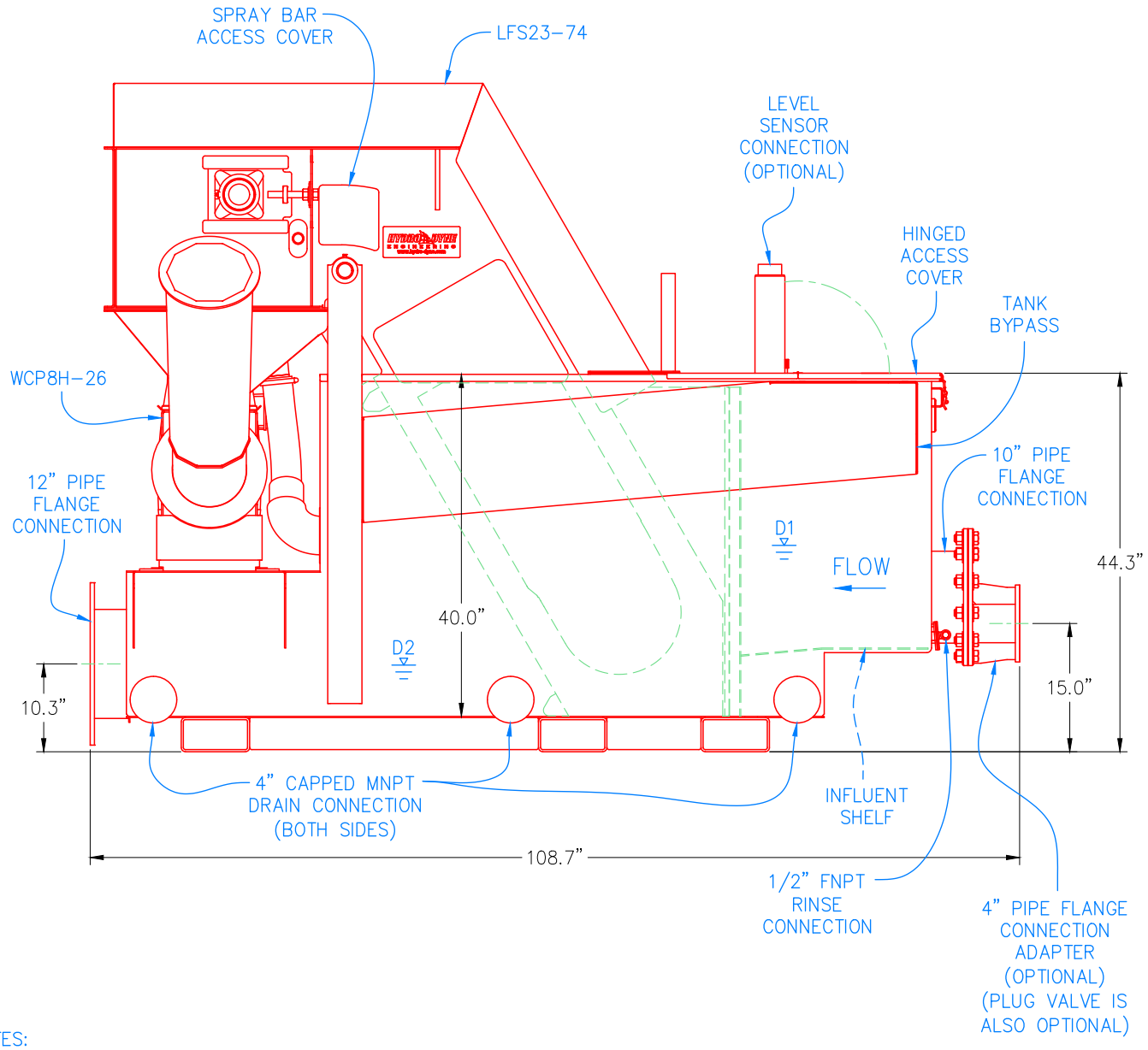
DRAWN BY/DATE: J. COONEY - 03/12/2024	SCALE: 5/8"=1'	
CHECKED BY/DATE: S. STURTEVANT - 03/12/2024	SIZE: A	



NOTES:

1. UNIT MAY NEED TO BE ELEVATED FOR EFFLUENT TO FULLY DRAIN BY GRAVITY.
2. A DUMPSTER IS TYPICALLY LOCATED AT THE UNIT FOR SOLIDS COLLECTION.
3. SNORKEL MAY BE REMOVED TO FIT THROUGH A DOOR.
4. FORK LOCATIONS FOR LIFT ARE POSITIONED FOR A BALANCED LOAD.

SECTION A-A

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UNLESS NOTED	
TOLERANCE	
.X	± .125"
.XX	± .060"
.XXX	± .030"
FRACTIONAL	± 1/4"
∠	± 1°

HYDRO-DYNE ENGINEERING
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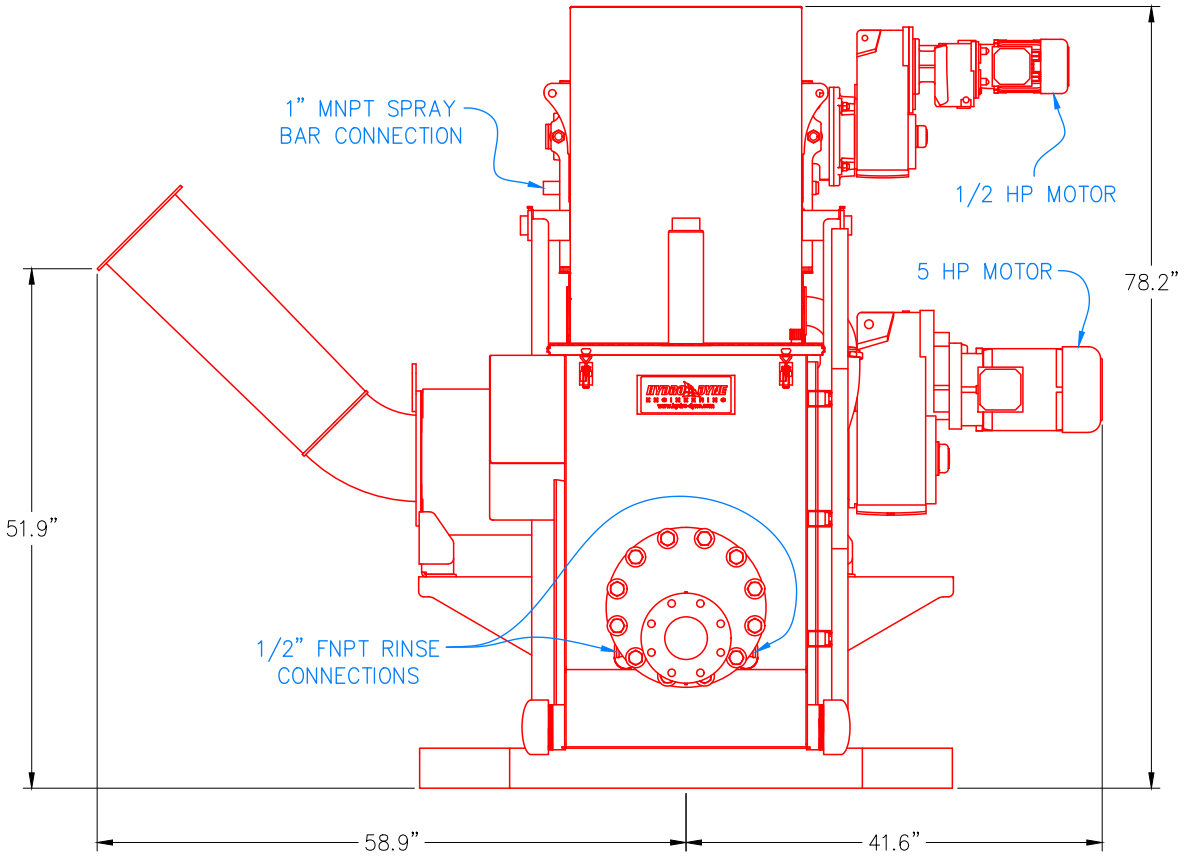
SRS LFS PROPOSAL LAYOUT

FILE #: SRS-LFS23-74-WCP8H-P1	SHT.: 2/4	REV.: P1
DRAWN BY/DATE: J. COONEY – 03/12/2024	SCALE: 5/8"=1'	
CHECKED BY/DATE: S. STURTEVANT – 03/12/2024	SIZE: A	



SECTION B-B

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.XXX ± .030"			
FRACTIONAL ± 1/4"			
∠ ± 1°			

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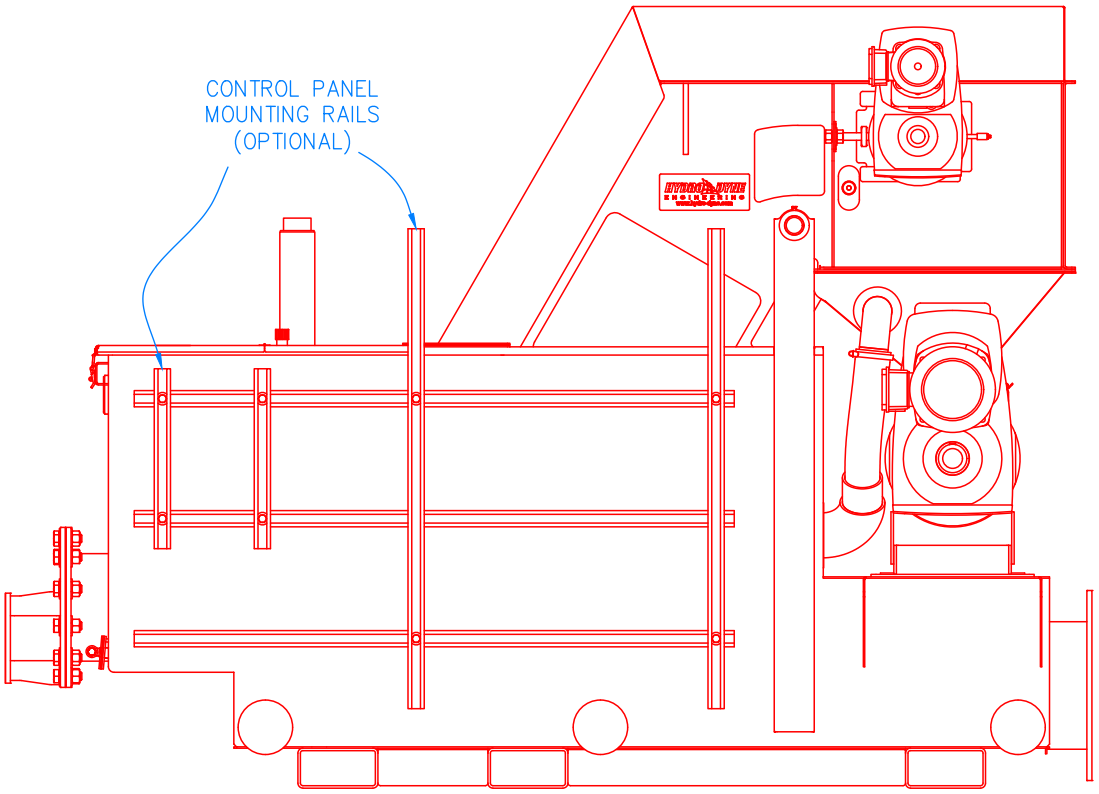
SRS LFS PROPOSAL LAYOUT

FILE #: SRS-LFS23-74-WCP8H-P1	SHT.: 3/4	REV.: P1
DRAWN BY/DATE: J. COONEY - 03/12/2024	SCALE: 5/8"=1'	
CHECKED BY/DATE: S. STURTEVANT - 03/12/2024	SIZE: A	



SECTION C-C

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UNLESS NOTED
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.XX ± .060"
.XXX ± .030"
FRACTIONAL ± 1/4"
∠ ± 1°

HYDRO-DYNE ENGINEERING
www.hydro-dyne.com

SRS LFS PROPOSAL LAYOUT

FILE #: SRS-LFS23-74-WCP8H-P1	SHT.: 4/4	REV.: P1
DRAWN BY/DATE: J. COONEY - 03/12/2024	SCALE: 5/8"=1'	
CHECKED BY/DATE: S. STURTEVANT - 03/12/2024	SIZE: A	

Dusky Shark Septage Receiving Station

SUPERIOR SELF-CONTAINED
PROTECTION FOR YOUR PROCESS.

SPEAK WITH AN EXPERT
< HTTPS://WWW.HYDRO-DYNE.COM/CONTACT-US/>

Overview

The Dusky Shark is renowned for eating just about anything, including garbage. And like this shark, our Dusky Shark Septage Receiving Station is highly capable of screening nearly any material out of a wastewater flow, including septage and grease trap material that other equipment cannot manage. The Dusky Shark Septage Receiving Station is highly efficient, reliable and easy to install.

DOWNLOAD BROCHURE
< HTTPS://WWW.HYDRO-DYNE.COM/WP-CONTENT/UPLOADS/2021/04/HYDRO-DYNE_DUSKY-SHARK-SEPTAGE-RECEIVING-STATION.PDF>

PHOTO GALLERY

- Best screen for septage: The only product on the market with a continuous belt design offloaded by water only
- Robust construction: Results in lowest lifecycle cost in the industry, least maintenance required, and lowest parts replacement
- **Screen design < https://www.hydro-dyne.com/septage-receiving-system-design-best-practices/>** : Optimal for offloading FOG and rags, with no operator intervention required
- Headquarters, manufacturing, parts and service based entirely in the USA

Through Flow Dusky Shark

- Proven design in hundreds of wastewater applications
- High volume screenings reduction with low maintenance
- Easily captures and removes FOG and rags
- Continuous belt design eliminates potential for jamming and removes large solids
- No submerged sprockets, bearings or bushings

Continuous Belt with Slotted Grid Design: The Optimal Design for Septage Applications

We offer opening options that include stainless steel links and perforated panels as well as UHMWPE perforated panels. Our Dusky Shark Septage Receiving Equipment can accommodate low-to-high flow rates and features opening sizes from 1mm to 75mm.

Laced Links

Stainless Steel Laced Links

Rectangular Openings from 3-9mm

The Laced Link-style grid is ideally suited for water and wastewater applications where fine screening is required with low headlosses.

Advantages

- Able to withstand extremely harsh environments
- Strongest grid available
- Excellent unloading of screenings
- Highest open area percentage/very efficient

Limitations

- Less efficient capture of hair and fibrous material
- Lower screening capture ratio

- Excellent in the screening of FOG and stringy material

Theory of Operation

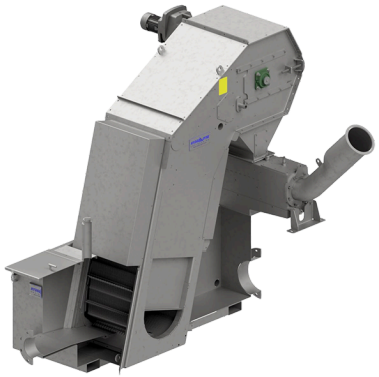
Flow passes through the screen while solids are intercepted and collected by the continuously moving grid. Solids larger than the openings in the screen's grid are collected and form a mat, which is removed undisturbed from the flow resulting in extremely high solids capture and easy unloading.

A low profile bottom shoe and polypropylene brush seals the grid, preventing solids from bypassing under the screen. Flow is constantly presented a clean grid surface as solids are transported to the top of the screen. Screenings are discharged into **screenings handling equipment < https://www.hydro-dyne.com/screenings-handling/>** .

Minimal friction is achieved through the use of Ultra High Molecular Weight Poly-Ethylene (UHMWPE) and stainless steel wear surfaces. Machined Delrin spacers precisely separate elements, eliminating metal-on-metal wear,

Wide stainless steel tracks ensure years of trouble-free operation. Stainless steel grid elements provide superior strength while reducing area and headlosses. Heavy gauge stainless steel links are not susceptible to breaking and damaging downstream equipment.

Level sensing devices can be connected to variable speed drives to automatically compensate for high solids loading during peak flows or low flow conditions by proportionally speeding or slowing the grid travel speed. This increases the capacity of the equipment when needed and reduces wear, thereby extending the life of the equipment.



Sealing

Our patented sealing system holds extremely tight tolerances between panels and grid to frame, eliminating the bypass of solids and intrusion of abrasive grit. We can ensure a tight tolerance down to 0.5mm in all locations on the screen, even those areas that other screens leave vulnerable.

Grid-to-Frame

- Guide Links create a continuous chain around edge of selected grid
- Formed stainless steel plate creates a labyrinth seal with Guide Link slot
- Fully adjustable and removable for inspection
- Continuously sealed for entire submerged grid path

Panel-to-Panel

- Slotted stainless steel hook links separated by Delrin spacers
- Links support panels every 3" (75mm)
- Panels are closely held against spacers
- No neoprene to erode or fall off
- No hinge to loosen or stretch
- Simple in-situ replacement

Drive

Patented direct drives efficiently power the screen. Stainless steel sprockets support and pull the black UHMWPE Guide Links, resulting in little-to-no friction and long wear. Most importantly, no part of the drive touches the grid. Therefore, a bent grid element will not be compounded into a disabled screen.

Electric Drive

Resilience to weather, wear, and lack of maintenance make this model an excellent choice for virtually every installation. Through sensible design and material selection this headworks screen is very efficient, utilizing a 0.5 hp (0.38 kW) electric motor. Screens will be wired to suit applications phase and voltage supplies. Chain guards are standard on all electrical models. Explosion proof motors are optional.

Hydraulic Drive

The Great White screen with hydraulic drive incorporates all the benefits of the electric drive with the added capability to be operated submerged. This is a useful option when flooding can occur and reliability is key.

screen
- Grid does not touch drive or unloading mechanism
- Low friction guide links
- Fractional hp and kW requirements
- Only two grease fittings per screen
- Direct drive uses no chains or sprockets

Screenings Discharge

Our highly effective spray wash provides a superior method of cleaning the grid while prohibiting carryover. Spray nozzles efficiently direct pressurized water over the width of the grid to positively remove screenings and prevent carryover. This method of discharge requires a relatively clean source of water to avoid clogging. Conveyance and compaction may be recommended depending on disposal requirements.

critical component to every water or wastewater treatment plant. Hydro-Dyne's turn-key screenings handling solutions are manufactured at the highest level of quality and designed to accept, wash, dewater, compact and/or transport collected screenings. In wastewater applications, screening handling systems are particularly important as they are designed to return organic material to the channel and produce clean, dry and inorganic product that can be properly disposed of in either a container or bagging unit.

