

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:

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1-281-830-0284

February 1, 2026

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Prepared By:



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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. [REDACTED] 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 [REDACTED] 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 XXXXXXXXXX

- 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 vary but will not affect the dewatering process. Grease trap waste is expected to be a significant 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 several businesses and residences. 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

Professional and Business Services make up the largest employment sector in the City of Houston (16.2%) followed by Government (13.5%) and Health Care & Social Assistance (11.4%).

Found in Supporting Documents Figure 2.4.1d [Economy at a Glance - Houston.pdf](#)

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 [REDACTED]

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.

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 [REDACTED] are 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 location of the facility and management of waste are not believed to have a negative impact on this area of Houston.

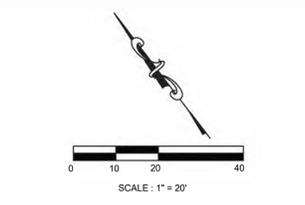
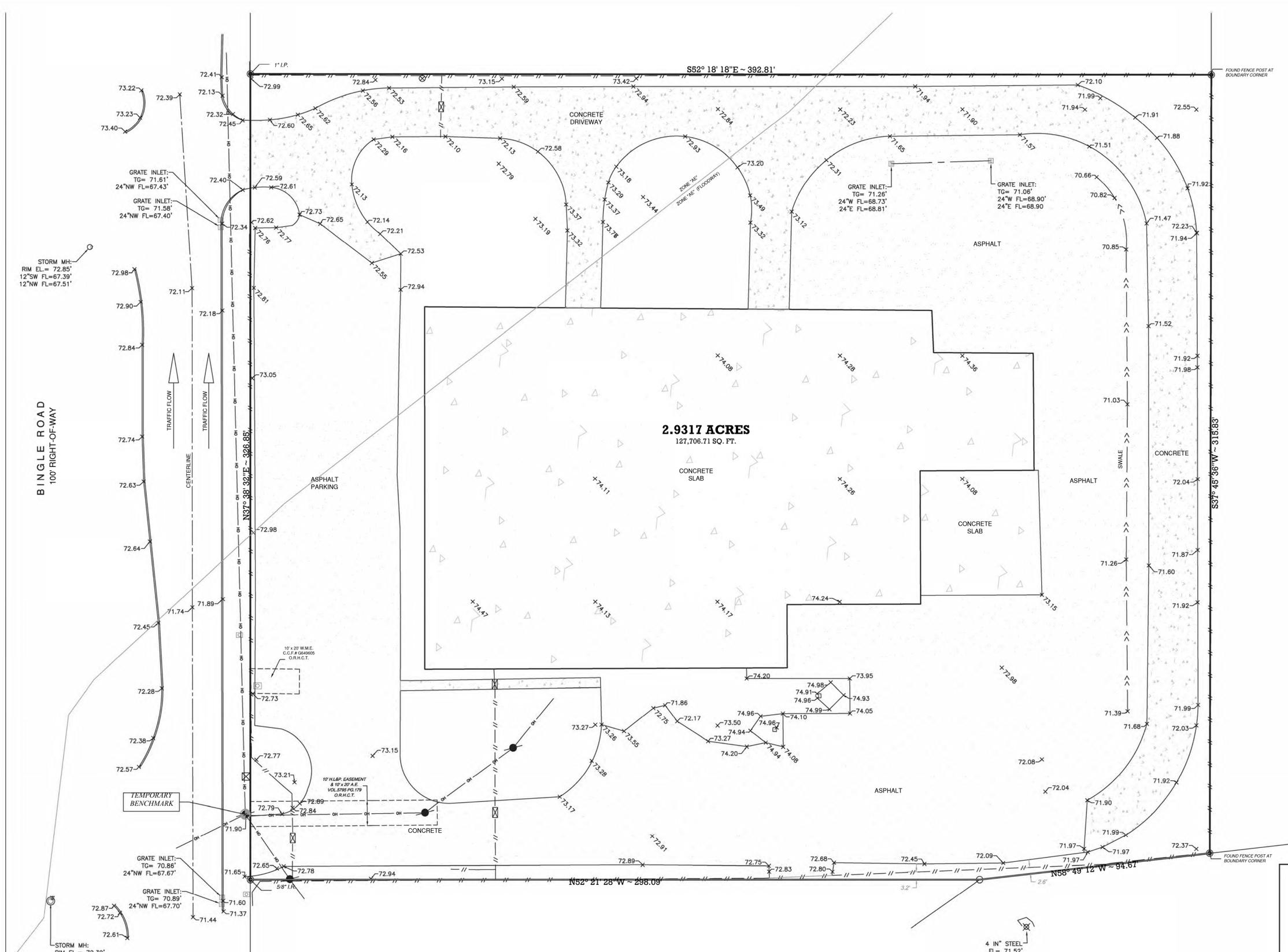
Supporting Documents



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'

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
 JOSHUA A. MCGINN
 REGISTERED PROFESSIONAL
 LAND SURVEYOR NO. 6467
 01/14/2025
 DATED



- SURVEYOR'S NOTES:**
- 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).
 - THE ADDRESS OF THE PROPERTY SURVEYED IS: 3300 BINGLE ROAD, HOUSTON, TX 77055.
 - THE PROPERTY SURVEYED LIES IN ZONE "AE" & "AE" (FLOODWAY), ACCORDING TO THE FEMA FIRM MAP# 48201C0655M, DATED JUNE 9, 2014.