Screening Handling At-A-Glance

- Collect and convey screenings for disposal
- Returns organics and wash water to channel
- Screenings meet strict landfill requirements
- Compactors reduce disposal weight and volume
- Bagging units can contain odor
- Agitation can be introduced for more thorough cleaning
- Can be designed as integral and external models
- Shafted and shaftless screw flights

https://www.hydro-dyne.com/product/whitetip-shark-washing-compactor/>

<

https://www.hydro-dyne.com/product/thresher-shark-washing-machine/>

<

https://www.hydro-dyne.com/product/spinner-shark-screw-conveyor-and-sluice-systems/>

dyne.com/product/whitetip-shark-washing-compactor/>

- Collects, conveys and compacts screenings for disposal
- Dewatering and conditioning
- Returns most organics and wash water to channel

Thresher Shark Washing Machine < https://www.hydro-dyne.com/product/thresher-shark-washing-machine/>

- Extremely thorough washing removes virtually all fecal material and produces "clean" and compacted screenings for disposal
- High capture of inorganic solids reduces plant operating costs and improves sludge quality
- Organic material returned to plant for biologic treatment

Spinner Shark Screw Conveyor < https://www.hydro-dyne.com/product/spinner-shark-screw-conveyor-and-sluice-systems/>

- Collects and conveys screenings for disposal

Horizontal Steel Tanks (20k Gallon, 10’ Dia x 33’ Long)

(Identification No. 3a Per Process Flow Diagram)

MEETS THE REQUIREMENTS OF UL 142

MADE IN USA

ABOVEGROUND TANK FOR FLAMMABLE LIQUIDS

NO. RM982017

THIS TANK REQUIRES EMERGENCY RELIEF VENTING

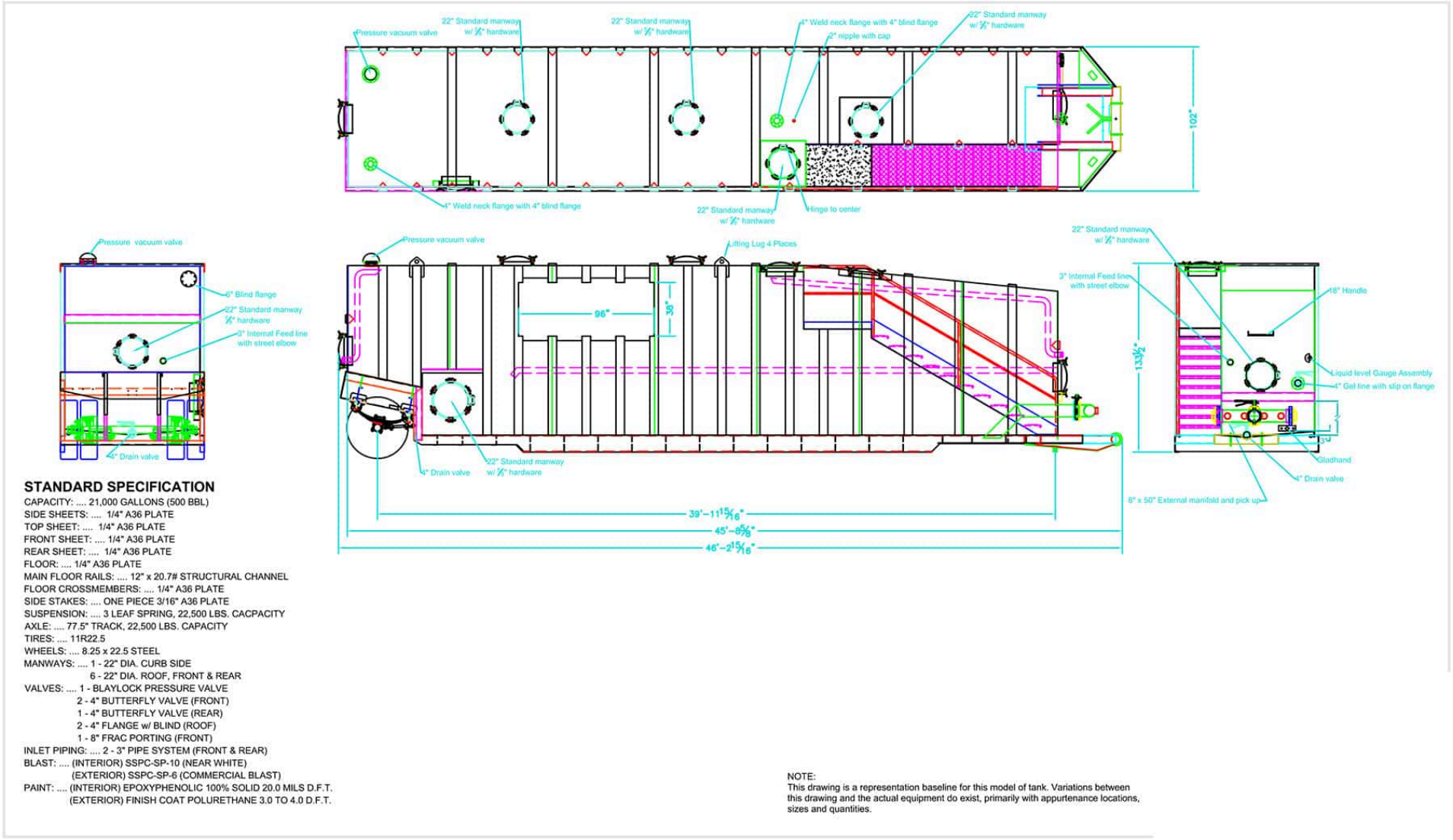
CAPACITY NO LESS THAN 499820 CFH BASED ON INSTALLATION WITHIN ONE FOOT OF THE TANK TOP

THIS TANK IS INTENDED FOR STATIONARY INSTALLATION ONLY

EMANUFACTURED DATE:	WEIGHT:	GALLONS:
05 25	18000	20000

Horizontal Steel Frac Tank (21k Gallon, 8.5’ x 46’ Long)

(Identification No. 5 Per Process Flow Diagram)



STANDARD SPECIFICATION

CAPACITY: .... 21,000 GALLONS (500 BBL)
SIDE SHEETS: .... 1/4" A36 PLATE
TOP SHEET: .... 1/4" A36 PLATE
FRONT SHEET: .... 1/4" A36 PLATE
REAR SHEET: .... 1/4" A36 PLATE
FLOOR: .... 1/4" A36 PLATE
MAIN FLOOR RAILS: .... 12" x 20.7# STRUCTURAL CHANNEL
FLOOR CROSSMEMBERS: .... 1/4" A36 PLATE
SIDE STAKES: .... ONE PIECE 3/16" A36 PLATE
SUSPENSION: .... 3 LEAF SPRING, 22,500 LBS. CACPACITY
AXLE: .... 77.5" TRACK, 22,500 LBS. CAPACITY
TIRES: 11R22.5
WHEELS: .... 8.25 x 22.5 STEEL
MANWAYS: .... 1 - 22" DIA. CURB SIDE
6 - 22" DIA. ROOF, FRONT & REAR
VALVES: .... 1 - BLAYLOCK PRESSURE VALVE
2 - 4" BUTTERFLY VALVE (FRONT)
1 - 4" BUTTERFLY VALVE (REAR)
2 - 4" FLANGE w/ BLIND (ROOF)
1 - 8" FRAC PORTING (FRONT)
INLET PIPING: .... 2 - 3" PIPE SYSTEM (FRONT & REAR)
BLAST: .... (INTERIOR) SSPC-SP-10 (NEAR WHITE)
(EXTERIOR) SSPC-SP-6 (COMMERCIAL BLAST)
PAINT: .... (INTERIOR) EPOXYPHENOLIC 100% SOLID 20.0 MILS D.F.T.
(EXTERIOR) FINISH COAT POLURETHANE 3.0 TO 4.0 D.F.T.

NOTE:
This drawing is a representation baseline for this model of tank. Variations between this drawing and the actual equipment do exist, primarily with appurtenance locations, sizes and quantities.

Pick Heater Specs

(Identification No. 3b Per Process Flow Diagram)

Slurry and Mash Heaters

What is a "BX Slurry and Mash" Steam Injection Heater?

A Pick BX Heater provides instantaneous and complete cooking of starch and other water-miscible slurries. It is also a great choice for viscous slurries such as waste grease and oil. Heating with a Pick BX efficiently reduces the viscosity to promote separation of components at the centrifuge.

It is proven effective on pearl, modified, and cationic starches with solids concentrations up to 35% and cooking temperatures ranging from 90°C – 150°C.

The low velocity design minimizes mechanical shear of the starch granules... an important consideration for cooking most cationic starches.

These heaters can also perform "double duty." They are often used to pre-heat water which is then blended with the starch powder to form the initial slurry. The slurry is then pumped back through the same heater for final cooking.

These compact, non-plugging BX Direct Steam Injection Heaters are available to process flow rates in excess of 600 GPM.

Application Data Forms & Brochure Downloads

Need a quote for a Pick Steam Injection Heater? Save time by submitting an application data sheet. Just looking for additional information on our products? Download our product specific brochures.

Submit Application Data Sheet

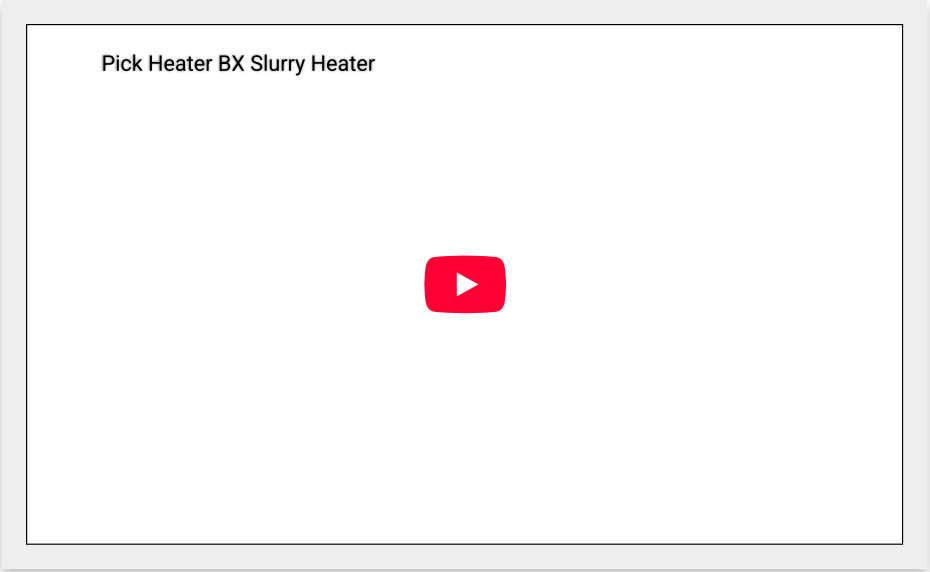
Download Slurry Heater Brochure

Download Pick Steam Injection Heater Brochure

Need a Replacement Part or Manual?

Request Replacement Parts
Contact us to order the parts you need to keep your Pick Heater up and running.
Replacement Parts Request

Request a Manual
Contact us to request a copy of the Service and Installation Manual for your Pick Heater.
Manual Request



Read a Related Blog Post or Article

- Benefits of Direct Steam Injection for Starch Cooking
- Improve Your Waste Grease Recycling Process with Direct Steam Injection
- Benefits of Industrial Wastewater Treatment Using Direct Steam Injection
- Why Direct Steam Injection Liquid Heating is the Preferred Choice for Many Industrial Applications

Typical Applications Include:

- Starch Slurries
- Mash Cooking
- Waste Grease
- Waste Oil
- Wastewater
- Other Viscous Liquids

Have a Question or Need More Information?

We're committed to providing the best customer support before and after the sale with a team of factory sales engineers that are recognized experts in the industry. They're ready to put that expertise to work for you.

Contact Us

Benefits of the Pick Slurry Heater:

The unique design of the Pick BX Heater offers key advantages over other high-velocity venturi devices and indirect heat exchangers.

Low Pressure Drop
Starch flows through the heater without obstruction. This results in negligible pressure drop when handling high viscosity formulations.

Low Noise
Noise generation is significantly lower and pipe vibration virtually eliminated.

Non-Shearing
Non-shearing action provides uniform product consistency

Low Velocity Mixing
This provides a “thorough cook” of starch granules yielding a better cooked product.

How the Slurry Heater Works:

1. Water-miscible liquid or product enters mixing chamber here.
2. Steam and liquid mix thoroughly within the heater body.
3. Heated liquid or product outlet.

The Pick Heater is an engineered product and heater selection is primarily based on Steam Demand.

For preliminary heater selection use the following Sizing Formula. Next match the liquid flow rate to the appropriate pipe size. The selection should be verified by your local Pick Heater Rep or a Factory Sales Engineer.

Please contact us with questions.

Sizing Formula:

Steam Demand

(lb/hr)= 0.43 x flow(GPM) x Δ T (ºF)
or
(kg/hr) = 0.092 x flow(LPM) x Δ T (ºC)

Example: 200 GPM x 50ºF temperature rise x 0.43 = 4,300 lb/hr of steam. You would require a 6X50-3BX which has a maximum rated steam capacity of 5,000 lb/hr, and a maximum water flow rate of 500 GPM with welded flanged connections.

Steam Injection Constant Flow Starch Cooker

BX Slurry Heater Technical Specifications

Model No.		6X7-1BX	6X10-1BX	6X25-1BX	6X50-1BX	6X75-1BX	6X100-1BX	6X150-1BX	6X200-1BX	6X350-1BX	6X500-1BX
Steam Capacity	Lb/hr	700	1,250	2,500	5,000	7,500	10,000	15,000	20,000	35,000	50,000
	Kg/hr	320	565	1,130	2,260	3,390	4,520	6,780	9,040	15,820	22,600
Liquid Pipe Size Range (inches).	Flanged	¾ - 2	1 - 3	1 ½ - 4	2 - 4	2 - 6	2 ½ - 6	3 - 8	4- 10	4 - 10	6 - 12

Heaters are manufactured in Carbon Steel or 316SS. Other alloys/materials available upon request. Liquid and steam piping is available in ANSI/DN Flanged construction.

Custom Systems

Pick Pre-Packaged Hot Water sets are custom designed to meet process industry needs effectively and efficiently.

- Pre-engineered skids, wall mounts or floor mounts available to meet your specific requirements.

- Compact design can fit most customer space constraints.
- Fully assembled and ready for operation (includes circulation pump, complete valving, controls and instrumentation in a skid-mounted package).
- Pilot Scale and Production Systems.

Products > Slurry and Mash Heaters

Email Print

Improve Your Waste Grease Recycling Process with Steam Injection

Brown grease – composed of fats, oils, and grease (FOG) and rotting food – has long been a problem for restaurants, food service operations and commercial kitchens. Brown grease can clog sewer lines and interfere with septic systems and sewage treatment operations, so restaurants install grease traps or gravity interceptors to collect it from kitchen sinks and floor drains for later disposal.

Most brown grease from waste traps has historically ended up as landfill, but recognition of its value for production of fertilizer, biodiesel and other products, as well as more stringent EPA regulations, are driving a trend of brown grease recycling.

Challenges of recycling waste trap grease

The unprocessed grease is a viscous slurry, with a typical solid content of 7% to 10%. It must be heated to reduce the viscosity and allow the components to be separated, but the heating of viscous slurries is a difficult task. Challenges include plugging, fouling and inconsistent heating. Direct Steam Injection (DSI) is a great choice for this demanding application due to its high energy efficiency and ease of use compared to indirect heating methods.

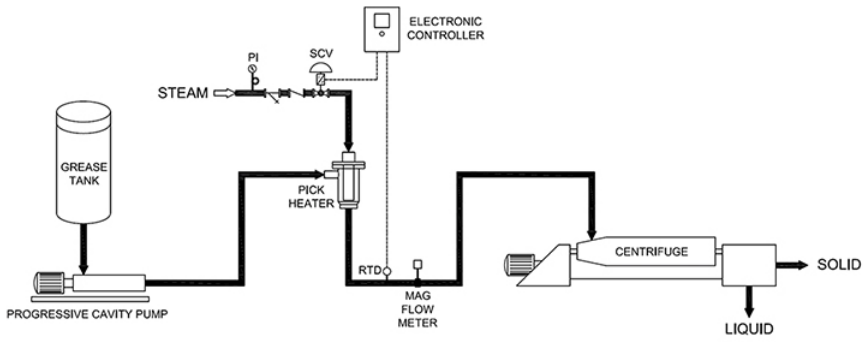


Figure 1. A brown grease processing system based around the Pick BX DSI heater.

Figure 1 shows a DSI-based system for processing waste-trap grease. A progressive cavity pump is used to transfer the brown grease from the holding tank. This type of pump is preferred for high-viscosity slurries because its mechanical and volumetric efficiency increases as does the viscosity; in contrast, a centrifugal pump becomes less efficient with increasing viscosity. The flow rate of the progressive cavity pump also remains relatively constant with variations in viscosity.

The slurry then passes to a DSI heater, such as the Pick BX, that heats it instantly from a nominal 60° F to 180° F. The heater must provide consistent heating of the slurry using medium to high-pressure steam and a liquid pressure of 20 psig.

An electronic controller monitors the temperature via a resistance-temperature detector and regulates a steam control valve to maintain the desired 180° F.

Finally, the heated slurry is sent to a decanter centrifuge to separate solids, light liquids such as oils and heavy liquids like wastewater.

The ABCs of DSI

A DSI heater injects steam directly into the fluid for an efficient transfer of heat – 100% of the available energy from the steam is instantly absorbed by the liquid.

The tremendous amount of energy available in the steam makes it imperative that the energy be dissipated quickly into the fluid to maintain stability. Failure to dissipate and condense the steam quickly can lead to inconsistent temperatures and potentially severe steam hammer.

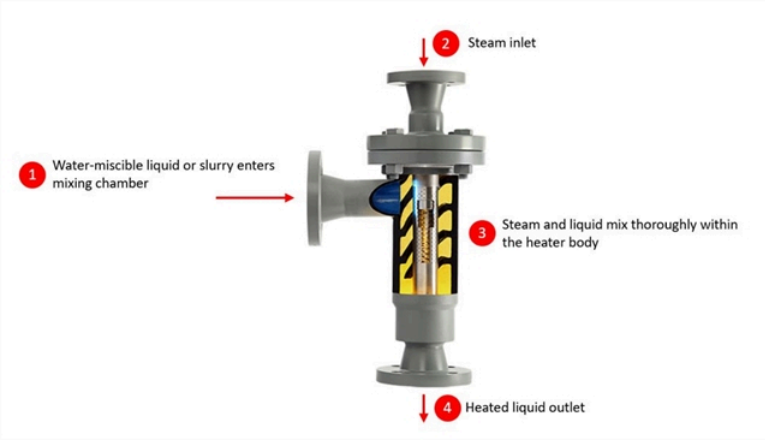


Figure 2. The Pick BX heater allows for rapid mixing and instantaneous heat transfer.