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

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

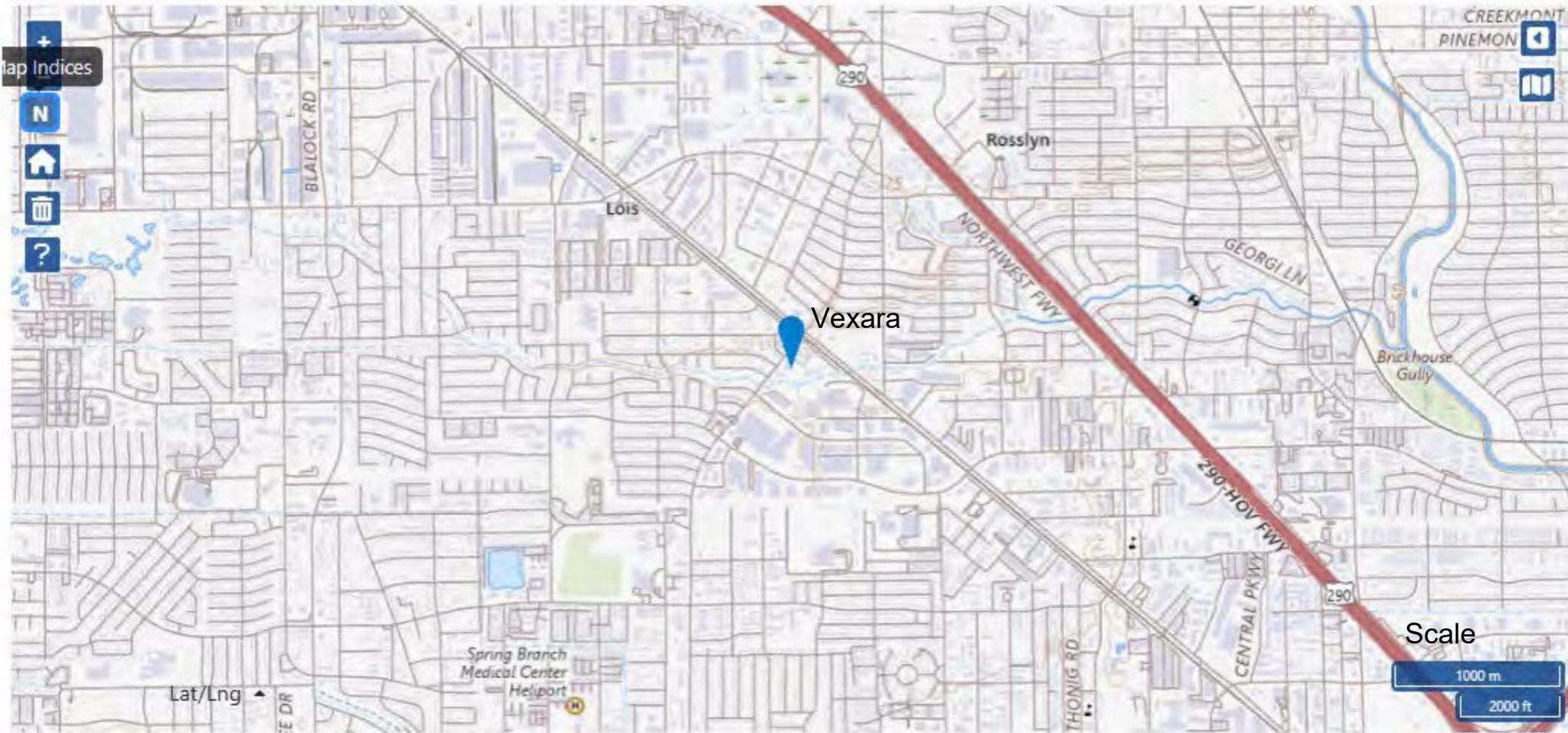


2.1.4: Topo Map





Figure 2.1.4 USGS Topo Map



<https://store.usgs.gov/map-locator>

3/2/2026

2.1.5: Polymer - MSDS





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

ADS 5084G

Product name:

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

AQUA-Zyme Disposal Systems, Inc.

Company:

PO BOX 489
Van Vleck, TX 77482
United States
(979) 245-5656

Telephone: Telefax:

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 ingredients

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

Asp. Tox. 1; H304

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

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), α -tridecyl-w-hydroxy-, branched

Concentration/ -range: < 5%

CAS Number: 69011-36-5

Acute Tox. 4; H302, Eye Dam. 1; H318

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

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 (NO_x), Carbon oxides (CO_x). 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/m³ (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.

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

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

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

<i>Acute oral toxicity:</i>	LD50/oral/rat > 5000 mg/kg (OECD 401)
<i>Acute dermal toxicity:</i>	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
<i>Acute inhalation toxicity:</i>	LC0/inhalation/4 hours/rat \geq 4951 mg/m ³ (vapors) (OECD 403) (Based on results obtained from tests on analogous products)
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.
<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
<i>Mutagenicity:</i>	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 \geq 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	B
Code:	

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



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
Attn: Justin
Client Address: PO Box 800
City, State, Zip: Van Vleck, Texas, 77482

P.O.#.:
Sample Collected By: Allison Diamond
Date Collected: 09/20/11

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

Shantall Carpenter

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

Job Sample ID: 11090672.01

Date Collected: 09/20/11

Sample Matrix: Water

Time Collected: 12:47

Other Information:

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 Job Sample ID: 11090672.01
 Date Collected: 09/20/11 Sample Matrix: Water
 Time Collected: 12:47
 Other Information:

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

Job Sample ID: 11090672.02

Date Collected: 09/20/11

Sample Matrix Water

Time Collected: 13:50

Other Information:

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 Job Sample ID: 11090672.02
 Date Collected: 09/20/11 Sample Matrix: Water
 Time Collected: 13:50
 Other Information:

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 Job Sample ID: 11090672.03
 Date Collected: 09/20/11 Sample Matrix: Water
 Time Collected: 13:40
 Other Information:

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 Job Sample ID: 11090672.03
 Date Collected: 09/20/11 Sample Matrix: Water
 Time Collected: 13:40
 Other Information:

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

Job Sample ID: 11090672.04

Date Collected: 09/20/11

Sample Matrix Water

Time Collected: 14:15

Other Information:

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 Job Sample ID: 11090672.04
 Date Collected: 09/20/11 Sample Matrix: Water
 Time Collected: 14:15
 Other Information:

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 4500S03-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	QC Sample 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	QC Sample 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	LCS Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Ignitability	83	85	102	83	84	101	0	20	75-125	



QUALITY CONTROL CERTIFICATE

Job ID : 11090672

Date : 9/29/2011

Analysis : Total Recoverable Metals

Reporting Units : mg/L

Method : EPA 200.7

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

Created By : Srinivasan

Samples in This QC Batch : 11090672.01,02,04

Digestion : PBI1092129 **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	0.02	
Iron	7439-89-6	BRL	mg/L	1	0.01	
Lead	7439-92-1	BRL	mg/L	1	0.01	
Manganese	7439-95-5	BRL	mg/L	1	0.02	
Molybdenum	7439-98-7	BRL	mg/L	1	0.01	
Nickel	7440-02-0	BRL	mg/L	1	0.05	
Selenium	7782-49-2	BRL	mg/L	1	0.01	
Silver	7440-22-4	BRL	mg/L	1	0.02	
Zinc	7440-66-6	BRL	mg/L	1	0.02	

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCS Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrLimit	%Recovery CtrLimit	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

Reporting Units : mg/L

Method : EPA 200.7

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

Created By : Srinivasan

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		



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 : PBI1092215 **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	QC Sample 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	LCS Spk Added	LCS Result	LCS % 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 : PBI1092215 **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	QC Sample 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	LCS Spk Added	LCS Result	LCS % Rec	RPD CtrlLimit	RPD CtrlLimit	%Recovery CtrlLimit	Qual
TSS	500	494.4	98.9						72-108	



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	Prep Method : EPA 200.7	Prep Date : 09/22/11 10:40
Digestion : PBI1092224	Prep Method : EPA 200.7	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	LCS Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrLimit	%Recovery CtrLimit	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	

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

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 : PBI1092303 **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	53-122	
Chlorooctadecane(surr)	3386-33-2	80.7	%	1	60-120	
1-Chlorooctane(surr)	111-85-3	81.5	%	1		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCS 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	



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 : PBI1092319 **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 % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Mercury	BRL	0.005	0.00515	102					80-120	



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 : PBI1092606 **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	%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	%Rec CtrlLimit	Qual
Cyanide	BRL	0.1	0.083	83					80-120	



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	QC Sample 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



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 : PBI1092704 **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	40					78-114	



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 : PBI1092715 **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		LCS		LCS		LCS		LCS		%Recovery		
	Spk Added	Result	% Rec	Spk Added	Result	% Rec	RPD	CtrlLimit	Spk Added	Result	% Rec	RPD	CtrlLimit
Lithium	1	1.007	101	1	1.000	100	0.7	20	1	0.9968	99.7	20	80-120
Tin	1	0.9909	99.1	1	0.9968	99.7	0.6	20	1	0.9968	99.7	20	80-120

QC Type: MS and MSD

QC Sample ID: 11090671.01

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



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

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	



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 : PBI1092905 **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	LCS Spk Added	LCSD Result	LCSD % Rec	RPD CtrlLimit	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Fluoride	1	0.949	94.9	1	0.919	91.9	20	20	90-110	
Sulfate	1	0.938	93.8	1	0.984	98.4	20	20	90-110	



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 : PBI1092911 **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	QC Sample 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	LCS 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	MS Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
COD	13	400	462	112	400	462	112			80-120	

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 : PBI1092913 **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	

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 : PBI1092921 **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	



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 : PBI1092925 **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	QC Sample 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	LCS Spk Added	LCS Result	LCS % 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	

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 : PBI1092932 **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	3386-33-2	BRL	mg/L	1	53-122	
Chlorooctadecane(surr)	111-85-3	99.4	%	1	60-120	
1-Chlorooctane(surr)		98.1	%	1		

QC Type: LCS and LCSD

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



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 : PBI1092950 **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	QC Sample 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	LCS 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	MS Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Formaldehyde	BRL	2.5	1.02	40.8						75-125	M2



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	QC Sample 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 % Rec	RPD %Recovery CtrlLimit
Sulfide	0.2	0.189	94.5	0.2	88.5	20
					6.6	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 % Rec
Sulfide		2.0	1.96	98		
						70-130

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 selected 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 selected 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).