The Pick BX Heater disperses the steam in many fine streams through precisely arranged orifices, promoting rapid mixing and instantaneous heat transfer. As the steam enters the internal injection tube it acts against a spring-loaded piston to expose some or all or the orifice pattern. As the steam input varies due to load changes, the piston adjusts the number of exposed orifices, providing rapid response to process changes.

The spring and piston arrangement prevents equalization of steam and liquid pressures, eliminating harmful shock and vibration caused by steam hammer. The helical flights inside the chamber ensure complete and thorough mixing of steam and liquid.

A low pressure drop allows the slurry to flow through the heater without obstruction. This results in negligible pressure drop when handling high-viscosity formulations and allows for use of plant's medium to high-pressure steam. The liquid pressure drop is typically only 1 PSI, and the sound level is usually 85 dBA or less.

In a brown grease processing application, the efficient design of the BX Direct Steam Injection Heater can cut fuel costs up to 28% compared to tank steam sparging, indirect shell and tube or plate heat exchangers.

Contact us to get additional information about the Pick BX Slurry Heater.

Improve Your Waste Grease Recycling Process with Steam Injection

Email Print

Cyclone Specs (Park Process Hydrocyclone)

(Identification No. 3c Per Process Flow Diagram)

HYDROCYCLONES

FOR SOLIDS/LIQUID SEPARATION

HydroSpin™

A simple way to accelerate solids/ liquid separation using the power of centrifugal force.

HydroSpin™ hydrocyclones are simple solids/liquid separation devices with no moving parts designed to accelerate the settling process of solids in liquid using centrifugal force. What determines the separation size of particles in a cyclone is a function of feed pressure, cyclone diameter, exit dimensions, and the relative characteristics of the particles and liquid. Special oil/ water separating hydrocyclones are also available in this line.

The incoming flow is directed into the cylindrical part of the hydrocyclone tangentially, creating a spin of the entire contents of the flow. The heavy components in the stream move outward toward the wall of the cylinder. The conical section of the cyclone causes the speed of rotation to increase, throwing even smaller particles toward the wall. In solids/liquid separating hydrocyclones, the solids tend to move downward to the bottom of the cyclone by gravity where they are discharged with a percentage of the incoming flow. The cleaner fluid circulating in the center forms a vortex that travels up and out of the top section of the cyclone through the vortex finder.

Features:

- Made of abrasion resistant polyurethane, carbon steel, or stainless steel
- Ceramic or rubber liners are available for steel and stainless steel models
- Other materials of construction are available for special chemical compatibility
- Available in sizes from 1” to 33”
- Single hydrocyclone models will handle flow from 1 GPM to over 8,000 GPM
- Multiple hydrocyclones can be installed on a manifold to handle higher flow rates
- Cuts to below 5 microns @ 50 PSI feed pressure can be achieved with 1” polyurethane models

Applications Include:

- Pulp and paper (remove sand and contaminants)
- Drilling industry (remove sand and silt from drilling mud)
- Metal working (separate metal particles from cooling liquid)
- Mineral processing (classification of particles)
- Irrigation (remove sand and silt)
- Oil industry (separate oil from water)
- Carpet recycling
- Plastic recycling
- Chemical processing
- Well water desanding
- Catalyst reuse

855-511-PARK
info@parkprocess.com
www.parkprocess.com

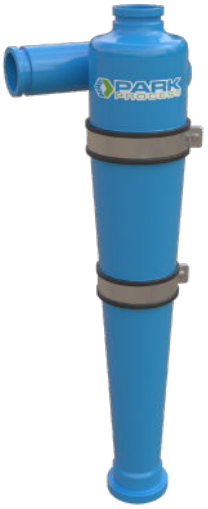
PARK PROCESS

Northwest Pipe Company

HydroSpin™

A Series
2.5”

B Series
3”

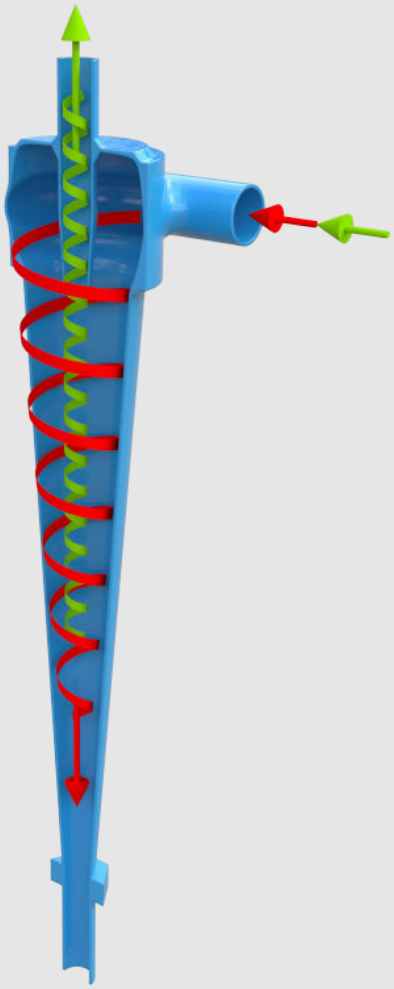


C Series
4”, 5”, 10” and 12”

D Series
1”, 2”, 3”, 4”, 6”, 8”, 10”, and 15”

Models

Park Process offers a full line of polyurethane and metal hydrocyclones as well as packed vessel systems.



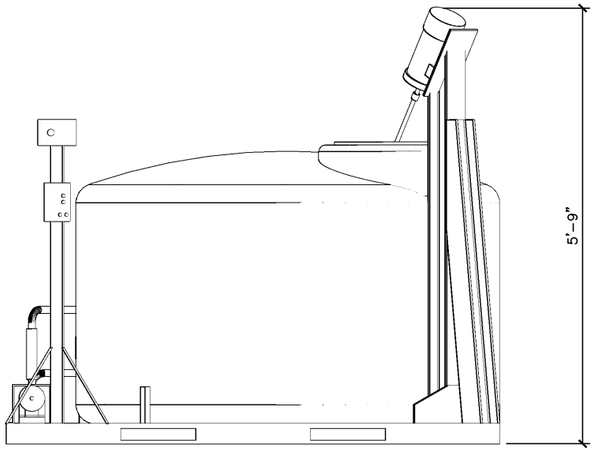
855-511-PARK
info@parkprocess.com
www.parkprocess.com

PARK PROCESS

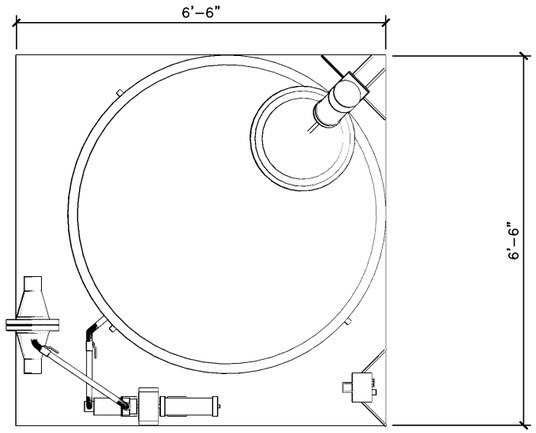
Northwest Pipe Company

Polymer Injection Specs (Aquazyme)

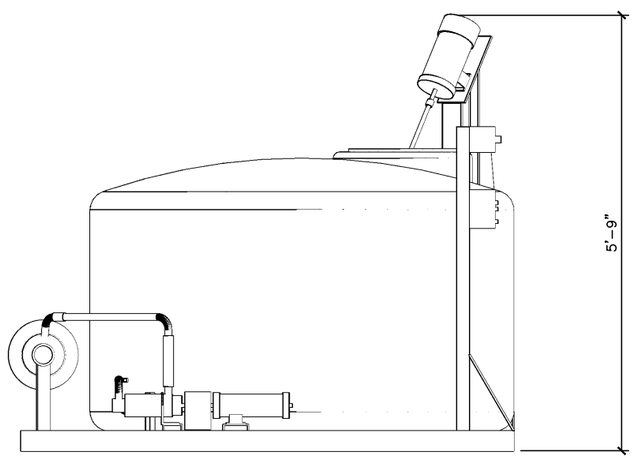
(Identification No. 6 Per Process Flow Diagram)



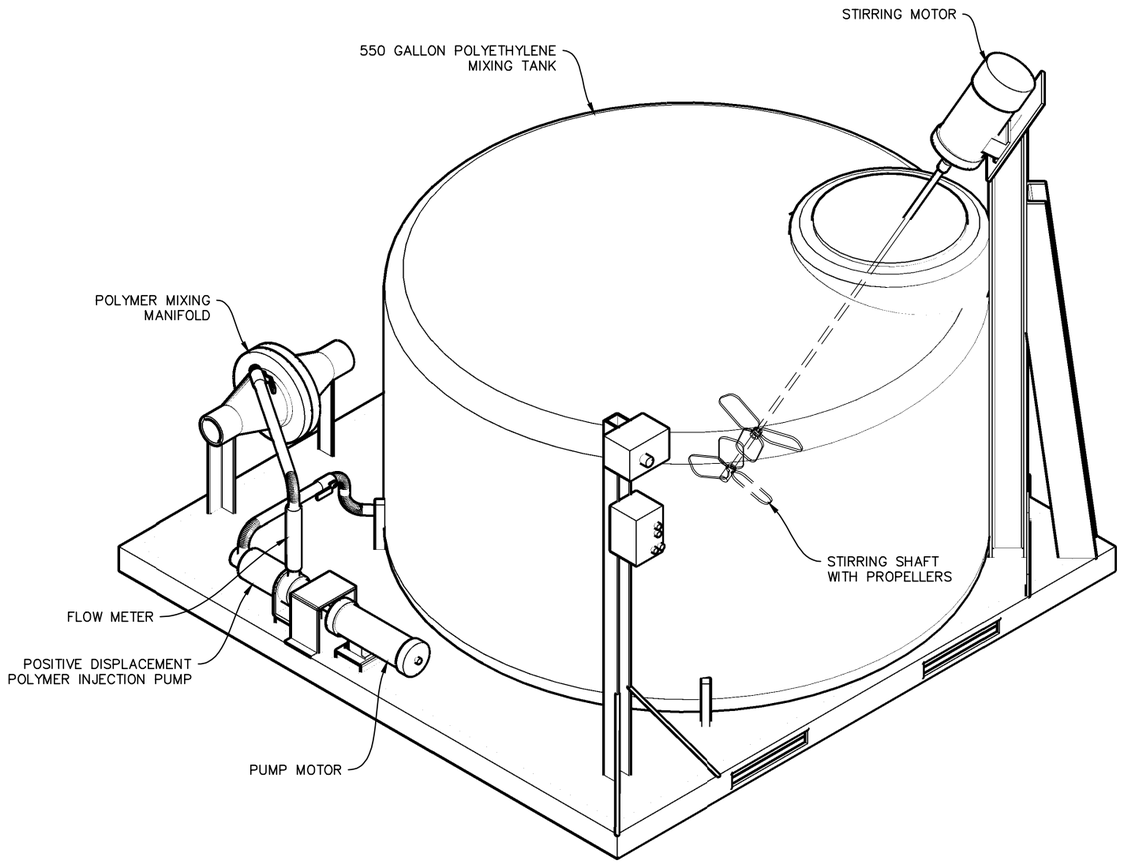
RIGHT SIDE VIEW



TOP VIEW



FRONT VIEW



ISOMETRIC VIEW

SHEET M 1.01

LYNNENGINEERING
1221 AVENUE F
BAY CITY, TEXAS 77414
PH: (979) 245-8900
FAX: (979) 245-5345

JOB No:	DRAWN BY:	SCALE:	DATE:
32933	JSS	AS SHOWN	6/29/2020

AQUA-ZYME POLYMER MIXING UNIT

VAN VLECK, TEXAS

DETAILS

F-11605

(https://www.facebook.com/aqua.zyme/) () 569 FM 2540, Van Vleck, TX 77482 979-245-5656 (tel:+9792455656)

Aqua - Zyme (index.html)

Request Info (/Contact/)

HOME DEWATERING LOCAL SERVICES ABOUT DISPOSAL SITES VIDEOS CONTACT FAQ BLOG

Home (Index.Html) ▸ Services (Services.Html) ▸ Polymer Injection Unit

Overview

Our Polymer Dosing and Injection Unit works with the 15 & 30 cubic yard ADS dewatering units. The Polmer Dosing and Injection unit works to inject a polymer mixture into the sludge as it flows into the ADS Dewatering Units. The addition of polymer causes the sludge mixture to flocculate, separating the liquids from the solids, therefore speeding up the dewatering process. For more information on our Polymer Dosing and Injection units, give us a call today at **979-245-5656 (tel:+9792455656)**.

Get Free Quotation

Would you like to get a quote for good service, just submit your email.

Ph: 979-245-5656 (tel:+9792455656)
Email [redacted]

Frequently Asked Questions

- How do I find a dumpster rental?
- What size roll-off dumpster should I use?
- How long can I rent a dumpster for? Do you offer longer-term roll-off dumpster rentals?
- What equipment will be needed to start dewatering my liquid waste?
- Where should I locate my dewatering facility?
- What permits and/or approvals will I need?
- What about effuent & dewatered sludge disposal?
- What about disposal trucking?
- How can I know that dewatering will actually save me money?

0:00 / 1:26

Dewatering Equipment for Liquid Solids Separation (/dewatering-systems/dewatering-equipment-for-liquid-solids-separation/)

Servicing Septic & Grease Pumpers World Wide (/dewatering-systems/servicing-septic-grease-pumpers-worldwide/)

Servicing Water & Wastewater Treatment Plants (/dewatering-systems/servicing-water-and-wastewater/)

ADS 15 & 30 Cubic Yard Roll Off Dewatering Unit (/dewatering-systems/ads/)

Polymer Injection Unit (/dewatering-systems/polymer-injection-unit/)

4" Trash Pump (/dewatering-systems/4-trash-pump/)

Rental & Sales Dewatering Equipment (/dewatering-systems/rental-and-sales-dewatering-equipment/)

Polymer Sales, Testing & Distribution (/dewatering-systems/polymer-sales-testing-and-distribution/)

Consulting Services & Onsite Training (/dewatering-systems/consulting-services-and-onsite-training/)

Our Brochures

Drawings & Specs (/site/assets/files/1102/aquazyme_-_polymer_unit.pdf)

Words From Customers

RES Group ★★★★★

RES Group ★★★★★

> RES would like to THANK EVERYONE for the GREAT SERVICE and professionalism of Aqua-Zyme. We will be back completing the SS at Celanese in the Fall 2021, and will be reaching out to you. I know the weather conditions were not the best – yet you all tried your hardest to service our porta johns. THANK YOU ALL AGAIN!

> RES would like to THANK EVERYONE for the GREAT SERVICE and professionalism of Aqua-Zyme. We will be back completing the SS at Celanese in the Fall 2021, and will be reaching out to you. I know the weather conditions were not the best – yet you all tried your hardest to service our porta johns. THANK YOU ALL AGAIN!

We can't control the weather, but we can control the schedule, cost, quality, and safety.

Contact Us Today (/Contact/)

Aqua - Zyme
(index.html)

The ADS Waste Disposal System is completely shop assembled and, upon delivery, is ready for installation.

569 FM-2540
Van Vleck, Texas 77482

(979) 245-5656 (tel:+9792455656)

[redacted]

Mon - Sat 8:00am - 5:00 pm
Closed Sunday

Usefull links

Home (/)
Dewatering (/dewatering-systems/ads/)
Local Services (/local-services/septic-pumping/)
About (/about/why-dewatering/)
Disposal Sites (/disposal-sites/)
Videos (/videos/)
Contact (/contact/)

Texas Sludge Disposal | Taft, TX
Valley Dewatering | Mercedes, TX

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(https://www.facebook.com/aqua.zyme/)

/** * Author: Md Hasanuzzamna * Linkedin: https://linkedin.com/in/md-h * Youtube: https://youtube.com/@leomeasure * [redacted] */ (function() { function leoMeasureIframeFormSubmitDataLayer() { var iframeSelector = 'iframe'; // Change as your iframe selector example: 'iframe#id-of-iframe' var iframe = document.querySelector(iframeSelector); var isFormSubmitted = false; var isInsideIframe = false; var isCodeExecuted = false; var iframeHeight; var observer = new MutationObserver(function (_mutationsList, observer) { var currentHeight = iframe.offsetHeight; var iframeHeightChange = Math.abs(((currentHeight - iframeHeight) / iframeHeight) * 100); if (!isFormSubmitted && iframeHeightChange > 40) { observer.disconnect(); isFormSubmitted = true; window.dataLayer = window.dataLayer || []; dataLayer.push({ event: 'iframe_form_submit', form_location: window.location.href, iframe_id: iframe.getAttribute('id'), iframe_class: iframe.getAttribute('class') }); } }); function handleMouseOver(event) { if (event.target.closest(iframeSelector)) { isInsideIframe = true; } else { isInsideIframe = false; } } function handleFormSubmission() { var formInsideIframe = iframe.contentDocument.querySelector('form'); formInsideIframe.addEventListener('submit', function (event) { var formData = {}; var formInputs = formInsideIframe.querySelectorAll('input, select, textarea'); for (var i = 0; i < formInputs.length; i++) { var input = formInputs[i]; if (input.type === 'radio') { if (input.checked) { formData[input.name] = input.value; } } else if (input.type === 'checkbox') { if (!formData[input.name]) { formData[input.name] = []; } if (input.checked) { formData[input.name].push(input.value); } } else { formData[input.name] = input.value; } } window.dataLayer = window.dataLayer || []; window.dataLayer.push({ event: 'iframe_form_submit', form_location: window.location.href, iframe_id: iframe.getAttribute('id'), iframe_class: iframe.getAttribute('class'), user_inputs: formData }); }); } document.addEventListener('mouseover', handleMouseOver); window.addEventListener('blur', function () { if (isInsideIframe && !isCodeExecuted) { isCodeExecuted = true; document.removeEventListener('mouseover', handleMouseOver); window.dataLayer = window.dataLayer || []; dataLayer.push({ event: 'iframe_form_start', form_location: window.location.href, iframe_id: iframe.getAttribute('id'), iframe_class: iframe.getAttribute('class') }); if (iframe.contentDocument) { handleFormSubmission(); } else { iframeHeight = iframe.offsetHeight; observer.observe(iframe, { attributes: true, childList: true, subtree: true }); } }); } leoMeasureIframeFormSubmitDataLayer(); })()

Related Links

Dewatering Box Specs (Flo Trend, Roll-Off Sludge Mate, 40 CY Each)

(Identification No. 7a Per Process Flow Diagram)

Roll-Off Sludge Mate®

Designed to Dewater

The Sludge Mate® is a container filter used along with polymer to dewater various types of waste. Polymer is mixed in with the waste before it is processed through the Sludge Mate®. The filters within the Sludge Mate® retain the solids and allow the water to pass through and out the drainage ports. This discharge of clear liquid is not treated water and must be disposed of properly. Once the sludge has been dewatered for 12 to 24 hours and has passed the paint filter test, it will then be ready for disposal.