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 #
11090072

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) **Sampler's Signature & Date**

ALLISON DIAMOND A&B LABS *Allison Diamond* 9-20-11

LAB USE ONLY	9. Sample ID and Description	10. Sampling		11. 12. Matrix										13. No. of Containers	14. Containers*	15. Preservatives**	16. PH-Lab Only	17. Analyses/Methods	18. REMARKS	
		Date	Time	Comp.	Grab	Water	Soil	Sludge	Oil	Air	Other									
	01A-0 SEPTIC BEFORE	9/20/11	12:47	X														15	PH 6.83	SEE ATTACHED FOR ANALYSIS
	02A-0 SEPTIC AFTER	9/20/11	1:50	X														15	TEMP 27.6 PH 6.95	
	03A GREASE BEFORE	9/20/11	1:30	X														15	PH 7.01	
	04A-0 GREASE AFTER	9/20/11	2:15	X														15	TEMP 29.5 PH 5.21	

19. RELINQUISHED BY

1 Allison Diamond **DATE** 9/20/11 **TIME** 4:17

2

3

20. RECEIVED BY

21. RECEIVED BY LABORATORY

D. Feys 9/20/11 11:17

22. KNOWN HAZARDS/COMMENTS

Temperature: 13.1 °C

Intact: Y or N Initials: *K.D*

*Containers: VOA - 40 ml vial A/G - Amber/Glass 1 Liter **Preservatives: Col H - HCl N - HNO₃ S - H₂SO₄
 4 oz/8 oz - glass wide mouth P/O - Plastic/other OH - NaOH T - Na₂S₂O₃ X - Other

METHOD OF SHIPMENT **BILL OF LADING/TRACKING #**

LAB USE ONLY **SAMPLING** _____ **RENTAL** _____ **P/U** _____

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.

Page 39 of 41



A&B Labs Analytical Testing Quotation

Date: 08/11/2011

11090672

QUOTE ID: QT11081101

Quote To :

Quoted By :

Client : Aqua Zyme Services

Contact : Bethany Sapp

Contact : Justin Atkinson

Phone : (713) 453-6060

Address : PO Box 800
Van Vleck, Texas - 77482

Fax : (713) 453-6091

Project :

Email :

Phone : 979-245-0957

Fax : 979-244-8239

	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
OP	Total Petroleum Hydrocarbons	Liquid	TX 1005	4	7 Days
	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.	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Matrix</td> <td style="width: 10%;">Water</td> <td style="width: 10%;">Soil</td> <td style="width: 10%;">Liquid</td> <td style="width: 10%;">Sludge</td> <td style="width: 10%;">Solid</td> <td style="width: 10%;">Cassette</td> <td style="width: 10%;">Tube</td> <td style="width: 10%;">Bulk</td> <td style="width: 10%;">Badge</td> <td style="width: 10%;">Food</td> <td style="width: 10%;">Other</td> </tr> <tr> <td>:</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Badge	Food	Other	:	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Badge	Food	Other																	
:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																	
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,

A handwritten signature in black ink, appearing to read 'Julie Peterson', is written over a light blue horizontal line.

Julie Peterson
Client Services Representative



Certificate No: T104704265-22-20



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

Client: Aqua-Zyme Services
Project: OAK HOLLOW WWTTP
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

Envirodyme Laboratories, Inc.

A handwritten signature in black ink, appearing to read 'Julie Peterson'.

Julie Peterson, Client Services Representative

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.



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

Client: Aqua-Zyme Services
Project: OAK HOLLOW WWTTP
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
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	---------	-------

Envirodync Laboratories, Inc.

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

Envirodync Laboratories, Inc.

Julie Peterson, Client Services Representative

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

Client: Aqua-Zyme Services
Project: OAK HOLLOW WWTTP
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)										
TSS	<2.0	2.0	mg/L							Prepared & Analyzed: 02-Apr-24
LCS (B4D3062-BS1)										
TSS	81.0		mg/L	100		81.0	80-120			Prepared & Analyzed: 02-Apr-24
Duplicate (B4D3062-DUP1)										
TSS	4.0	2.0	mg/L		5.8			36.7	20	Source: 24C2394-01 Prepared & Analyzed: 02-Apr-24
Batch B4D3176 - Inorganics										
Blank (B4D3176-BLK1)										
BOD-5	<2.0	2.0	mg/L							Prepared & Analyzed: 26-Mar-24
LCS (B4D3176-BS1)										
BOD-5	220		mg/L	198		111	84.6-115.4			Prepared & Analyzed: 26-Mar-24
Duplicate (B4D3176-DUP1)										
BOD-5	<2.0	2.0	mg/L		<2.0			0	20	Source: 24C2756-01 Prepared & Analyzed: 26-Mar-24
Batch B4D3918 - Inorganics										
Blank (B4D3918-BLK1)										
Oil & Grease	<5.0	5.0	mg/L							Prepared & Analyzed: 11-Apr-24
LCS (B4D3918-BS1)										
Oil & Grease	34.3		mg/L	40.0		85.8	78-114			Prepared & Analyzed: 11-Apr-24

Envirodyne Laboratories, Inc.

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Julie Peterson, Client Services Representative



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

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

Reported:
22-Apr-24 16:35

Wet Chemistry - Quality Control
Envirodyme 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)										
Oil & Grease	35.6		mg/L	40.0		89.0	78-114	3.61	18	
Batch B4D4479 - Inorganics										
Blank (B4D4479-BLK1)										
Ammonia-N (NH3-N)	<0.20	0.20	mg/L							Prepared & Analyzed: 15-Apr-24
LCS (B4D4479-BS1)										
Ammonia-N (NH3-N)	0.99		mg/L	1.00		99.0	90-110			Prepared & Analyzed: 15-Apr-24
Matrix Spike (B4D4479-MS1)										
Ammonia-N (NH3-N)	1.25	0.20	mg/L	1.00	0.34	91.0	90-110			Source: 24C2834-01 Prepared & Analyzed: 15-Apr-24
Matrix Spike Dup (B4D4479-MSD1)										
Ammonia-N (NH3-N)	1.28	0.20	mg/L	1.00	0.34	94.0	90-110	2.37	20	Source: 24C2834-01 Prepared & Analyzed: 15-Apr-24
Batch B4D4967 - Inorganics										
Blank (B4D4967-BLK1)										
COD	<5.0	5.0	mg/L							Prepared & Analyzed: 18-Apr-24
LCS (B4D4967-BS1)										
COD	93.0		mg/L	100		93.0	90-110			Prepared & Analyzed: 18-Apr-24
Matrix Spike (B4D4967-MS1)										
COD	57.0	5.0	mg/L	50.0	7.00	100	80-120			Source: 24D0005-03 Prepared & Analyzed: 18-Apr-24

Envirodyme 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



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

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

Reported:
22-Apr-24 16:35

Wet Chemistry - Quality Control
Envirodyme 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)										
COD	59.0	5.0	mg/L	50.0	7.00	104	80-120	3.45	20	
					Source: 24D0005-03	Prepared & Analyzed: 18-Apr-24				

Envirodyme 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



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

Client: Aqua-Zyme Services
Project: OAK HOLLOW WWTTP
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

Envirodyme 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.

A handwritten signature in black ink, appearing to read 'Julie Peterson', is written over a horizontal line.

Julie Peterson, Client Services Representative



2463183

Envirodyne Laboratories, Inc.