Sample Application

Beginning Waste % of Solids	Beginning Waste Volume	Processing Time	Dewatered Cake % of Solids	Dewatered Cake Volume	Volume Reduction
1 - 1.5%	10,000 Gallons	24 Hours	12-16%	1,000 Gallons (5 Cu Yards)	85 - 90%

Note: Individual application results, as well as processing capacity, may vary depending on % of solids in the sludge and sludge characteristics

Roll-Off Sludge Mates® are designed to be handled by a roll-off hoist truck. They are of rectangular design and have a filter panel on each wall and one in the center extending the length of the container. Each Roll-Off unit can be equipped with a sliding lid, a tarp, a closed roof with hatchways, or an open top. All units are offered with or without the Poly-Mate® Polymer Mixing and Injection System.

Sludge Mate® Processing Capabilities

Sludge Mate® Size	Amount of sludge processed per day*
15 cu. yd.	15,000 gallons
20 cu. yd.	20,000 gallons
25 cu. yd.	25,000 gallons
30 cu. yd.	30,000 gallons
40 cu. yd.	40,000 gallons

**Calculations based on sludge with 1% of solids. Results may vary according to sludge characteristics.*

- **Digested Sludge**
- **Alum Sludge**
- **Grease Trap Waste**
- **Septic Tank Waste**

FLO TREND

sales@flotrendllc.com
www.flotrendllc.com

U.S. Patent Nos. 4,871,454 and 5,595,654

(281) 941-5559 •1400 Kowis Street •Houston, TX 77093-3202

Engineered Drawings available Upon Request

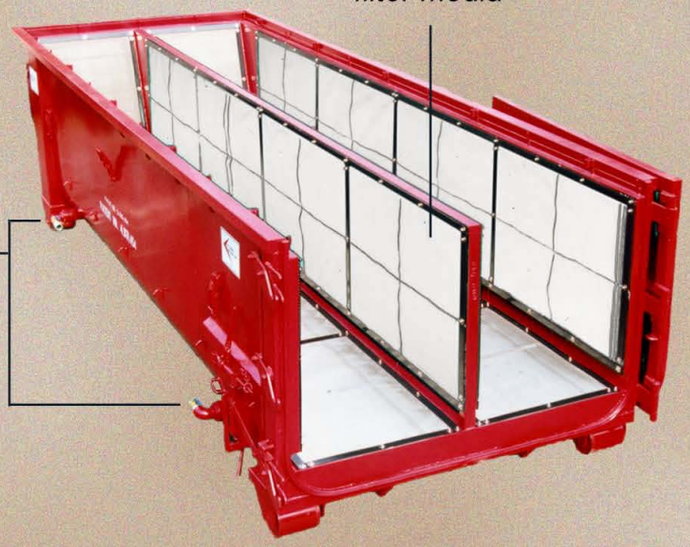
Roll-Off Models

Standard sizes: 15, 20, 25, 30 and 40 cubic yard capacities. As an option, a center panel can be added to increase the drainage surface area. Roll-offs are round-bottom containers with 3" drainage ports, 1/4" gasketed watertight doors, a 1/4" floor, and 3/16" side walls. Roll-offs are commercially sandblasted, coated with a two-part epoxy primer, and painted with a two-part epoxy top coat.

- Available with Reusable Nylon Screens
- Available with Split Rolling Lid

optional center panel with porous support plates behind filter media

Filtered liquid drains (two on each side) by pump or gravity drainage of bottom filter cavity. Two additional drains are located on the front of the container for draining wall cavities.



Model RB-25-0-G/V-VPF features an open top, 25 cubic yard Gravity/Vacuum and vertical center panel

15 cu. yd.

20 cu. yd.

25 cu. yd.

30 cu. yd.

40 cu. yd.

Loader Model

Standard sizes: 1-1/2, 2, 3, and 4 cu. yd. Available in front, rear or side-loader models. These Container Filters can be picked up and unloaded by standard loader trucks.

Gravity/ Vacuum style with casters and lid

FL-2-C-G/V 2 cu. yd. Loader

Lugger Model

Standard sizes: 6, 8, 10, 14, and 16 cu. yd. These Container Filters are custom made to fit lugger trucks and hoists.

sloped bottom (towards drains)

filtered liquid drains

LB-8-C-G/V 8 cu. yd. Gravity/Vacuum style with hinged lid

Container Filters

Patent No. 5,681,460
& 4,871,454

Available in three styles:

- **Basic** - floor filter only
- **Standard** - floor and side filters
- **Gravity / Vacuum** - vacuum filtration of floor screens and gravity draining of side screen

- *Cover Lids - available for all models*
- *Center panels - for greater filter area on all models*

Available Container Filter Models:

- Roll-off
- Self-Dumping Hoppers
- Front Loaders
- Rear/Side Loaders
- Retro-Fits
- Trailer Mounted
- Tipping Stand Mounted
- Vacuum Boxes

Filter Media:

Reusable Filter Materials:

- Polyester
- Stainless Steel
- Polypropylene
- Nylon
- Other Plastics

  Mesh Size: 4 - 325

  Micron Rating: 4750 - 45

Disposable Filter Materials:

- Polypropylene Non-Woven WT. 3oz.,4oz., 6oz., 8oz., 10oz.Micron Rating: 12 - 100
- Polypropylene Monofilament Mesh size: 40 microns

THE CONTAINER FILTER is a patented, economical one-step method for separating and dewatering sludge, slurries and waste streams. The container filter's simple design consists of three components: the Container, porous support panels, and filter media. The space between the support panels, container walls and floor provide a drainage field for liquid. Outlets on the bottom and side walls of the container allow for gravity drainage or pump suction of liquid from the Container Filter.

All models of Container Filters can be altered to fit the customer's specific requirements.

1400 Kowis St.
Houston, TX 77093
Tel – (713) 699-0152

January 22, 2026

Andy Bates
Liquid Waste Solutions

Dear Mr. Bates,

It was brought to my attention that you would like to see the Sludge-Mate processing capabilities for a 40 cubic yard unit at 0.5% of suspended solids. Please see details bellow:

Sample Application:

- Waste volume- 80,000 Gal.
- Waste % of solids - 0.5%
- Waste PH Level- 6.5-7.5
- Processing time- 24-36hrs.
- Dewatered volume- 40 Cubic Yards

Sincerely,

Iván D. León
ENGINEERING MANAGER

Permanent Pump Specs (AMT 4” Sewage Trash Pump)

(Identification Nos. 3, 3a, 3b, 6 & 8 Per Process Flow Diagram)

2″ to 4″ Sewage Trash Pumps

RESOURCES:

- Download Spec Sheet UPDATED JUNE 2017
- Download Price Sheet
- Download Owners Manual 394B/394A/394F/394E/399C
- Download Owners Manual 394G/394H/394K/394J/399D

Models: (See spec sheet for more info)

NOTE: Product images are a representation only and AMT reserves the right to discontinue any model or change specification at any time without incurring any obligation.

316B-95
316A-95
393B-95
393A-95
394H-95 (replaces 394B-95)
394G-95 (replaces 394A-95)
394K-95 (replaces 394F-95)
394J-95 (replaces 394E-95)
399D-95 (replaces 399C-95)

Category: Self-Priming Electric Pumps

Share this product

Description

AMT Cast Iron Sewage/Trash pumps are designed for trouble free and economical handling of solids laden liquids and slurries. Pumps are available in three NPT port sizes: 2″, 3″ or

water, sludge and

r solids. Minimum

liquid requirement must be above 85% — maximum 15% solids. Failure to do so may damage pump and void warranty.

- Cast Iron Construction
- Silicon Carbide/Viton® Mechanical Seal
- 2″, 3″ & 4″ NPT Ports Sizes
- Maximum Temperature 180° F
- Self-Priming to 20 Ft.
- Stainless Steel Semi-Open, Clog Resistant Impeller
- Buna-N Check Valve and O-Ring
- Removable Cast Iron Volute/Wearplate
- Easy Cleanout Design
- 3″ & 4″ Models Feature Front Cleanout
- Pull-from-Rear Design
- Available with 3 to 15 HP Totally Enclosed Fan Cooled (TEFC) Electric Motors

Related products

3"-4" Stainless Steel Self-Priming Pumps

2" Self-Priming High Pressure Pumps

3" Self Priming Centrifugal

1" and 2" Cast Iron Chemical

1" Stainless Steel Pumps

Product Search

Search products...

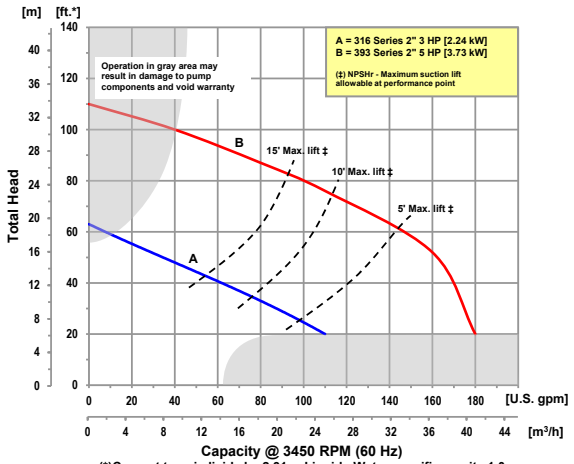
AMT Pump Company
Copyright © All Rights Reserved
AMT Pump Company manufactures and sells Industrial/Commercial pumps & accessories through authorized distributors.

Web Development: KDS FX Design

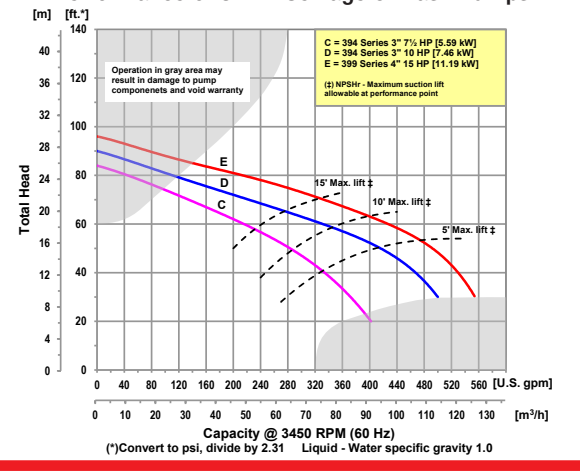
Self-Priming Cast Iron Sewage & Trash Pumps

- **Cast Iron Construction**
- **Silicon Carbide/Viton® Mechanical Seal**
- **2″, 3″ & 4″ NPT Ports Sizes**
- **Maximum Temperature 180° F**
- **Self-Priming to 20 Ft.**
- **Stainless Steel Semi-Open, Clog Resistant Impeller**
- **Solids Handling and Dirty Water Design**
- **Buna-N Check Valve and O-Ring**
- **Removable Cast Iron Volute/Wearplate**
- **Easy Cleanout Design**
- **3″ & 4″ Models Feature Front Cleanout**
- **Pull-from-Rear Design**
- **Available with 3 to 15 HP Totally Enclosed Fan Cooled (TEFC) Electric Motors**

Performance of 2” Sewage & Trash Pumps



Performance of 3”-4” Sewage & Trash Pumps



AMT Cast Iron Sewage/Trash pumps are designed for trouble free and economical handling of solids laden liquids and slurries. Pumps are available in three NPT port sizes: 2", 3" or 4". Cast iron construction with two vane stainless steel self-cleaning impellers, silicon carbide mechanical seals for abrasion resistance and Buna-N O-rings and check valves. Built-in check valve allows pump to reprime automatically in an open system without the foot valve. The solids handling capabilities of the pumps make them ideally suited for a variety of industrial applications including: sewage treatment, canneries, chemical processing, wineries, tanneries, meat packing, breweries, pulp, wood chips, process water, sludge and slime, waste water, white water and other applications. These sewage/trash pumps will easily handle liquids containing sewage, stones, sticks, mud and other solids. Minimum liquid requirement must be above 85% – maximum 15% solids. **Failure to do so may damage pump and void warranty.**

AMT® A Gorman-Rupp Company
400 Spring Street • Royersford, PA 19468 USA
www.amtpump.com • 888-amt-pump (268-7867)

For use with nonflammable liquids compatible with pump component materials. Viton® and Teflon® are registered trademarks of E. I. Dupont.

AMT Self-Priming Sewage/Trash Pumps

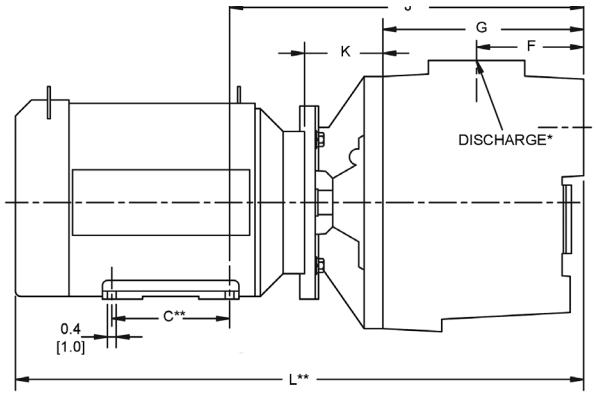
A Gorman-Rupp Company

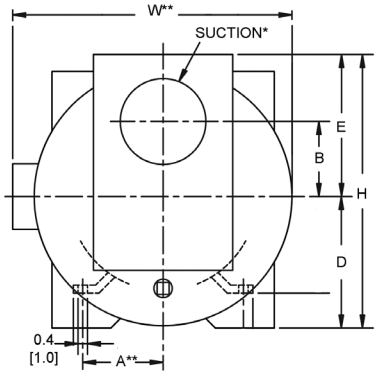
Pump Dimensional & Specification Data

Model	HP	SUC*	DIS*	A**	B	C**	D	E	F	G	J**	K	L**	W**	H	Ship Wt. (Lbs.)
316B-95	3	2	2	2.5 [6.3]	2.1 [5.3]	3.8 [9.6]	4.0 [10.1]	4.8 [12.2]	3.1 [7.8]	6.1 [15.5]	11.1 [28.2]	2.4 [6.1]	20.3 [51.5]	9.3 [23.6]	8.8 [22.3]	94
316A-95				2.5 [6.3]	2.1 [5.3]	3.8 [9.6]	4.0 [10.1]	4.8 [12.2]	3.1 [7.8]	6.1 [15.5]	11.1 [28.2]	2.4 [6.1]	19.9 [50.5]	9.3 [23.6]	8.8 [22.3]	87
393B-95	5	2	2	3.8 [9.6]	2.1 [5.3]	5.5 [14.0]	5.2 [13.2]	4.8 [12.2]	3.1 [7.8]	6.9 [17.5]	14.8 [27.6]	4.4 [11.1]	27.4 [69.6]	13.4 [34.0]	10.0 [25.4]	189
393A-95				3.8 [9.6]	2.1 [5.3]	5.5 [14.0]	5.2 [13.2]	4.8 [12.2]	3.1 [7.8]	6.9 [17.5]	14.8 [27.6]	4.4 [11.1]	24.9 [63.2]	12.3 [31.2]	10.0 [25.4]	173
394H-95	7½	3	3	4.3 [10.9]	3.5 [8.9]	5.5 [14.0]	6.1 [15.5]	9.0 [22.9]	8.1 [20.6]	11.8 [30.0]	19.0 [48.3]	3.7 [9.4]	30.5 [77.5]	15.5 [39.4]	15.1 [38.4]	295
394G-95				3.8 [9.6]	3.5 [8.9]	5.5 [14.0]	6.1 [15.5]	9.0 [22.9]	8.1 [20.6]	11.8 [30.0]	18.3 [46.5]	3.7 [9.4]	29.0 [73.7]	13.5 [34.3]	15.1 [38.4]	245
394K-95	10	3	3	4.3 [10.9]	3.5 [8.9]	7.0 [17.7]	6.1 [15.5]	9.0 [22.9]	8.1 [20.6]	11.8 [30.0]	20.0 [50.8]	3.7 [9.4]	33.6 [85.3]	15.5 [39.4]	15.1 [38.4]	360
394J-95				4.3 [10.9]	3.5 [8.9]	7.0 [17.7]	6.1 [15.5]	9.0 [22.9]	8.1 [20.6]	11.8 [30.0]	20.0 [50.8]	3.7 [9.4]	32.7 [83.1]	14.3 [36.3]	15.1 [38.4]	270
399D-95	15	4	4	4.3 [10.9]	3.5 [8.9]	7.0 [17.7]	6.1 [15.5]	9.0 [22.9]	8.1 [20.6]	11.8 [30.0]	20.0 [50.8]	3.7 [9.4]	33.7 [85.6]	14.3 [36.3]	15.1 [38.4]	275

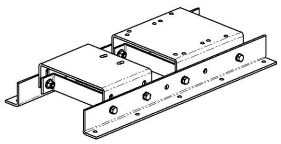
(*) Standard NPT (Female) pipe thread.
(**) This dimension may vary due to motor manufacturer's speciifcations.
(+) 3-Phase motors can also operate on 50 Hz. (this will change full load amps, service factor and RPM)
NOTE: Dimensions are in inches (centimeters) and have a tolerance of ± 1/4".
NOTE: Electric supply for ALL motors must be within ± 10% of nameplate voltage rating (e.g 230V ± 10%=207 to 253)

Model	Curve	HP	PH	ENC	Frame	Voltage @ 60 Hz +	Full Load Amps	Max Solids
316B-95	A	3	1	TEFC	56J	230	16	1"
316A-95			3			230/460	8/4	
393B-95	B	5	1	TEFC	184JM	230	20	1"
393A-95			3			230/460	17/9	
394H-95	C	7½	1	TEFC	215JM	230	31	1½"
394G-95			3		184JM	230/460	22/11	
394K-95	D	10	1	TEFC	215JM	230	40	1½"
394J-95			3			230/460	26/13	
399D-95	E	15	3	TEFC	215JM	230/460	47/24	2"





Optional Mounting Base Model A200-90



Standard Features

- Cast Iron Construction for Abrasive Resistance and Durability
- Silicon Carbide/Viton® Mechanical Seal
- Built-in Buna-N Check Valve
- Buna-N O-ring Casing Seal Reusable After Clean Out Maintenance
- Self-Cleaning Stainless Steel Impeller Resists Clogging and Wear
- Pull-from-Rear Design Permits Clean Out and Repair Without Removing Piping
- 3" & 4" Models Feature Front Cleanout
- Replaceable Cast Iron Volute/Wearplate Designed for Solids Handling
- Motor Includes Stainless Steel Shaft or Stainless Steel Shaft Sleeve
- Available with 3 to 15 HP Totally Enclosed Fan Cooled (TEFC) Electric Motors
- Single or Three Phase, 3450 RPM Motors
- Optional Mounting Base Available for 184/215 JM Frames
- Maximum Working Pressure 150 PSI
- Seal Flush Port Provided on 5 HP and Larger
- Optional Mounting Base Available
- QSP – Quick Ship Pump for Many Models

Hazardous Duty/Xplosion Proof motors available from stock ranging from 1 to 10 HP; *CALL FOR QUOTATION & LEAD TIME!*

AMT A Gorman-Rupp Company

Manufacturer of AMT & IPT Pumps
400 Spring Street • Royersford, PA 19468 USA
www.amtpump.com • 888-amt-pump (268-7867)

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IPT PUMPS BY GORMAN-RUPP®

1025

Portable Pump Specs (4” Trash Pump by Aquazyme)

(https://www.facebook.com/aqua.zyme/) () 569 FM 2540, Van Vleck, TX 77482 979-245-5656 (tel:+9792455656)

Dewatering Equipment for Liquid Solids Separation (/dewatering-systems/dewatering-equipment-for-liquid-solids-separation/)
Servicing Septic & Grease Pumpers World Wide (/dewatering-systems/servicing-septic-grease-pumpers-worldwide/)
Servicing Water & Wastewater Treatment Plants (/dewatering-systems/servicing-water-and-wastewater/)
ADS 15 & 30 Cubic Yard Roll Off Dewatering Unit (/dewatering-systems/ads/)
Polymer Injection Unit (/dewatering-systems/polymer-injection-unit/)
4" Trash Pump (/dewatering-systems/4-trash-pump/)
Rental & Sales Dewatering Equipment (/dewatering-systems/rental-and-sales-dewatering-equipment/)
Polymer Sales, Testing & Distribution (/dewatering-systems/polymer-sales-testing-and-distribution/)
Consulting Services & Onsite Training (/dewatering-systems/consulting-services-and-onsite-training/)



Overview

Our 4" Trash pump works to pump sludge from holding tanks into the Polymer Dosing and Injection Unit and into the ADS Dewatering Units. The 4" Trash Pump can pump sludge at a max rate of up to 662 gallons per minute. This flow rate can be slowed down to optimize performance of the polymer injection unit. For more information, give us a call today at **979-245-5656 (tel:+9792455656)**.

Get Free Quotation

Would you like to get a quote for good service, just submit your email.

Ph: 979-245-5656 (tel:+9792455656)

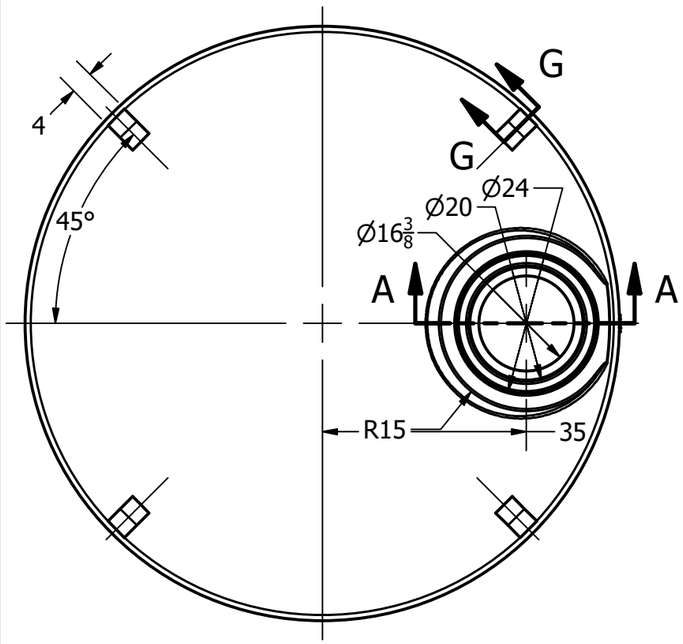
[redacted]

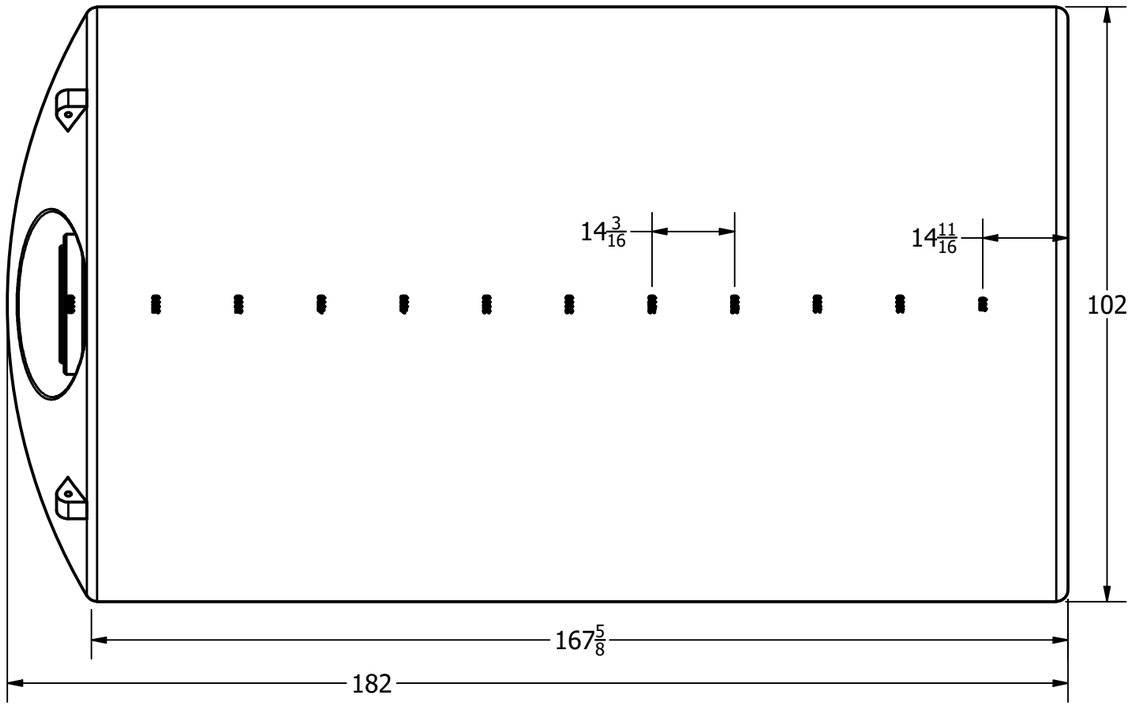
Frequently Asked Questions

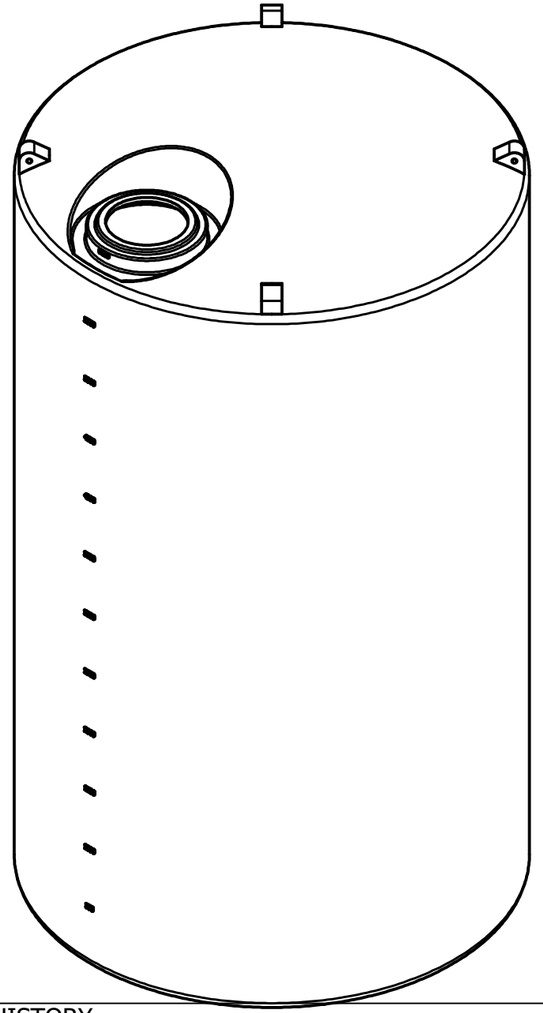
- How do I find a dumpster rental?
- What size roll-off dumpster should I use?
- How long can I rent a dumpster for? Do you offer longer-term roll-off dumpster rentals?
- What equipment will be needed to start dewatering my liquid waste?
- Where should I locate my dewatering facility?
- What permits and/or approvals will I need?
- What about effuent & dewatered sludge disposal?
- What about disposal trucking?
- How can I know that dewatering will actually save me money?

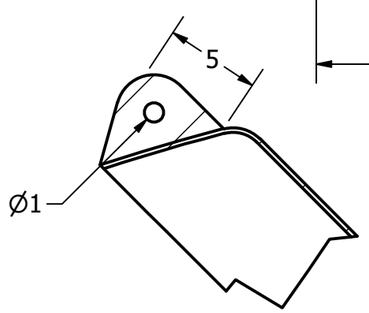
Poly Storage Tank Specs

(Identification Nos. 3d & 8a Per Process Flow Diagram)









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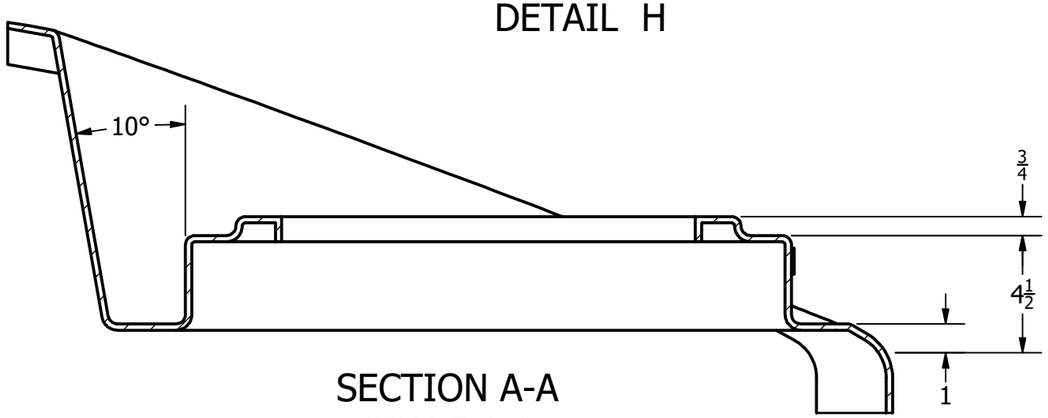


SECTION A-A
SCALE 1:6

REVISION HISTORY			
REV	DESCRIPTION	DATE	AUTHOR
A	REDRAWN	8/14/1997	
B	REDRAWN	7/16/2013	Michael Holden
C	ADDED LIFTING LUGS	7/14/2020	Liv OLtean

DRAWN	Jerry Paulson	8/14/1997
CHECKED		
QA		
MFG		
APPROVED		

NORWESCO, INC. SAINT BONIFACIUS, MN

TITLE

6000 GALLON VERTICAL STORAGE TANK

SIZE		DWG NO	REV
B			C

SCALE: 1/16 SHEET 1 OF 1

Distance Away **405 miles** FAIRFIELD, TX 1	02/01/2026	Due to the physical size or quantity of this selection, we are not able to automatically calculate freight for your order. Please contact our Freight Specialists at (866)721-6376 or you may continue your purchase on this site if you intend to handle your own freight arrangements.	**Add to cart**

+ View More Options

*The Estimated Ready Date is the estimated date when your product will be ready to ship. This date is subject to change and does not include transit times.

Request a **Quick Quote** Call an Expert **(866) 721-6376**

Store large volumes efficiently with the Norwesco 6000 Gallon Vertical Liquid Storage Tank. Crafted from durable, UV-stabilized polyethylene, it's ideal for reliable water and liquid material storage.

✉ **EMAIL**

Accuracy of the images may vary. Refer to the specifications table to ensure precision.

Product Overview

Unmatched Durability and Capacity for Your Liquid Storage Needs

Maximize your liquid storage capacity with the robust Norwesco 6000 Gallon Vertical Liquid Storage Tank in White. Engineered for superior durability and long-term performance, this high-capacity tank provides a reliable solution for agricultural, commercial, and residential liquid management needs. Its space-saving vertical design and premium construction make it an indispensable asset for storing water, fertilizers, and other non-corrosive liquids safely and efficiently.

Key Features & Benefits

- **Exceptional 6000-Gallon Capacity:** Offers substantial storage for large-scale operations and demanding applications.
- **Premium Norwesco Quality:** Manufactured by an industry leader, ensuring trusted performance and longevity.
- **Durable HDLPE Construction:** Crafted from virgin high-density linear polyethylene (HDLPE) for superior strength, impact resistance, and a long service life.
- **Seamless, One-Piece Design:** Rotationally molded construction eliminates seams, preventing leaks and enhancing structural integrity.
- **UV-Stabilized for Outdoor Use:** Designed with UV inhibitors to withstand harsh sun exposure, preventing material degradation and ensuring durability outdoors.
- **White Color Advantage:** The white finish reflects sunlight, helping to maintain cooler liquid temperatures and allowing for easy visual inspection of liquid levels.
- **Corrosion and Rust Resistant:** Polyethylene material naturally resists rust, corrosion, and most chemicals, offering maintenance-free operation (Note: Suitable for liquids with a specific gravity of 1.5 or less; avoid highly corrosive chemicals).
- **NSF/ANSI 61 Approved Material:** Constructed with materials that meet NSF/ANSI 61 standards for potable water storage, ensuring water quality and safety.

Common Uses & Applications

The Norwesco 6000 Gallon Vertical Liquid Storage Tank is incredibly versatile, serving a wide array of needs across various sectors:

- **Potable Water Storage:** Ideal for residential, commercial, and agricultural potable water supplies, ensuring clean and safe drinking water.
- **Rainwater Harvesting:** Collect and store rainwater for irrigation, non-potable household uses, and agricultural applications.
- **Agricultural & Farming:** Perfect for storing liquid fertilizers, livestock watering, liquid feed supplements, and other farm-related liquids.
- **Industrial & Commercial:** Suitable for process water, batch mixing, and non-corrosive chemical storage in industrial settings.
- **Emergency Water Supply:** Provides a critical reserve for fire suppression systems or as a backup water source during outages.
- **Irrigation Systems:** Ensures a consistent and readily available water supply for large-scale irrigation needs.

Invest in the reliability and superior performance of the Norwesco 6000 Gallon Vertical Liquid Storage Tank today. Experience peace of mind with a robust storage solution designed to meet your most demanding needs. Order now to secure your durable liquid management asset!

Specifications

Shipping Info

We found other products you might like!

6500 Gallon Plastic Vertical Liquid Storage Tank

$9,105.00

6000 Gallon Plastic Vertical Liquid Storage Tank

$8,898.00

6200 Gallon Plastic Vertical Liquid Storage Tank

$9,105.00

6400 Gallon Plastic Vertical Water Storage Tank in Black

$8,921.99

6400 Gallon Plastic Vertical Water Storage Tank in Green

$8,921.99

Power Washing Equipment Specs (Hotsy Pressure Washers)

5700/5800 SERIES

PRESSURE WASHERS / SINCE 1970

FEATURES

8.0 to 9.5 GPM @ 2500 to 3000 PSI
Stainless Steel Coil Skin
20 HP

HOT WATER | **ELECTRIC** | **BELT DRIVE**

Upright, vertical coil delivers high efficiency and maintains constant temperature using oil, natural gas or liquid propane.

Controls for the pump, burner and detergent are easily accessible.

Remote ready for operation in wash bays.

Adjustable upstream detergent injection ensures high-pressure sudsing for better cleaning.

Stainless steel coil skin provides extra durability to withstand overspray.

Elevated gas valve protects valve from water damage, and is located at the back corner for easy installation and service.

Burner assembly pivots down to allow access to burner ring and pilot assembly for maintenance.

Insulated Hotsy trigger gun and insulated wand with ergonomic, adjustable side handle.

Pressure relief valve protects the machine and user from thermal expansion.

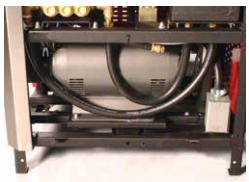
Control panel provides access to the main controls. Remove the front panel to access the Smart Relay for secured control of desired operating settings, such as auto start/stop functionality.

Sleek side and front panels are easily removed for routine maintenance and service access.

50-ft. length of high-pressure hose for easy maneuverability around a large working area.

With its 20 HP motor driving the incomparable Hotsy Triplex Pump and a vertical banded belt, the 5700 and 5800 Series delivers cleaning power up to 9.5 GPM and 3000 PSI.

Quick disconnect stainless steel nozzles are color coded for quick changing between 0°, 15°, 40° spray nozzles.



Motor is mounted to slide out rails for easy removal.

Programmable Smart Control Automation provides complete control over the machine's run time, auto start/stop and time delay shut down functionality.

Large frame Hotsy belt-drive pump features NESTechnology with U-Seals for 3 times longer pump life.

OPTIONS FOR 5700/5800 SERIES

12" Power Dampener
Remote Station (1)
R-Con Wireless Remote Kit (2)
Wall Mount Remote Kite (3)
LP Conversion Kit
12" Natural Gas- or LP Gas-Fired Draft Diverter
Soap Solenoid and Switch
Water Inlet Solenoid

1

2

3

5700/5800 SERIES

Hot-Water **ELECTRIC** Models

POWERFUL MODELS FOR TOUGH INDUSTRIAL CLEANING..