11011 Brockiet, Ste. 230

Houston, Texas 77099-3543

Phone (281)568-7880 - Fax (281)568-8004

E A430318

Page _____ Of _____

TCEQ Certification # T104704265

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

Analysis Request and Chain of Custody Record

Project No. **Oak Hollow WWTP** Client/Project **Discharge Water from Dewatering Container**

Lab ID No.	Field Sample No./ Identification	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, Oil & Grease	7.42		23	

Samplers: (Signature)	Relinquished by: (Signature)	Date: Time:	Received by: (Signature) <i>a hf</i>	Date: 3.26.24 Time: 752	Seal Intact?
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Seal Intact?
Remarks:	Relinquished by: (Signature) <i>a hf</i>	Date: 3.26.24 Time: 1425	Received by Lab: (Signature) <i>M De J</i>	Date: 3/26/24 Time: 1425	Seal Intact?
	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





Environmental & Industrial Hygiene Services

2000 25th Street, West, Arthur, Texas 77642 (409) 982-4575 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

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

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

RESULTS OF ANALYSIS

Site/Location: Valley Dewatering 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 - 16/22@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

csr/chr/CNR


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

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O.F - 4.0
C.I - 4.5

Vdsi@ATT.net

CHEMTEX

CHAIN OF CUSTODY RECORD

PHONE : (361) 299-9900 FAX : (361) 299-1155

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

ENVIRONMENTAL ANALYTICAL SERVICES REQUEST

E-mail : [REDACTED]
Web Site : www.chemtexas.com

CLIENT: Valley Dewatering Services, Inc ATTN : Mr. Justin Atkinson	ADDRESS: Valley Dewatering Services, Inc PO Box 489 [REDACTED]	PHONE : 979) 245-5656 E. Mail [REDACTED] 956) 376-8229
---	--	---

BILLING CONTACT/ADDRESS: (if different from above)	P. O. #:	PROJECT NO:	PROJECT: Valley Dewatering Monitoring	SITE/LOCATION: Valley Dewatering Services, Inc. 120 Patricia St.
---	----------	-------------	--	--

SAMPLE (S) COLLECTED BY: (Print Name) <i>Ricky Vasquez</i>	Expected Turnaround Time 2-4 hr. Rush ___ 24 hr. Rush ___ 48 hr. Rush ___ 5-7 days <u>X</u> 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		Sample Matrix	Composite/Grab	Chemical Preservative	Sample Containers			CBOD, TSS	NH ₃ -N	COD	Oil & Grease	PCP/mg/L			
		Date	Time				No	Size (oz)	Type (Glass/Plastic)								
C22070130A	Vally Dewatering	7-12-22	12:30pm	WW	G	-	1	32 oz	P	X							
C22070130B	Vally Dewatering			WW	G	H ₂ SO ₄	1	8 oz	P		X						
C22070130C	Vally Dewatering			WW	G	H ₂ SO ₄	1	8 oz	P			X					
C22070130D	Vally Dewatering			WW	G	H ₂ SO ₄	1	32 oz	G				X				
C22070130E	1			WW	G	-	2	32	G					X			

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

Relinquished By:	Date/Time: 7-13-22 11:10 am	Received By: <i>CHP</i>	Date/Time: 7/13/22 11:10 am
Relinquished By: <i>Ricky Vasquez</i>	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: [REDACTED]

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2.4.1 a-d: Land Use Map, Community Growth Trends, 1-Mile & 6-Mile Maps