■ Oil, NG or LP-Fired ■ 8 to 9.5 GPM @ 2500 to 3000 PSI ■ 20 HP

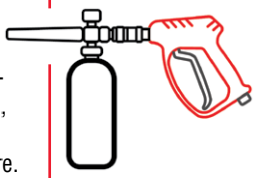
MODEL	PART NO.	GPM	PSI	HP	VOLT/PH	AMPS	FUEL	BTU/HR	PUMP MODEL	HOSE (FT)	DIMENSIONS (LXWXH)	SHIP WT (LBS)
5730SS	1.109-658.0	8.0	3000	20	230/3	44	Oil*	768,000	HX9536L.2	50	51"x31"x63.4"	1,471
5732SS-208	1.109-654.0	8.0	3000	20	208/3	55	NG	720,450	HX9536L.2	50	51"x31"x63.4"	1,471
5732SS	1.109-655.0	8.0	3000	20	230/3	42	NG	720,450	HX9536L.2	50	51"x31"x63.4"	1,471
5733SS	1.109-659.0	8.0	3000	20	460/3	23	Oil*	768,000	HX9536L.2	50	51"x31"x63.4"	1,471
5735SS	1.109-656.0	8.0	3000	20	460/3	21	NG	720,450	HX9536L.2	50	51"x31"x63.4"	1,471
5736SS	1.109-657.0	8.0	3000	20	575/3	16	NG	720,450	HX9536L.2	50	51"x31"x63.4"	1,471
5832SS	1.109-651.0	9.5	2500	20	230/3	42	NG	939,890	HX1036L.2	50	51"x31"x63.4"	1,471
5832SS-208	1.109-650.0	9.5	2500	20	208/3	48	NG	939,890	HX1036L.2	50	51"x31"x63.4"	1,471
5835SS	1.109-652.0	9.5	2500	20	460/3	21	NG	939,890	HX1036L.2	50	51"x31"x63.4"	1,461
5836SS	1.109-653.0	9.5	2500	20	575/3	16	NG	939,890	HX1036L.2	50	51"x31"x63.4"	1,471

**Oil-fired models are not supplied with a fuel tank*

DETERGENTS

To clean like a pro, you need to include detergents. Hotsy offers a full line of detergents for cleaning grease, dirt, road grime, aluminum, sanitation and so much more. Our detergents help you clean faster and save money.

PARTS & ACCESSORIES



Clean faster and more efficiently with pressure washer accessories like flat surface cleaners and turbo nozzles.

SERVICE

Hotsy factory-trained technicians keep your equipment running with on-site or in shop maintenance and tune-ups. Plus, we repair all brands.

hotsy®

The Pressure Washer The Pros Use.

EST. 1970

HOTSY.COM

Tel: 800.525.1976

Fax: 888.880.9631

Email: [redacted]

Distributed by:

NOTE: We are constantly improving and updating our products. Consequently, pictures, features & specifications in this brochure may differ slightly from current models. Flow rates & pressure ratings may vary due to variances allowed by manufacturers of our machine components. We meet the CETA testing specs for machine performance at +_10% and in some cases are tighter within +_ 5% of listed specifications.

Specifications & product descriptions subject to change without notice. Hotsy's manufacturing facilities have established and apply a quality and environmental management system to be ISO 9001:2008 and ISO 14001:2001 certified.

VISIT US ONLINE

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Twitter TheHotsyMan

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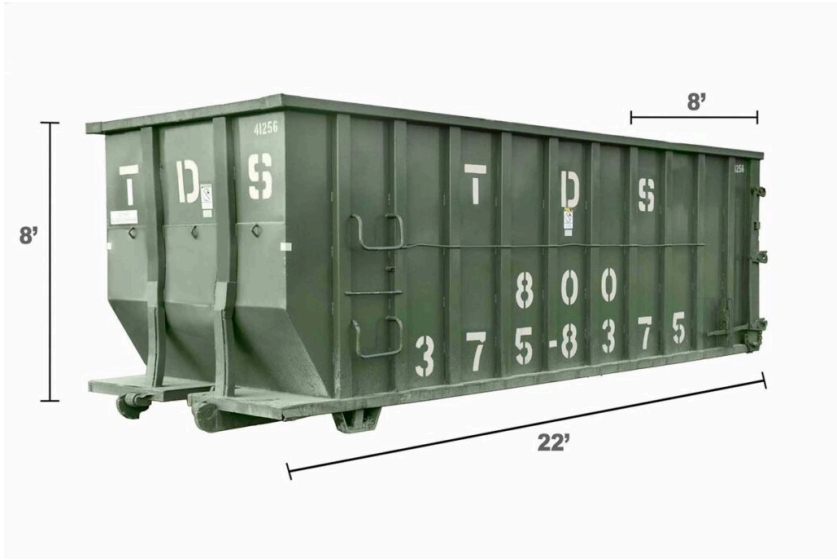
P/N HOT_1800 Effective 07/23

Rolloff Dumpster Specs (Texas Disposal Systems, 40 CY Each)

(Identification No. 7b Per Process Flow Diagram)



40-Yard Dumpster Dimensions

40-yard dumpsters get their name from being able to typically hold up to 40 cubic yards of debris. The TDS 40-yard dumpsters are **22 feet long, 8 feet wide and 8 feet tall**. These dumpsters work great for both large-scale commercial and/or residential projects. Please note that dumpster sizes from other manufacturers and disposal services may vary.

40-Yard Dumpster Rental Price

The cost of renting a 40-yard dumpster will always vary based on your location, the type of debris you're throwing away, the weight of the debris, and how long you plan on keeping the rental. To get your quote, please contact our Customer Care team at **(800) 375-8375** (tel:+18003758375) or **contact us here** (https://www.texasdisposal.com/your-business/roll-off-dumpsters/request-a-quote-for-roll-offs/). What does the quote include?

Request a Quote

Powered by CookieYes (https://www.cookieyes.com/product/cookie-consent/?ref=cypbcyb&utm_source=cookie-banner&utm_medium=fl-branding)

40-Yard Dumpster Weight Limit

TDS's 40-yard roll-off dumpsters have a weight limit of 12,000-16,000 pounds. Please keep in mind that the type of material you're throwing away and the distance driven to your location may affect the maximum weight allowed in your load.

Request a Quote

New! Roll-Off Work Completion — Fast. Reliable. Next-Business-Day.

Need a haul fast? We've got you covered.

Our new Roll-Off Work Completion service guarantees that existing commercial customers get their roll-off dumpster hauls completed by the next business day (excluding Saturday) — **just get your request in by 3 pm, and we'll handle the rest.**

Contact Us

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Sampling Port Specs (Schier Sewer Viewer Plain End Plastic Port)

(Identification No. 9 Per Process Flow Diagram)

SCHIER

Sewer Viewer™ 11-5/8 in. Plain End Plastic Sampling Port

Part #S806500101 | Item #8368250 | Manufacturer Part #8065-001-01

(0) Write a Review

$561.37

Width: 11-5/8 in

1 Add to Cart

How to get it:

Pick Up Available Nearby
0 in **Wichita, KS**
Available in 1 store nearby

Shipping Available
Available for immediate shipment

Product Details

Documents

- SPECIFICATION
- WARRANTY
- INSTALLATION

Specifications

Application: Indoor, Outdoor

Collection: Sewer Viewer™

End Connection 1: Plain End

End Connections: Plain End

Fitting Size 1: 4 in

Fitting Size 2: 6 in

Fitting Sizes: 4 in x 6 in

Height: 14-1/2 in

Length: 24-1/4 in

Material: Plastic

Material Type: HDPE, Polyethylene

Product Type: Sampling Port

References

REFERENCES

Aqua-Zyme Disposal Systems, Inc. Available at [redacted] Accessed 1/2026

APPLICATION TO THE TCEQ FOR NEW PERMIT FOR A MUNICIPAL SOLID WASTE FACILITY

Part IV – Site Operating Plan - MSW Permit No. 2430

Vexara Pharmaceuticals

3300 Bingle Road

Houston, TX 77055

Prepared For:

Vexara Pharmaceuticals, LLC

1800 West Loop South Suite 1110

Houston, TX 77027

1-281-830-0284

February 1, 2026

Revision Date: February 27, 2026, April 29, 2026

F# 2507

STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED
PROFESSIONAL ENGINEER

05-06-2026

Prepared By:

ENVIRO-AG ENGINEERING, INC.
EAE
AMARILLO - STEPHENVILLE- ARTESIA

3404 Airway Boulevard ♦ Amarillo, Texas 79118 ♦ Tel 806/353-6123 ♦ Fax 806/353-4132

Table of Contents

FM 2507

STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED
PROFESSIONAL ENGINEER

05-06-2026

List of Supporting Documents

4.0 Description of Facility & Personnel

This is a proposed grease/grit trap, lint and septic waste processing facility. The facility will be an enclosed 7800 sq ft building with roll-up doors. Access to the facility is controlled by a perimeter fence, consisting of a four-foot barbed wire fence or a 6-foot chain link fence or equivalent with lockable gates. An attendant will be on-site during operating hours. The operating area and transport unit storage will be enclosed by walls or fence. Vacuum trucks containing domestic waste consisting of human waste (municipal sewage wastewater), food greases, lint and grit pumped from septic tanks will be offloaded by hose at a receiving station that will be enclosed by a building and surrounded by a curb to contain small spills. Safety bumpers will be provided for the vehicles at the hoppers. The receiving station will contain an automated trash separating screen (dusky shark or screw press) that will remove large non-biodegradable particulate/trash and convey it to a trash receptacle (10 cubic yard box) which will be taken to an authorized landfill once it is filled. The separated waste will be transferred to a separations tank via a 4" trash pump (200 to 400gpm). This tank is 10' diameter x 33' long and has a capacity of 20,000 gallons. It will be used as a separating tank to allow grease to float to the top from the liquids and bio-solids. The grease on the top of the separation tank will be pumped through a pick heater at 25 gpm that will inject steam directly into the waste stream. This will heat the grease instantly from 60°F to 180°F. The waste stream that exits the pick heater will enter a cyclone tank (cone shaped tank, 10" diameter x 2' tall, 8-gallon capacity) where the waste stream enters the cyclone tank at an angle to make the waste stream spin that allows for further separation of brown grease from the waste liquids and bio-solids. The clarified brown grease will stay at the top of the cyclone tank and discharged through the acceptance port where under residual pressure will flow to a 7,000-gallon high density polyethylene recyclable oil tank where it will eventually be offloaded and taken to a recycling facility. The separated waste liquids and bio-solids that fall out of the bottom of the cyclone will be discharged through the reject port where under residual pressure will flow back into the receiving station for re-processing. The remaining waste liquids and bio-solids in the separation tank will be pumped at 200 to 400 gpm through a series of two storage tanks (10'diameter x 33'long with 20,000-gallon capacity each) and then a 21,000-gallon mixing tank (frac tank 46' x 10' x 8.5') where the waste liquids and bio-solids will be batched for processing with the addition of lime manually added to the mixing tank for pH adjustment (optimal pH level: 6.5-7.5) at the appropriate consistency to allow dewatering process to be optimized. Once the batch volume in the mixing tank is pH optimized, the waste liquids and bio-solids will be pumped at 200 to 400 gpm to one of two dewatering boxes (40 cubic yards each or 8,078 gallons each). Polymer will be injected into the waste stream as it is being pumped into one of the two dewatering boxes that will cause bio-solids to bind with the polymer compound enhancing the further separation of solids from the liquids. The dewatering boxes are built with a special arrangement of screens that allows the effluent wastewater to escape into the designated collection space and then drain through ports in the dewatering box and

gravity flow into a sump pump pit. The collected bio-solids in the dewatering box with the aid of the ADS 5084G polymer will form dime to nickel size clumps of solid waste material separated from the effluent wastewater through the use of a belt press filter media that allows the solids to collect in the box and only allows the effluent water to pass through. One 40-cubic yard dewatering box processes up to 80,000 gallons of waste liquids and solids per day. The expected percentage of waste solids in this waste stream entering the dewatering boxes is 0.5%. From the sump pump pit, the effluent wastewater will be pumped at 200 to 400 gpm into a 6,000-gallon high density polyethylene holding tank. The holding tank will set at ground level and will allow the effluent wastewater to gravity flow to the underground sanitary sewer service line that connects to the City of Houston's sanitary sewer system. The proposed facility will not discharge into a septic system. There will be a sampling/inspection port consisting of a manhole or other City approved structure on the sanitary sewer service line gravity flowing from the holding tank. This will allow the City of Houston access for sampling and inspection. Once a dewatering box is full of waste solids and can pass a dryness test via a paint filter test, the solids will be offloaded into a 40-cubic yard rollbox and hauled to an approved/authorized solid waste disposal site landfill or composting facility. If the solids cannot be hauled immediately to a disposal site, the solids will be stored temporarily in the enclosed facility building in an available storage bay until it can be disposed of. This overall process results in dewatered solids of 18-22% on average, reducing the total volume of waste by up to 95%, and reduces FOG, BOD, COD and TSS levels by an average of 99%.

The facility has contacted the City of Houston and will be applying for any required City of Houston permits and will comply with the conditions within these permits as well. The solids will be stored no longer than 7 business days on-site or what local jurisdiction limits require and then it will be transported to an approved/authorized solid waste disposal site landfill or composting facility. The facility plans on processing on average 50,000 gallons of waste liquids and solids per day with a maximum capability of 150,000 gallons per day. Based on 50,000 gallons per day with an expected percentage of waste stream solids at 0.5%, it is anticipated that on average it may take up to 32 days to fill a dewatering box of solids prior to disposal. Operating at maximum capability of 150,000 gallons per day it would be projected that it would take 21 days to fill two dewater boxes of solids prior to disposal. The proposed facility has contacted other facilities receiving the waste and they can manage the volumes and concentrations estimated by the facility design. See Figure 4.0.1

- Brown grease is composed of fats, oils and grease (FOG). It can clog sewer lines and interfere with septic systems and sewage treatment operations. Recognition of its value for production of fertilizer, biodiesel and other products, as well as stringent EPA regulations, are driving a trend of brown grease recycling.
- The solid waste will consist of food particles, grit and septic waste. The lipids are made up of fatty acids, triacylglycerols and fat-soluble hydrocarbons and originate from scraps of baked and fried food items removed from grease traps.

The grit includes sand, gravel, cinder, as well as eggshells, bone chips, seeds, coffee grinds and large organic materials (food waste). Septic waste is the liquid and water-borne waste derived from ordinary living processes.

- The liquid waste will be the grey water that is mixed with the solids in the grease and grit traps as well as in the septic tanks.

The proposed facility is working with the City of Houston to obtain a permit to discharge into the City of Houston's sewage treatment system via underground lines. All wastewater generated by the facility will be managed as contaminated water in accordance with 30 TAC 330.207. No other permit is required under TPDES or another agency (330.65(d)).

The proposed facility will be operated by a facility manager to ensure proper operation with the design and standards. Also, 5-7 full-time employees will be assigned to the facility. The facility manager will receive hazardous waste screening training. Each employee will have the necessary training and experience to operate all equipment onsite. Facility personnel will be trained in the appropriate sections of the facility's health and safety plan. The operating plan provides guidance on the procedures for site management and operating personnel to conduct day-to-day operations in accordance with the permit requirements.

The minimum number of staff to operate the facility is two, and they are as follows:

Facility Manager

1. Supervising all the activities to ensure the safety of all personnel/visitors on site including training and monitoring of the dewatering process;
2. All required recordkeeping;
3. Supervising the operations, processing of materials and equipment inspections;
4. Coordinating with the City of Houston for wastewater discharge, handling and monitoring requirements as well as other agencies;

Site Employee/Operator

1. Accepting waste, handling operations and discharge of the processed waste in accordance with the rules explained through 4.0 Site Operating Plan of this application;
2. Ensure the wastewater trucks are properly secured in order to prevent spills and report any violations to the proper authorities;
3. Perform routine maintenance activities;
4. Clean-up spilled materials, cleaning all working surfaces that come in contact with waste material at least 2-3 times per week and tank cleaning;

Attendants/Employees onsite will be trained per the operating manual, and a class B wastewater technician will be available at all times during business hours.

4.1 Generalized Construction Details of Treatment and Storage Units

The construction and operation of the waste management facility shall comply with Subchapter U of 30 TAC Chapter 330 or other approved air authorizations.

General construction specifications for the treatment units (dewatering tank, polymer mixing and dosing unit, pump, hose, materials and coatings) and typical drawing details of the dewatering tank are contained in Supporting documents – Figure 4.1.1.

4.2 Facility Operation Procedures

Registered transporters will bring material to the facility in enclosed trucks. The site manager or trained site employee/operator will be on site at all times during operation.

Liquid waste (grease from restaurants, grit from commercial car washes, septage) is delivered to the facility by truck. The load/material will be inspected to make sure no prohibited or unauthorized waste is delivered to the facility. The wastewater will be offloaded from the truck via hose into a receiving station with an automated trash screen. The large trash will be separated out and put into a 10 cubic yard dumpster to be hauled to the landfill. The liquid waste with suspended solids will then go through a 4" trash pump into a 20,000-gallon separation tank (10' diameter x 33' long) and then the separated grease will be pumped into a pick heater and cyclone tank by a trash pump to separate out the brown grease. The brown grease will be stored in a poly oil storage tank so it can be recycled. The separated waste liquids and bio-solids that fall out of the bottom of the cyclone will be discharged through the reject port where under residual pressure will flow back into the receiving station for re-processing. The wastewater and biosolids that remain in the separation tank will be pumped through a series of 2 storage tanks until it reaches the mixing tank where lime will be added to the mixture. This mixture will be pumped into the dewatering boxes. As it is being pumped over, the polymer will be injected into the solution to start the separation process. The solids flocculate and separate from the liquids. The liquids will drain through an opening in the wall of the box and collect in a sump pump pit where it will be pumped to a holding tank to be visual inspected, sampled as needed and pumped to the City of Houston sewer treatment system via underground lines. The facility will follow the requirements set forth in the City of Houston permit. Solids retained in the dewatering box will be offloaded into a rollbox and transferred to an approved disposal site or composting site. The dewatering process is complete after the solids drain for several hours.

The products of this process include treated water and dewatered solids.

- Brown grease: It can clog sewer lines and interfere with septic systems and sewage treatment operations. Recognition of its value for production of fertilizer, biodiesel and other products, as well as stringent EPA regulations, are driving a trend of brown grease recycling.