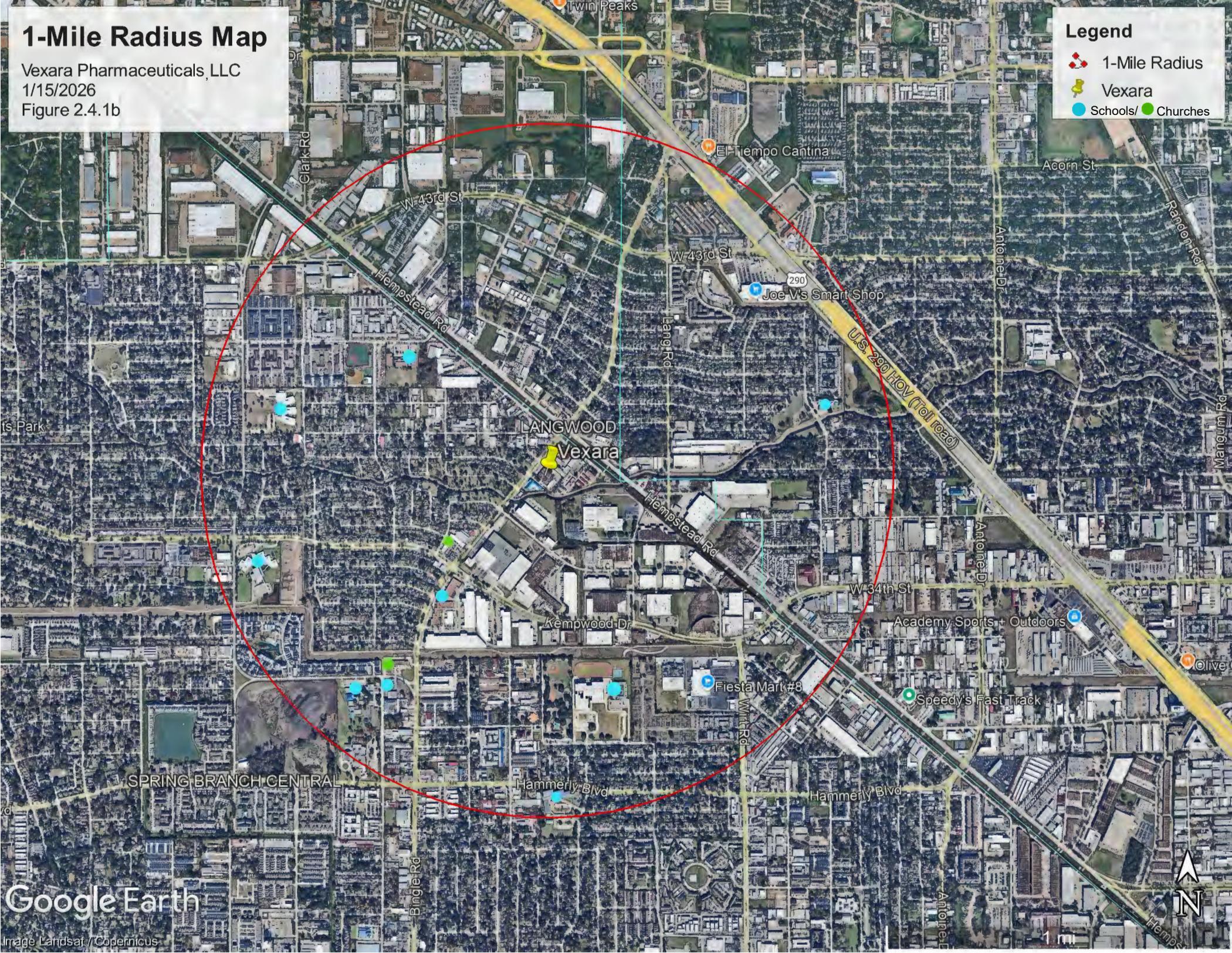


1-Mile Radius Map

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

Legend

-  1-Mile Radius
-  Vexara
-  Schools/
-  Churches

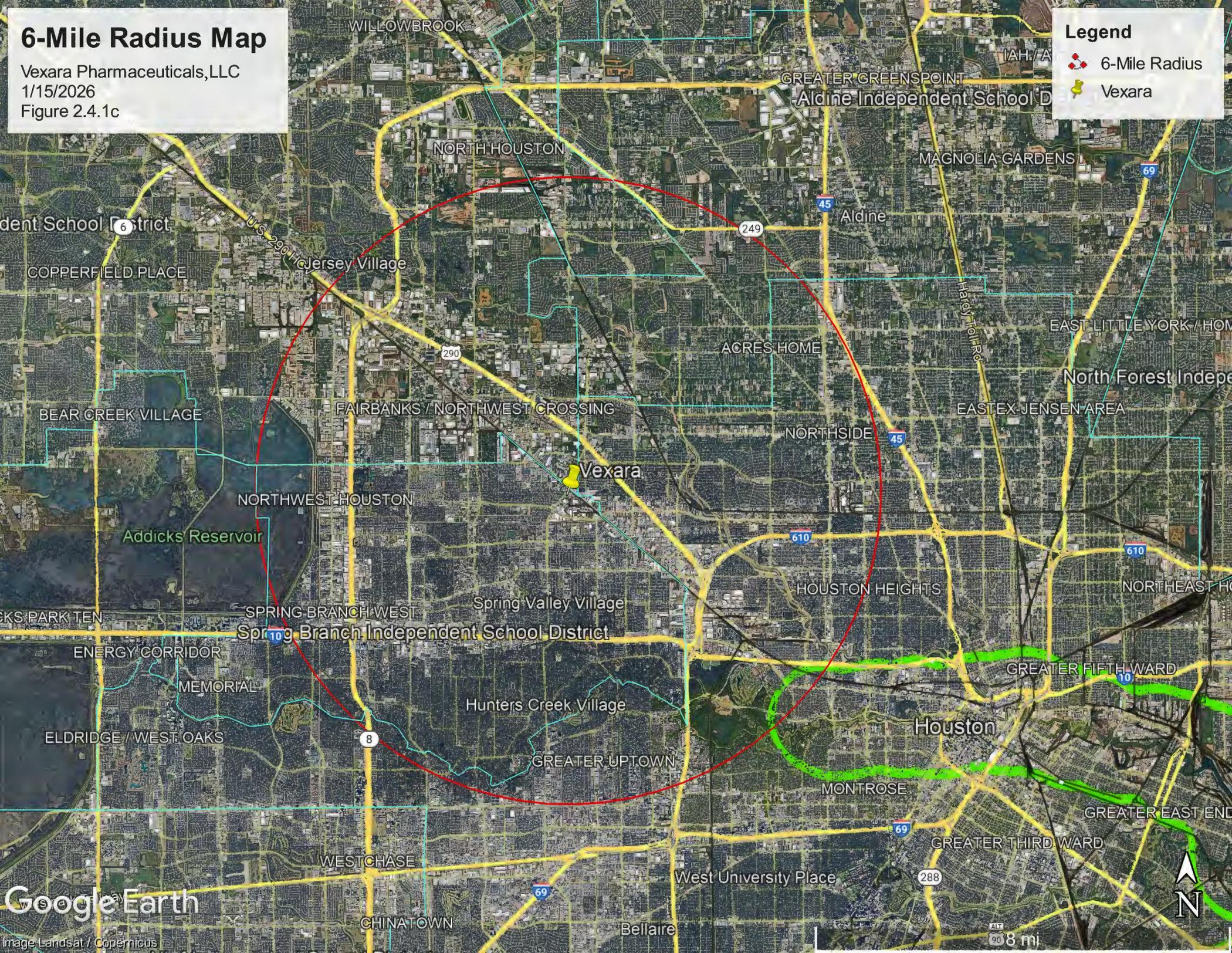


6-Mile Radius Map

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

Legend

-  6-Mile Radius
-  Vexara



THE ECONOMY AT A GLANCE

HOUSTON



GREATER HOUSTON PARTNERSHIP.
Making Houston Greater.

A publication of the Greater Houston Partnership

Volume 33 Number 6 – June 2025

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City alone lost over a quarter-million people during those four years, with residents moving out in search of more space and a lower cost of living.

TOP 20 MOST POPULOUS U.S. CITIES RANKED BY RESIDENTS ADDED/LOST SINCE '20

Rank	City	Population		Residents Added/Lost
		'20	'24	
1	Houston	2,298,945	2,390,125	91,180
2	San Antonio	1,439,340	1,526,656	87,316
3	Fort Worth	923,645	1,008,106	84,461
4	Charlotte	874,948	943,476	68,528
5	Phoenix	1,612,593	1,673,164	60,571
6	Jacksonville	951,925	1,009,833	57,908
7	Seattle	740,600	780,995	40,395
8	Oklahoma City	683,084	712,919	29,835
9	Austin	965,893	993,588	27,695
10	Columbus	906,466	933,263	26,797
11	Dallas	1,303,426	1,326,087	22,661
12	San Diego	1,384,824	1,404,452	19,628
13	Denver	717,620	729,019	11,399
14	Indianapolis	887,213	891,484	4,271
15	San Jose	1,009,686	997,368	-12,318
16	Los Angeles	3,896,329	3,878,704	-17,625
17	Chicago	2,745,196	2,721,308	-23,888
18	Philadelphia	1,600,788	1,573,916	-26,872
19	San Francisco	874,826	827,526	-47,300
20	New York	8,740,306	8,478,072	-262,234

Note: Reflects population on July 1st of the given year
Source: Partnership analysis of U.S. Census Bureau data

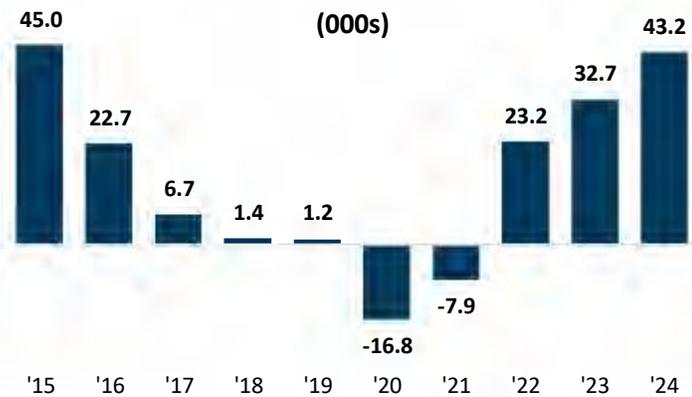
Among major cities adding the most residents, a disproportionate number are in Texas. The top three cities are all in the Lone Star State, with San Antonio and Fort Worth trailing behind Houston in the second and third spots. Austin and Dallas have also shown meaningful growth.

Houston continues to be the fourth most populous U.S. city, trailing Chicago. After several years of population decline, Chicago saw growth in '24. Still, Houston's growth rate is much faster. Based on last year's growth rates, Houston is projected to overtake Chicago as the third-largest U.S. city in '37.

CITY POPULATION GROWTH

The City of Houston is growing at a strong pace, with 43,217 new residents added last year bringing the city's population to a record 2,390,125 people. Since '22, Houston has experienced robust growth, reversing a five-year stint of weak or negative growth in the aftermath of Hurricane Harvey and the COVID-19 pandemic.

CITY OF HOUSTON POPULATION GAINS/LOSSES

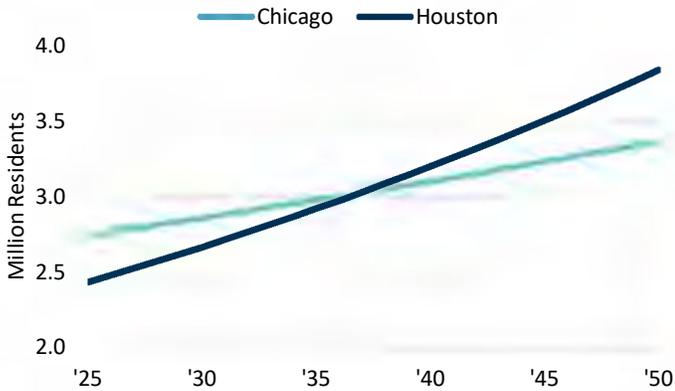


Note: Reflects population change for 12 months ending on July 1st
Source: Partnership analysis of U.S. Census Bureau data

Some professionals left the city for the suburbs during the pandemic, opting to live further from the office in larger more affordable homes. However, as offices have scaled back their work-from-home policies, demand to live closer to the city center has partially rebounded.