- Water: The wastewater will be pumped into a holding tank for visual inspection to ensure the process is functioning as designed before entering a sampling station for city inspection and on to the city of Houston wastewater treatment plant.
- Solids: Dewatered solids in the dewatering boxes will be transferred from the facility by a roll-off truck. It will be delivered to an approved/authorized disposal site or composting site in the Houston area.

4.3 Safety and Hazardous Waste Recognition

Safety procedures will be developed and adapted for the facility with training provided to all employees. All activities will be supervised by the facility manager to ensure the safety of all employees/visitors at the facility.

Vexara Pharmaceuticals employees who are responsible for incoming load inspections will be trained to recognize the potential for the presence of hazardous wastes as defined in 490 Code of Federal Regulations Part 261 and/or PCB wastes as defined by 40 Code Federal Regulations Part 761. The training is required before an individual is qualified to inspect incoming loads. An annual refresher course is required.

The training program should include identification of characteristic odors or visual signs of the presence of hazardous waste characteristics within the material processed at the facility. This training will be provided to all Vexara Pharmaceuticals employees responsible for unloading material.

4.4 Inspection of Incoming Loads

Trained employees will be responsible for accepting and directing the transport of all waste. These employees are responsible for visual inspections of all loads of waste material coming into the facility to minimize the possibility of unauthorized material being accepted and to verify the load information provided by the generator and transporter.

Attendants onsite will be trained per the operating manual, and a class B wastewater technician will be available at all times during business hours.

4.5 Hazardous Waste Handling Procedures

In the instance that an incoming load contains hazardous waste or PCB waste, the material will not be unloaded, and the transporter will be responsible for removing the material from the site.

If Vexara Pharmaceuticals inadvertently accepts hazardous waste, the facility manager will contain the accepted material by terminating process flow and return material back to transport if feasible or contact a company licensed and permitted to handle and dispose of such materials. The TCEQ will be notified immediately if this occurs.

4.6 Fire Protection Plan

In an emergency, The Houston Fire Department can be reached by dialing 911. The facility will be equipped with fire extinguishers in the office area (1) and around the processing area at a minimum of 4. The City of Houston's Fire Marshall will oversee additional fire equipment needs during the city permit approval process. All employees will be trained in fire extinguisher use and communication and response in the event of a fire.

The grease trap, sewer sludge and septage materials have sufficient water content to prevent ignition hazard. The brown grease recycling process involves controlled heat. The dewatering process does not involve heat, and generation of heat or flammable vapors is insignificant. Pressurized water is available on-site – See Part III - Equipment Specs.

4.7 Materials along the Route to the Site and Control of Accidental Spillage

There will be no issue of blowing material from open air trucks. The waste material is brought to the facility in tank trucks filled with liquids and sludges. Employees will take necessary steps to ensure that the tank trucks are secured in order to prevent any spills.

Facility employees will be on-site and supervise the unloading process. The waste material will be unloaded via pressurization of the tanker truck pumps and discharging via hose to the receiving station. The dewatering boxes will be positioned inside the building and stored and tarped inside when full. Any spills will be contained in the building or with a curb and can easily be pumped back to the receiving station or storage tanks.

All tanks/containers used for storage will be in the enclosed building or be housed inside a containment wall.

Trained employees will only be processing the waste material. Inspections of all connections and piping will be completed regularly during operation. If leakage is detected, waste processing will stop and the leak will be repaired.

Spills of waste material along routes are expected to be minimal because the facility receives liquid waste from enclosed tanker trucks. However, the facility will be responsible for clean-up of waste material manifested to the site that are spilled along and within the right of way of public access roads serving the facility for a distance of two miles in either direction from the entrance used for waste delivery daily when the facility is in operation in coordination with local authorities or the Texas Department of Transportation before the clean-up operations commence.

4.8 Spill Containment

In the event of a spill from the receiving area, storage area or processing area, the spill will be contained within the walls of the enclosed 7,800 square foot building with a 6" curb. The holding tanks located outside the building will have a two-foot tall and five-inch-thick containment wall in the event of a spill.

4.9 Sanitation and Periodic Cleaning

The equipment will be regularly inspected and cleaned to minimize solid loading. All working surfaces that are in contact with waste material will be washed at least 2-3 times per week. All solids removed from the storage tanks will be processed through the dewatering boxes. Wash water will be collected in sump pump pit and then pumped to the storage tank to be pumped to the City of Houston sanitary sewer system via underground lines. No wash water will accumulate.

4.10 Maximum Storage Time

The proposed facility is designed with a receiving station where the trucks will be offloaded with a hose. From there the liquid is pumped into a 20,000-gallon separation tank. This is where the brown grease separation occurs and the remaining liquid is pumped back into the receiving station. The liquid and biosolids remaining in the separation tank will be pumped through a series of 2 storage tanks each with a 20,000-gallon capacity and then into a mixing tank (21,000 gallons) where lime is added for pH adjustment. *From here, the wastewater is injected with the polymer and pumped to one of two dewatering boxes with tarps (40-cubic yard with capacity of 8,078 gallons each), providing* adequate design capacity to process waste without delays. The solids will be stored no longer than 7 business days on-site or what local jurisdiction limits require and then it will be transported to an approved domestic solid waste disposal site landfill or composting facility. The facility plans on processing on average 50,000 gallons of waste liquids and solids per day with a maximum capability of 150,000 gallons per day. Based on 50,000 gallons per day with an expected percentage of waste stream solids at 0.5%, it is anticipated that on average it may take up to 32 days to fill a dewatering box of solids prior to disposal. Operating at maximum capability of 150,000 gallons per day it would be projected that it would take 21 days to fill two dewater boxes of solids prior to disposal.

All solids sent to the landfill will pass the Paint Filter Liquids Test (EPA Method 9095B). Any testing required by the landfill for classification of waste will be followed and records of all analyses will be retained on-site for a minimum of three years.

4.11 Contingency Plan for Overloading and Breakdown

The design capacity of the facility will not 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 problems or vector harboring, additional waste will not be received until the conditions are back to normal operation.

If a major mechanical breakdown or a significant work stoppage occurs which causes the waste storage tanks to become full, no additional waste will be accepted. Measures will be taken to prevent the settlement of solids in the storage tanks.

In the event of an extended breakdown over 24 hours, all incoming material will be diverted directly to an approved landfill. Vacuum trucks will be utilized to take stored waste to other waste disposal facilities. Any spills will be contained inside the building or curb and cleaned up immediately.

4.12 Quality Control Program

In order to meet state and local regulations, the facility has adopted the following rules for site operation:

- No unloading or processing of any hazardous waste or prohibited material.
- Diverting material from the waste stream without processing is not considered recycling.
- The material received at the facility will be visually inspected.
- The unloading of material in unauthorized areas is prohibited.
- The wastes received at the facility shall be manifested. The manifests must have the information required by the agency. The following information is expected:
    - Name of waste generator
    - Physical address of waste generator
    - Telephone number of responsible party
    - Type of waste generated and removed
    - Size of vessel
    - Volume of waste removed
    - Signature (with date) of waste generator
    - Name of transporter
    - Telephone number of the transporter
    - TCEQ registration of transporter
    - Vehicle or disposal permit number of transporter
    - Signature of transporter
    - Disposal or processing site
    - Permit number of disposal or processing site; and
    - Signature of (and date) of the site operator

The material will be rejected if discrepancies are found on the manifest.

All solids sent to the landfill will pass the Paint Filter Liquids Test (EPA Method 9095B). Any testing required by the landfill for classification of waste will be followed and records of all analyses will be retained on-site for a minimum of three years.

The facility will analyze wastes received for benzene, lead, and total petroleum hydrocarbons (TPH). Each waste type will be analyzed annually for lead. Grit trap wastes will be analyzed annually for BOD, TSS, benzene, and pH. Records of each analysis will be retained on-site for a minimum of three years. All sampling and analysis shall be done according to EPA-approved methods.

The facility will be operated such that a sludge that is accepted at municipal landfill will not exceed the benzene, lead and THP concentrations. Sludges exceeding these limits will not be disposed of in a municipal solid waste landfill and will be sent to an authorized solid waste management facility for further processing or disposal as hazardous waste, as appropriate or disposed in a municipal solid waste landfill with dedicated Class 1 industrial solid waste cells if the sludge is nonhazardous.

Contaminant	Total Limit	TCLP Limit
Benzene	10 milligrams per kilogram (mg/kg)	0.5 milligrams per liter (mg/L)
Lead	30 mg/kg	1.5 mg/L
Total petroleum hydrocarbons (TPH)	1,500 mg/kg	not applicable

4.13 Operating Hours

The waste acceptance hours of the facility will be between4:00 a.m. and 6:00 p.m., Monday-Friday and Saturday am-noon. The operating hours for operating heavy equipment and transporting materials on- or off-site will be between 5:00am and 9:00 pm Monday-Friday. A trained employee will be onsite during normal business hours. Emergency approval will be obtained from the TCEQ Regional Office for acceptance of waste outside permitted hours. A log will be kept in the site operating plan to record dates, times and duration when any alternative operating hours are utilized. The commission's regional offices may allow additional temporary operating hours to address disaster or other emergencies or unforeseen circumstances that could result in the disruption of waste management services in the area.

4.14 Site Sign

The facility will display at all entrances to the facility where waste is received, a sign measuring at least four feet by four feet with letters at least three inches in height stating the facility name and type, hours and days of operation, authorization number and facility rules and unloading area location.

4.15 Easements and Buffer Zones

Waste unloading, storage and processing operations will not occur within any easement, buffer zone or right-of-way that crosses the site. All pipeline and utility easements will be clearly marked with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet.

A minimum separating distance of 50 feet will be maintained between solid waste processing and disposal activities and the boundary of the facility.

4.16 Ventilation and Air Pollution Control

The facility is completely enclosed to prevent nuisance odors from leaving the property by minimizing the contact between unprocessed waste and air. All liquid and solid waste will be stored in odor retaining containers and vessels enclosed or covered. The storage tanks are curbed and enclosed. Liquid from the mixing tank will be pumped to the dewatering box. During the process of liquid separation, a polymer is added for separation, and lime is added to adjust the pH as needed. The addition of lime and polymer help reduce the odor. Typically, solids will not remain in the boxes long enough to create an odor problem. Vinyl Tarps with integrated mesh pouches on the underside for odor absorbing carbon inserts will be used to cover the boxes as needed to help contain and reduce the odors during storage and transport. If nuisance odors are found to pass the facility boundary, operations may be suspended until odors are abated. No air emissions from the facility will cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act. Based on other facilities like this facility, no air permit is required. The owner or operator will obtain all required authorizations under Chapter 116 or Subchapter U from Air Permits Division, if required.

The enclosed facility has a large exhaust fan on the south end that would expel the odorous air higher into the atmosphere for odor abatement as well as roof vents. The empty containers will be washed down with hot water and degreaser.

The facility will not be open on Sunday.

4.17 Noise Pollution/Vector Control Procedures

Noise pollution should be minimal. The facility will receive around 10 trucks a day that will unload and load within the enclosed building or the area of the enclosed building.

Vectors are not expected to be an issue because the waste is fully controlled within the storage and processing site. Spills will be cleaned up immediately on discovery. If a problem develops, a pest control service will be contacted to eliminate the issue.

4.18 Access Control and Facility Access Roads

Public access to the facility will be controlled by means of artificial barriers such as a locked entrance gate to protect human health and safety and the environment. The facility is an enclosed building that will be off-limits to the public. The facility and the gate will be locked during non-operating hours.

Traffic will access the facility via Bingle Road from the North or South and then exit on the Bingle Road via the existing driveway on the west side of the property. The site traffic will not use any residential streets. Bingle Road is a paved roadway. The estimated 10 vehicles/day generated by the facility will not cause disruption of normal traffic patterns.

The internal driveway from the facility entrance to the facility processing area is asphalt and concrete. Roadways within the facility will be inspected daily and cleaned as required. Safety bumpers at hoppers will be provided for vehicles. Dust generation will be minimal due to the asphalt roads as well as slow truck speeds. No tracking of mud will occur. No solid waste unloading, storage, disposal or processing operations will occur within any easement, buffer zone or right -of-way that crosses the facility. Sufficient parking will be available for facility personnel and visitors.

Attendants on site will be trained per the operating manual and a class B wastewater technician will be available at all times during business hours.

4.19 Endangered Species Protection

The facility will operate in such a manner not to destroy or affect the critical habitat of endangered or threatened species. See Part 2.7.

4.20 Abandoned Oil, Gas or Water Wells

There are no known abandoned oil, gas or water wells on the site. If any abandoned oil, water or gas wells are discovered, the Executive Director of the TCEQ will be notified immediately. The facility will take the necessary steps to plug such wells required by TCEQ or other state agencies and notify the Executive Director of the TCEQ within 30 days after plugging. The facility will be connected to city water.

4.21 Alternate Processing Procedures

In the event that the storage tanks are full or inoperable, material will not be accepted. Incoming loads will be re-routed to the landfill. Vacuum trucks will be utilized to take stored waste to other approved disposal sites.

If the transfer pump, polymer system, dewatering box or the drain system is not functioning, material may be received if storage capacity is available. In the event of an extended breakdown over 24 hours, all incoming material will be diverted directly to

an approved/authorized landfill. Vacuum trucks will be utilized to take stored waste to other waste disposal facilities.

4.22 Water Pollution Control

Water pollution from the dewatering process is minimized. The building will have 20 ft walls with a 6" curb around all the equipment inside the building. The outside tanks will have a two-foot tall and five-inch-thick containment surrounding them. This will hold the amount of the largest tank at 21,000 gallons and a significant storm event. Wastewater effluent from the dewatering process will be discharged into the sewer line via underground lines on the west of the property in accordance with the City of Houston Sanitary Sewer Department requirements. Based on the design, the waste management unit can sufficiently control and contain a worst-case scenario spill or release from the unit. The spill or release will be contained inside the building with a 6" curb or containment wall. There will be no contaminated groundwater or surface water.

The entire facility from unloading, storage and processing will be undercover /curbed or have a containment wall. The waste storage units are completely covered or enclosed and do not constitute fire, safety, health or litter hazards. There will be no surface water discharges from these areas or ponded water onsite that could become a nuisance.

All liquids resulting from the operation of processing solid waste will be disposed of in a manner that will not cause surface or ground water pollution. Wastewater from the dewatering process is discharged into the sewer line at the west boundary of the facility in accordance with City of Houston Sanitary Sewer Department Requirements.

The daily effluent design standard for oil and grease concentration leaving the facility and entering a public sewer system shall not exceed 200 milligrams per liter, the concentration established in the wastewater discharge permit pretreatment limit or the concentration established by the treatment facility permitted under Texas Water Code, Chapter 26, the National Pollutant Discharge Elimination System, or following liquid effluent limits, if the discharge points do not require compliance with locally set limits.

30 TAC A§330.207(g)

Effluent Characteristics	**Effluent limitations**	
	Maximum for any one day:	Average of daily values for 30 consecutive days shall not exceed:
	Metric units (kilograms (kg)/1,000 kg of raw material)	
Oil and grease	0.10	0.05
Total petroleum hydrocarbons (TPH)	0.01	0.01
pH	5.5 - 10.5	5.5 - 10.5
	English units (pounds (lbs)/1,000 lb of raw material)	
Oil and grease	0.10	0.05
TPH	0.01	0.01
pH	5.5 - 10.5	5.5 - 10.5

4.23 Litter Control and Facility Maintenance

Routine maintenance will be completed by Vexara Pharmaceuticals employees. Outside contractors will be used if needed. Regular maintenance activities include:

- All working surfaces that come in contact with waste will be washed down at least 2-3 times per week
- Wash water will be collected and disposed of in the dewatering process
- Litter and windblown material resulting from the operation will be collected and disposed of properly at least once per day on days of operation to minimize unsightly conditions
- Firefighting equipment will be checked on a monthly basis to ensure it is in working condition
- Operation equipment will be maintained and serviced routinely for proper processing conditions

4.24Employee Sanitation Facilities

Potable water and a restroom facility are provided for use of employees and visitors in the designated office area.

4.25 Recordkeeping and Manifest Retention

Manifests will be retained on-site as required by 30 TAC §312.145.

Trip Tickets have five parts:

Part 1- Generator and transporter information – given to generator at time of pick-up

The remaining four parts will have required information filled out completely and signed by appropriate parties before distribution of ticket. All four parts will be signed by Vexara personnel.

Part 2- Remains on file at Vexara Pharmaceuticals

Part 3- Returned by transporter to the waste generator within 15 days after the waste is received at the processing facility

Part 4- Transporter copy for records

Part 5- Available for local authority, if needed

Copies of all manifests will be retained for five years and readily available for review by TCEQ staff.

The executive director of TCEQ will be notified in writing annually of documents added to the operating records as required by 30 TAC §330.675.

The following documents must be kept on-site and readily available:

- Copy of permit application, site operating plan, final closure plan

- Any and all location restriction demonstrations
- Inspection records and training procedures
- Notification procedures related to the exclusion of the receipt of the regulated hazardous waste and/or PBC waste
- Cost estimate and financial assurance documentation relating to financial assurance for closure
- Copies of all correspondence and responses related to the operation of the processing facility, modification to the permit, approvals and any other documents referring to technical assistance
- All information in the operating record for the life of the facility

All reports required by the Executive Director will be submitted based off the permit reporting requirements including MSW quarterly and annual reports. All reports will be signed by the person who is duly authorized as signatory for the reports according to 305.44(b). If the authorized signatory is no longer accurate, a new authorization will be submitted.

Supporting Documents

4.0.1: Disposal email from Approved Waste Facility

Figure 4.0.1

Outlook

Fw: Sludge Disposal

From mgmt . [redacted]
Date Thu 5/7/2026 10:22 AM
To Amy Peoples [redacted]

CAUTION: This email originated from outside of Enviro-Ag Engineering. Do not click links or open attachments unless you have verified the sender and know the content is safe.

From: Zymme Shared Mailbo[redacted]
Sent: Thursday, May 7, 2026 10:21 AM
To: [redacted]
Subject: Sludge Disposal

Hello Andy,

As we discussed, our TCEQ Don Tol Composting Facility will be able to handle about 3 loads of dewatering sludge per day. We accept dewatered, grease trap, septic, and municipal sludge.

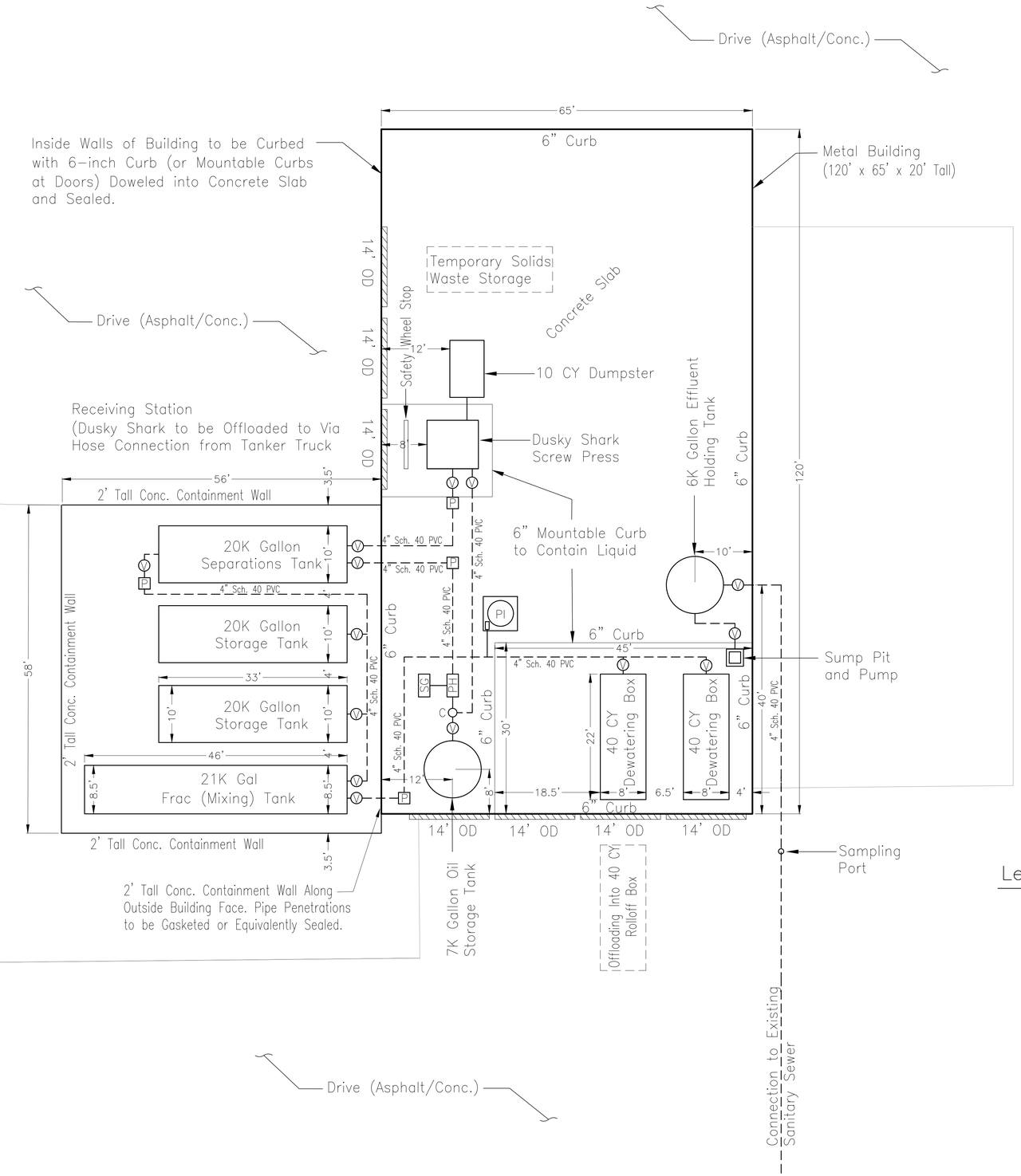
Let me know if there is anything else we can help with.

Thanks,

Justin Atkinson
Operations Manager / VP
(979) 245-5656 phone
www.aqua-zyme.com
Aqua - Zyme

4.1.1: Construction Plans

Figure 4.1.1



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	INITIAL RELEASE		

N E S W

0 10 20

SCALE: 1" = 10'

Legend

P	Pump
V	Valve
C	Cyclone
PH	Pick Heater
SG	Steam Generator
PI	Polymer Injection Unit
OD	Overhead Door

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3404 Airway Blvd.
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79118
TEL (806) 353-6123
FAX (806) 353-4132

SHEET DESCRIPTION:
Layout and Dimension Plan

SCALE: As Shown
PROFILE SCALE:
HORIZONTAL
–
VERTICAL
–

USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTION ON THE FIRST SHEET OF THIS DOCUMENT.

REV –

DWG. SIZE: D | SHEET 1 OF 3

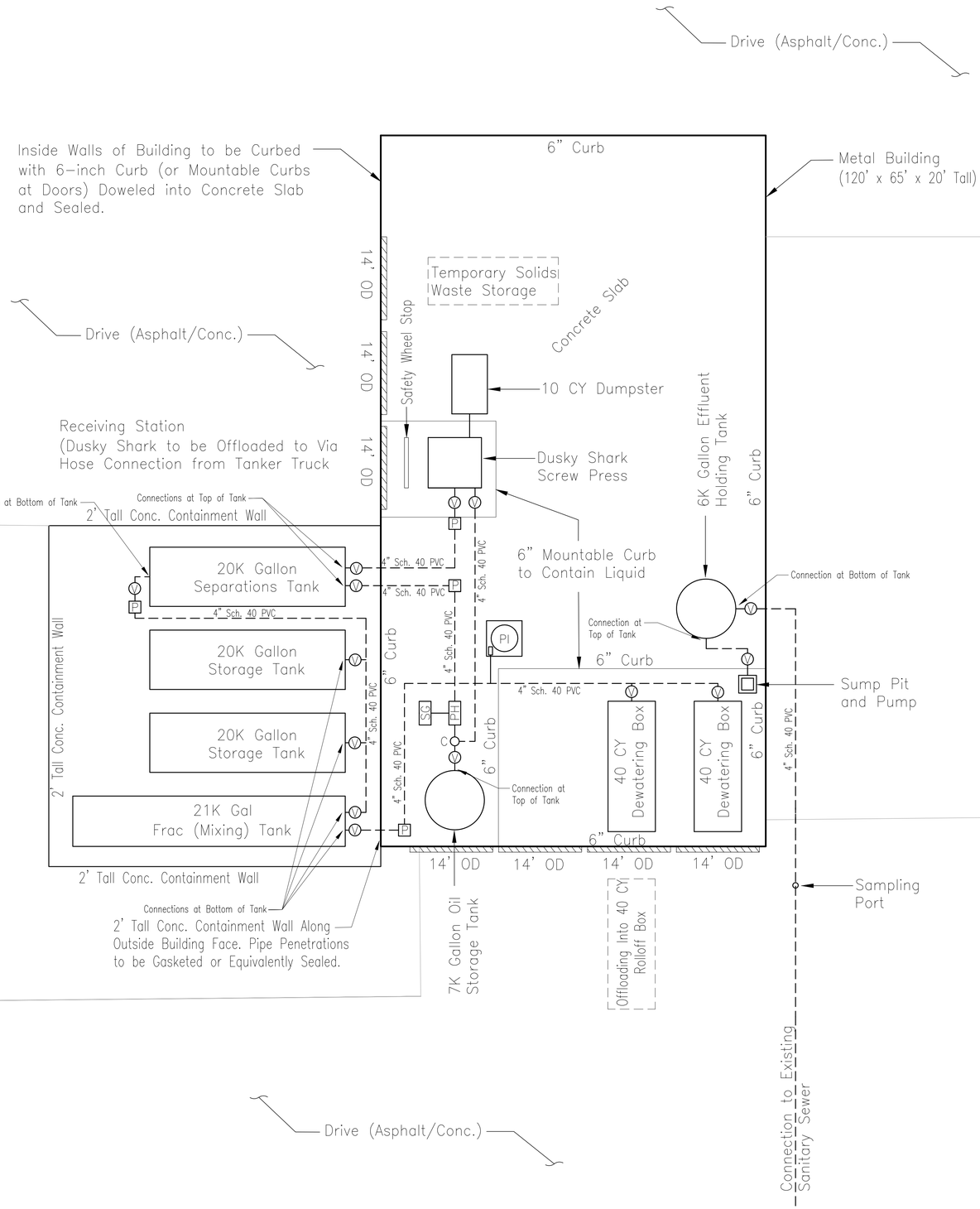
TX FIRM No. 2507

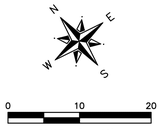
STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED PROFESSIONAL ENGINEER
05/06/2026

Vexara Pharmaceuticals LLC
Layout and Dimension Plan

DWG

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	INITIAL RELEASE		





Notes:

1. All pressure piping for this project shall be minimum 4–inch Schedule 40 PVC. All PVC joints and couplings shall be solvent welded and properly thrust restrained. If steel is selected, joints and couplings shall be flanged, threaded and/or mechanical joint type.
2. All pumps (centrifugal and submersible) shall be capable of 200 gpm (maximum 400 gpm) at minimum 70' total dynamic head. All pumps shall be equipped with capability to throttle (decrease) flow rate.
3. Valves shall ball, gate or butterfly type.
4. All plumbing constuction shall be leak and pressure tested up to 80 psi.
5. Concrete construction work shall be watertight including all joints. Concrete shall be minimum 4,000 psi structural grade. Existing joints and/or cracks in slab shall be cleaned and filled with an appropriate high performance elastomeric joint sealant. Recommended product, Sikaflex–1a by Sika.
6. Entire concrete slab surface within operation area shall be cleaned and coated with an industrial grade bituminous epoxy by Carboline, product Bitumastic 300M per manufacturer's recommendations.
7. Inside of operation area along inside wall of building to be curbed with 6–inch reinforced concrete doweled into existing slab and sealed. At overhead doors, mountable curb to be installed to provide access.
8. Receiving station shall be a Dusky Shark septage screw press unit.
9. Heat injection and steam generation shall be a direct steam injection (DSI) BX Series by Pick Heater.
10. Cyclone oil/water separator shall be a 10–inch diameter by 2–ft tall cyclone by Park Process (or equivalent) and capable of performance at separation duty at 25 gpm at 40 psi.
11. Polymer injection system shall be by Aqua–Zyme or equivalent.
12. Metal storage tanks shall be of welded construction and coated on inside and outside to be protective of metal and resistant to corrosion.
13. 40 cubic yard dewatering boxes shall be by Flo Trend.
14. Frac tanks shall be industry standard 500 barrel horizontal tanks.
15. Power and controls are not part of these drawings and shall be performed by the MEP engineer or specialty electrical/control contractor.
16. Poly (HDPE) storage tanks shall be high density polyethylene material and suitable for oils and domestic wastewater liquids.
17. Sampling port shall be placed over sewer service connection for City inspection and sampling. Sampling port shall be Schier Sewer Viewer or equivalent or as directed by City.
18. All development work pertaining to City of Houston site planning ordinances are not part of these drawings. Site planning/property development work shall conform to the City of Houston development standards, processes and ordinances.

Legend

P	Pump
V	Valve
C	Cyclone
PH	Pick Heater
SG	Steam Generator
PI	Polymer Injection Unit
OD	Overhead Door

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SCALE: As Shown
PROFILE SCALE:
HORIZONTAL –
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DWG. SIZE: D | SHEET 2 OF 3

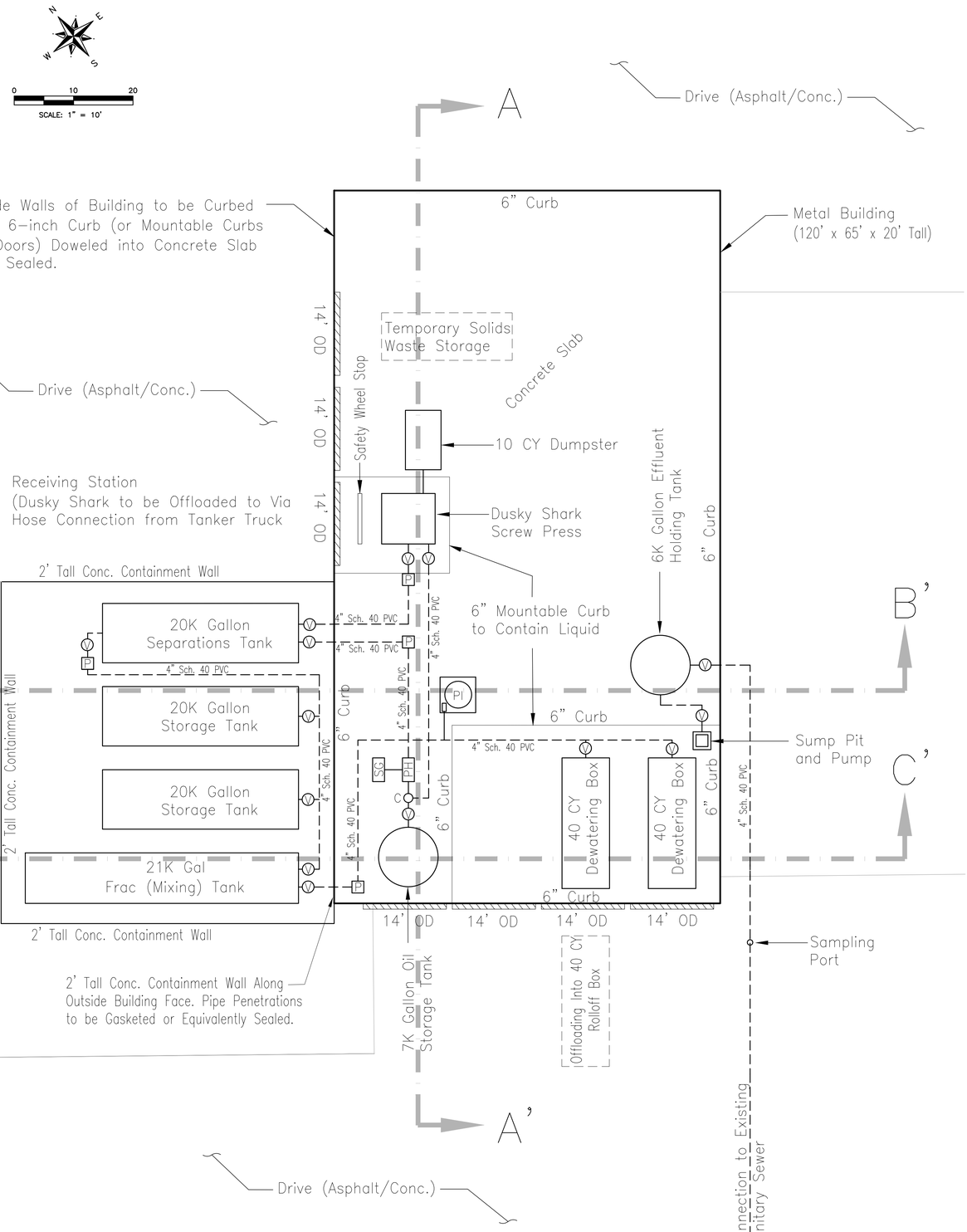
TX FIRM No. 2507

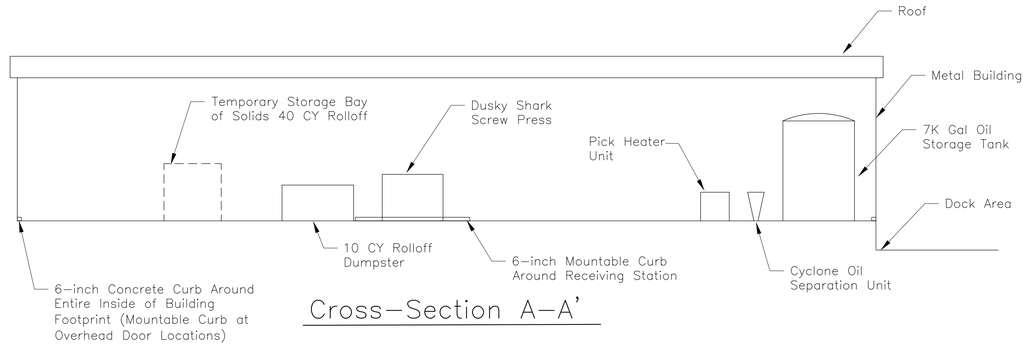
STATE OF TEXAS
ERICK V. EMERINE
103494
LICENSED PROFESSIONAL ENGINEER
05/06/2026

DWG

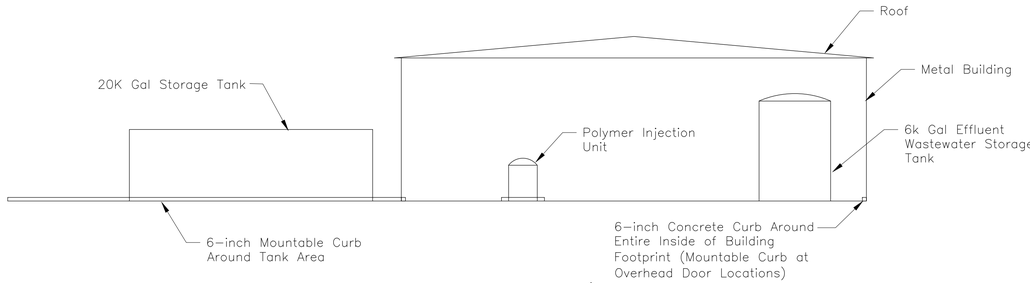
Vexara Pharmaceuticals LLC
Construction Plan

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	INITIAL RELEASE		

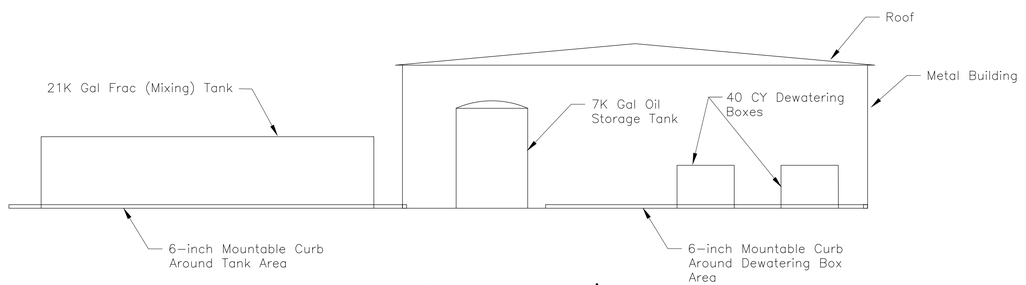




Cross-Section A-A'



Cross-Section B-B'



Cross-Section C-C'

PROPRIETARY INFORMATION
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SHEET DESCRIPTION:
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SHEET 3 OF 3

TX FIRM No. 2507

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References

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