Houston has led the nation in municipal population growth during the '20s. In the four years since the start of the decade, the City of Houston has added 91,180 new residents – more than any other major city. All three cities with larger baseline populations (New York, Los Angeles, and Chicago) shed residents during that time. New York

CHICAGO VS HOUSTON POPULATION LINEAR GROWTH PROJECTION



Note: Projects 1-year population growth rates for '24 into the future
Source: Partnership analysis of U.S. Census Bureau data

But this projection is naïve and overly simple. There is no reason to think the current growth rates will stay constant in the future. Unforeseen events and trends can emerge, pushing the date when Houston might overtake Chicago sooner or later.

Fastest Growing Houston-Area Cities

The Census Bureau’s new population data also shows how different communities are growing within the metro area. The region’s 20 largest cities are as follows. (Note: this excludes communities like the Woodlands or Spring which are not incorporated as independent cities.)

TOP 20 MOST POPULOUS HOUSTON-AREA CITIES

City	Pop.	City	Pop.
1 Houston	2,390,125	11 Galveston	53,538
2 Pasadena	149,617	12 Rosenberg	42,571
3 Pearland	129,620	13 Friendswood	41,291
4 League City	118,456	14 La Porte	38,046
5 Conroe	114,581	15 Deer Park	34,495
6 Sugar Land	109,851	16 Alvin	29,869
7 Baytown	86,004	17 Lake Jackson	28,158
8 Missouri City	78,582	18 Katy	27,741
9 Texas City	57,875	19 Dickinson	21,941
10 Fulshear	54,629	20 Angleton	20,979

Note: Reflects population on July 1, 2024
Source: Partnership analysis of U.S. Census Bureau data

Houston proper is home to 2.4 million people, or approximately 31 percent of all metro residents. Pasadena, Pearland, League City, Conroe, and Sugar Land are each home to more than 100,000 people. Fulshear has grown significantly and overtaken Galveston as the 10th-largest city in the region.

Among these 20 cities, those with significant population growth since the start of the decade include Conroe and Katy (each growing by more than 20 percent) along with

Texas City, Rosenberg, and Alvin (each growing by 10 percent or more). A few of the region’s largest cities (Galveston, Sugar Land, and Pasadena) have lost residents during that time. But, by far the most significant growth has been in Fulshear where the population has more than tripled, growing by 210.1 percent since ‘20.

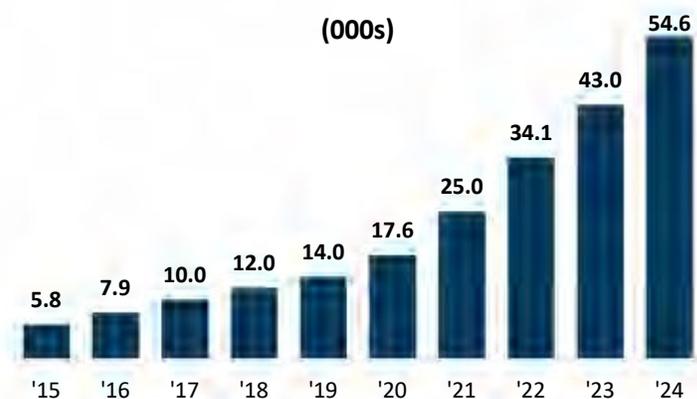
TOP 20 LARGEST HOUSTON-AREA CITIES RANKED BY POPULATION GROWTH RATE SINCE ‘20

Rank	City	Population		Change (%)
		'20	'24	
1	Fulshear	17,617	54,629	210.1
2	Conroe	91,234	114,581	25.6
3	Katy	22,419	27,741	23.7
4	Texas City	52,286	57,875	10.7
5	Rosenberg	38,494	42,571	10.6
6	Alvin	27,143	29,869	10.0
7	Angleton	19,434	20,979	7.9
8	La Porte	35,304	38,046	7.8
9	Missouri City	74,440	78,582	5.6
10	Houston	2,298,945	2,390,125	4.0
11	League City	114,659	118,456	3.3
12	Pearland	126,011	129,620	2.9
13	Dickinson	21,468	21,941	2.2
14	Baytown	85,436	86,004	0.7
15	Friendswood	41,027	41,291	0.6
16	Deer Park	34,364	34,495	0.4
17	Lake Jackson	28,148	28,158	0.0
18	Galveston	53,652	53,538	-0.2
19	Sugar Land	110,844	109,851	-0.9
20	Pasadena	151,449	149,617	-1.2

Note: Reflects 48-month change for period ending on July 1, 2024
Source: Partnership analysis of U.S. Census Bureau data

In 10 years, Fulshear grew from a small community of less than six thousand to a population center almost 10 times that size. The city’s evolution is due in large part to the rapid development of residential subdivisions.

FULSHEAR POPULATION BY YEAR



Note: Reflects population as of July 1st of the given year
Source: U.S. Census Bureau

Looking across the nation, Fulshear is the fastest-growing

city with 50K+ residents since the start of the decade.

U.S. CITIES* WITH THE FASTEST POPULATION GROWTH '20-'24

City	%	City	%
1 Fulshear, TX	210.1	11 Maricopa, AZ	30.2
2 Celina, TX	190.0	12 Little Elm, TX	29.7
3 Saratoga Springs, UT	49.9	13 Casa Grande, AZ	27.3
4 Georgetown, TX	47.5	14 New Braunfels, TX	27.0
5 Leander, TX	43.8	15 Conroe, TX	25.6
6 Kyle, TX	41.8	16 Port St. Lucie, FL	25.0
7 Queen Creek, AZ	37.6	17 North Port, FL	23.0
8 Eagle Mountain, UT	35.8	18 Buckeye, AZ	22.0
9 Westfield, IN	34.0	19 Lehi, UT	21.6
10 Lebanon, TN	32.4	20 Goodyear, AZ	20.8

Note: *Limited to cities with over 50K residents in '24

Source: Partnership analysis of U.S. Census Bureau data

Of the top 20 fastest-growing cities during that time, eight are in Texas, with two in the Houston area (Fulshear and Conroe), two in the Dallas/Fort Worth area (Celina and Little Elm), one in the San Antonio area (New Braunfels), and three in the Austin area (Georgetown, Leander, and Kyle).

A DEEPER DIVE INTO METRO POPULATION

April's issue of *Glance* examined the outstanding level of population growth that the metro area experienced in '24. Data released by the Census Bureau provides additional insights into how the Houston-Pasadena-The Woodlands area has achieved this growth and how it will benefit its economy for years to come.

In '24, about a quarter of the region's population growth was due to natural increase (i.e. the number of babies born minus the number of people who died). The rate of natural population increase in Houston is much higher than in other large metros due to its high birth rates.

TOP 20 MOST POPULOUS U.S. METROS RANKED BY BIRTH RATE IN '24

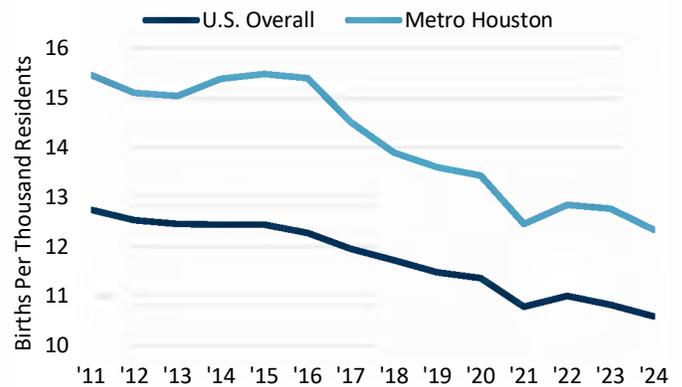
Metro	Births Per 1000 Res.	Metro	Births Per 1000 Res.
1 Houston	12.3	11 Philadelphia	10.5
2 Dallas	12.3	12 Seattle	10.4
3 Atlanta	11.2	13 Orlando	10.2
4 Riverside	11.1	14 Detroit	10.2
5 Minneapolis	11.0	15 Miami	10.1
6 San Diego	10.8	16 Chicago	10.0
7 Denver	10.8	17 Boston	9.8
8 Phoenix	10.8	18 Los Angeles	9.6
9 New York	10.7	19 San Francisco	9.3
10 Washington	10.7	20 Tampa	9.2

Source: Partnership analysis of U.S. Census Bureau data

Houston led other large metros with 12.3 babies born per thousand residents in '24. Dallas came close to matching Houston's rate, but it still lagged by a fraction of a percent. All other metros were at least one birth per thousand residents behind, with cities like San Francisco and Tampa lagging by three births.

Across the developed world, birth rates have been falling for decades as social norms change, more women enter the workforce, and the costs of raising children increase. The U.S. has maintained a higher birth rate than other advanced economies in Europe and East Asia. But the U.S. rate has also fallen, going from 12.8 babies born per thousand residents in '11 to 10.6 in '24. Houston's birth rate, while declining from 15.5 babies born per thousand residents to 12.3 over the same period, has remained consistently higher than rates for other major metros and the U.S. overall.

BIRTH RATES OVER TIME U.S. VS METRO HOUSTON



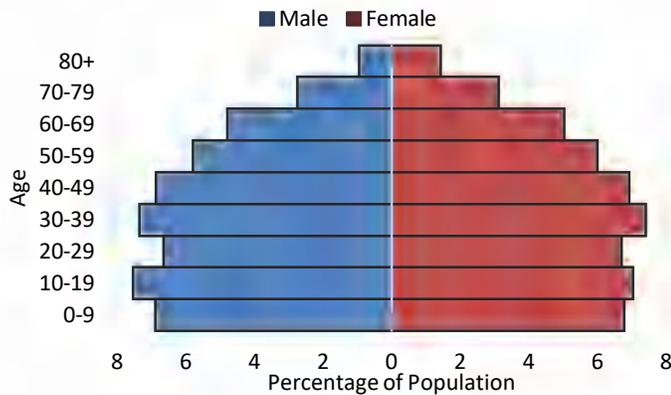
Source: Partnership analysis of U.S. Census Bureau data

Why are birth rates important to the economy? Because babies become adults and ultimately enter the workforce. Having high birth rates and a large population of minors means the labor force can continue to grow in the years and decades ahead.

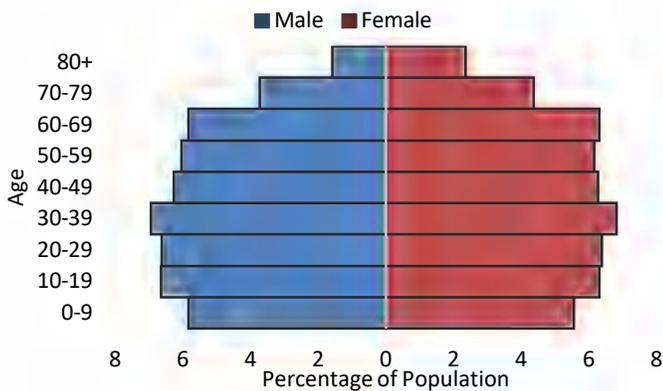
With its high birth rates, Houston has more children and young adults than most of the country. The chart below compares Houston's population pyramid to that of the U.S. overall. Each bar on the chart shows the share of people in different age groups, with males on the left in blue and females on the right in red. Having a pyramid shape is good for long-term economic growth – a wide base of children and young adults will contribute to the labor force for decades to come while supporting a smaller tip of retirees. Houston's chart is roughly pyramid-shaped, while the U.S. is closer to a sphere, with fewer children and more people that have aged out of the labor force.

POPULATION PYRAMIDS

METRO HOUSTON



U.S. OVERALL

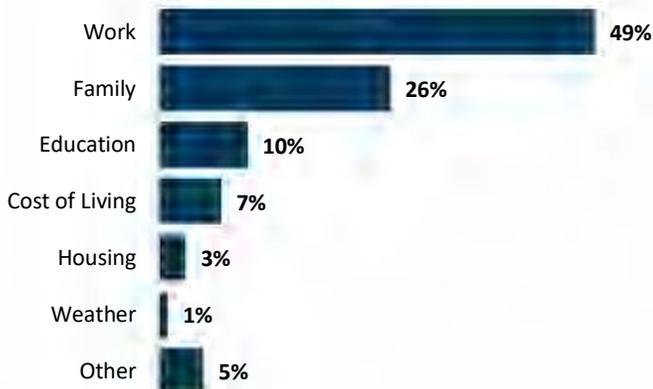


Source: U.S. Census Bureau American Community Survey '23

Another Look at Migration

While birth rates and natural population change are important, the lion's share of Houston's growth (75 percent) has been from people moving here. The 44th Kinder Houston Area Survey, released late in May, explores why people move to Houston along with their attitudes on international immigrants and a variety of other topics. It was conducted in January and February with over 9,800 respondents taking part across Harris, Montgomery, and Fort Bend counties.

MAIN REASON FOR MOVING TO HOUSTON

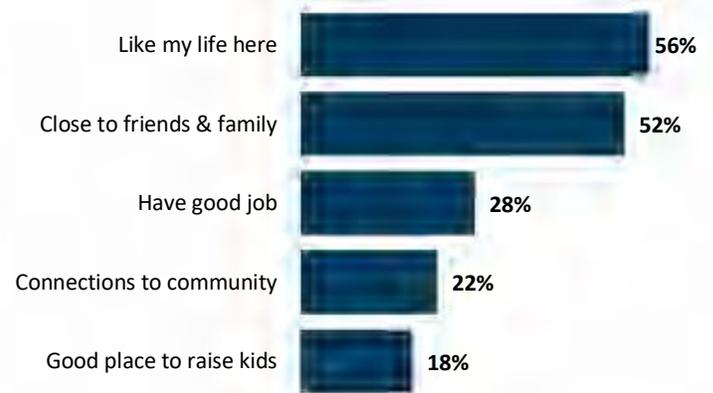


Source: 44th Kinder Houston Area Survey

The survey finds that almost half of all residents moved here as adults and have lived here for an average of about two decades. Houston's strong economy is a major reason they chose to come, with 49 percent moving for job-related reasons along with 7 percent for the low cost of living and 3 percent for housing.

People who arrive in Houston put down roots and grow to think of it as home. Nearly two-thirds of people who moved here as adults consider themselves to be "Houstonians." When asked why they choose to stay in the area, they frequently cite the quality of life here, relationships with family and friends, having a good job, and connections to the community.

REASON FOR STAYING IN REGION, HARRIS COUNTY RESIDENTS



Source: 44th Kinder Houston Area Survey

Attitudes towards foreign immigrants remain positive, with 72 percent in Harris County saying they contribute more to the economy than they take. This represents a slight downtick from 74 percent in '23, but a meaningful and continued increase over the 42 percent recorded the first time the question was asked in '94.

SHARE OF HOUSTON RESIDENTS SAYING IMMIGRANTS CONTRIBUTE MORE THAN THEY TAKE



Source: Kinder Houston Area Survey Results

The [full 2025 survey results](#) can be found at the website for the Kinder Institute for Urban Research.

KEY ECONOMIC INDICATORS

Clicking on the hyperlinks below will provide additional details on that indicator.



Aviation — The Houston Airport System (HAS) handled 62.5 million passengers in the 12 months ending April '25. That represents a 2.6 percent increase over the 61.0 million handled over the same period last year and a continued improvement over pre-pandemic levels of travel. Domestic and international travel accounted for 49.5 million and 13.1 million passengers, respectively.



Energy — The U.S. Energy Information Administration (EIA) estimates that domestic crude production ticked up to 13.3 million barrels per day (b/d) in April, a continued increase from the recent low of 13.1 million b/d in January. The EIA expects oil production will continue to gradually rise over the year, reaching a record of 13.7 million b/d in December. However, the EIA's forecast was run before OPEC+ announced production increases that may lower oil prices and lead U.S. producers to cut back on new drilling.



Home Sales — Brokers closed on 26,295 single-family homes year-to-date through April '25, according to the Houston Association of Realtors (HAR). This represents a modest 0.5 percent decrease compared to the same period in '24, with home sales remaining relatively stable despite April's high volatility in financial markets. Home prices grew marginally while inventories rose to their highest levels in almost 15 years.



Inflation — U.S. inflation cooled in April to its lowest rate in four years. Prices, as measured by the Consumer Price Index for All Urban Consumers (CPI-U), rose 2.3 percent nationwide between April '24 and April '25. This represents a slight drop from the 2.4 percent annual increase recorded in March, and the lowest rate since February '21. Metro Houston's annual inflation rate in April was lower than the national rate at 1.2 percent.



Purchasing Managers Index — Economic growth in the Houston area slowed in April, according to the most recent Houston Purchasing Managers Index (PMI) prepared by the Institute for Supply Management-Houston. The overall PMI, which measures broad economic activity through a survey of supply chain executives, was 48.5 in April, a slight decrease from 49.7 in March. Despite the downward trend seen in the first months of '25, the overall economy

is still expanding, as indicated by a PMI above the neutral point of 45. Manufacturing increased to a PMI of 48.9, while non-manufacturing dropped to 48.5.



Sales Tax — Sales and use taxes collected by the 122 Houston-area cities that collect them totaled \$438.3 million during the first three months of '25, up 9.5 percent from the \$400.1 million collected over the comparable period in '24. Adjusted for inflation, collections are up 8.4 percent. These collections, which cover the purchases of both consumers and businesses, are a proxy for broad economic activity in the region. Sales early in '25 may have been inflated with businesses and consumers frontloading purchases ahead of tariffs.



Unemployment — Metro Houston's unemployment rate fell from 4.2 percent in March to 3.9 percent in April, according to the Texas Workforce Commission. Houston's April number came in slightly higher than the Texas rate of 3.7 percent but matched the U.S. rate. Unemployment rates also fell over the month for the U.S. and Texas, which is the typical pattern for April as seasonal factors led to more hiring in key sectors. Unemployment rates are up marginally compared to April last year across the three areas.



Vehicles — Houston-area dealers sold 378,371 new cars, trucks, and SUVs in the 12 months ending April '25, according to TexAuto Facts, published by InfoNation Inc. This represents an 8.1 percent increase in sales over the same period last year. Truck and SUV sales were up 10.2 percent, and car sales were up 0.8 percent.

Colin Baker, Margaret Barrientos, Clara Richardson, and Leta Wauson contributed to this issue of Houston: The Economy at a Glance.

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HOUSTON MSA NONFARM PAYROLL EMPLOYMENT

	April '25	March '25	April '24	Change From		% Change From	
				March '25	April '24	March '25	April '24
Total Nonfarm Payroll Jobs	3,470,200	3,455,800	3,429,800	14,400	40,400	0.4	1.2
Total Private	2,999,000	2,984,700	2,964,900	14,300	34,100	0.5	1.2
Goods Producing	554,000	551,900	548,500	2,100	5,500	0.4	1.0
Service Providing	2,916,200	2,903,900	2,881,300	12,300	34,900	0.4	1.2
Private Service Providing	2,445,000	2,432,800	2,416,400	12,200	28,600	0.5	1.2
Mining & Logging	80,900	80,100	78,200	800	2,700	1.0	3.5
Oil & Gas Extraction	38,200	37,900	37,100	300	1,100	0.8	3.0
Support Activities for Mining	41,000	40,700	39,700	300	1,300	0.7	3.3
Construction	233,700	233,300	232,000	400	1,700	0.2	0.7
Manufacturing	239,400	238,500	238,300	900	1,100	0.4	0.5
Durable Goods Manufacturing	147,900	146,900	148,300	1,000	-400	0.7	-0.3
Nondurable Goods Manufacturing	91,500	91,600	90,000	-100	1,500	-0.1	1.7
Wholesale Trade	181,400	180,900	177,800	500	3,600	0.3	2.0
Retail Trade	321,100	320,000	318,900	1,100	2,200	0.3	0.7
Transportation, Warehousing & Utilities	197,300	197,800	192,700	-500	4,600	-0.3	2.4
Utilities	24,800	24,800	23,900	0	900	0.0	3.8
Air Transportation	21,900	21,900	21,900	0	0	0.0	0.0
Truck Transportation	31,100	31,100	30,600	0	500	0.0	1.6
Pipeline Transportation	14,400	14,400	13,700	0	700	0.0	5.1
Information	29,100	29,200	30,200	-100	-1,100	-0.3	-3.6
Telecommunications	10,500	10,400	11,300	100	-800	1.0	-7.1
Finance & Insurance	116,900	117,100	117,000	-200	-100	-0.2	-0.1
Real Estate & Rental & Leasing	64,200	64,000	63,700	200	500	0.3	0.8
Professional & Business Services	562,500	556,900	561,800	5,600	700	1.0	0.1
Professional, Scientific & Technical Services	284,700	282,800	279,800	1,900	4,900	0.7	1.8
Legal Services	33,600	33,300	32,400	300	1,200	0.9	3.7
Accounting, Tax Preparation & Bookkeeping	28,700	28,700	29,300	0	-600	0.0	-2.0
Architectural, Engineering & Related Services	79,400	78,200	75,300	1,200	4,100	1.5	5.4
Computer Systems Design & Related Services	42,800	42,400	43,900	400	-1,100	0.9	-2.5
Admin & Support, Waste Mgt & Remediation	231,000	227,200	234,400	3,800	-3,400	1.7	-1.5
Administrative & Support Services	218,100	214,500	221,600	3,600	-3,500	1.7	-1.6
Employment Services	76,900	74,900	79,800	2,000	-2,900	2.7	-3.6
Private Educational Services	72,900	72,900	72,700	0	200	0.0	0.3
Health Care & Social Assistance	395,700	393,900	385,900	1,800	9,800	0.5	2.5
Arts, Entertainment & Recreation	41,900	41,700	40,500	200	1,400	0.5	3.5
Accommodation & Food Services	326,200	322,500	324,600	3,700	1,600	1.1	0.5
Other Services	135,800	135,900	130,600	-100	5,200	-0.1	4.0
Government	471,200	471,100	464,900	100	6,300	0.0	1.4
Federal Government	37,700	37,500	36,800	200	900	0.5	2.4
State Government	102,000	100,800	98,500	1,200	3,500	1.2	3.6
State Government Educational Services	55,400	54,600	54,100	800	1,300	1.5	2.4
Local Government	331,500	332,800	329,600	-1,300	1,900	-0.4	0.6
Local Government Educational Services	226,700	228,200	228,600	-1,500	-1,900	-0.7	-0.8

Source: Texas Workforce Commission

2.4.2: City Coordination Letter & Council of Government Email





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 2.4.2



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 Pharmaceuticals.
The information will be used to document
coordination with the local Council of Governments.
Please e-mail you response to me at [REDACTED]

Thanks,
Amy Peoples



Vexara - Council of Governments



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

Open



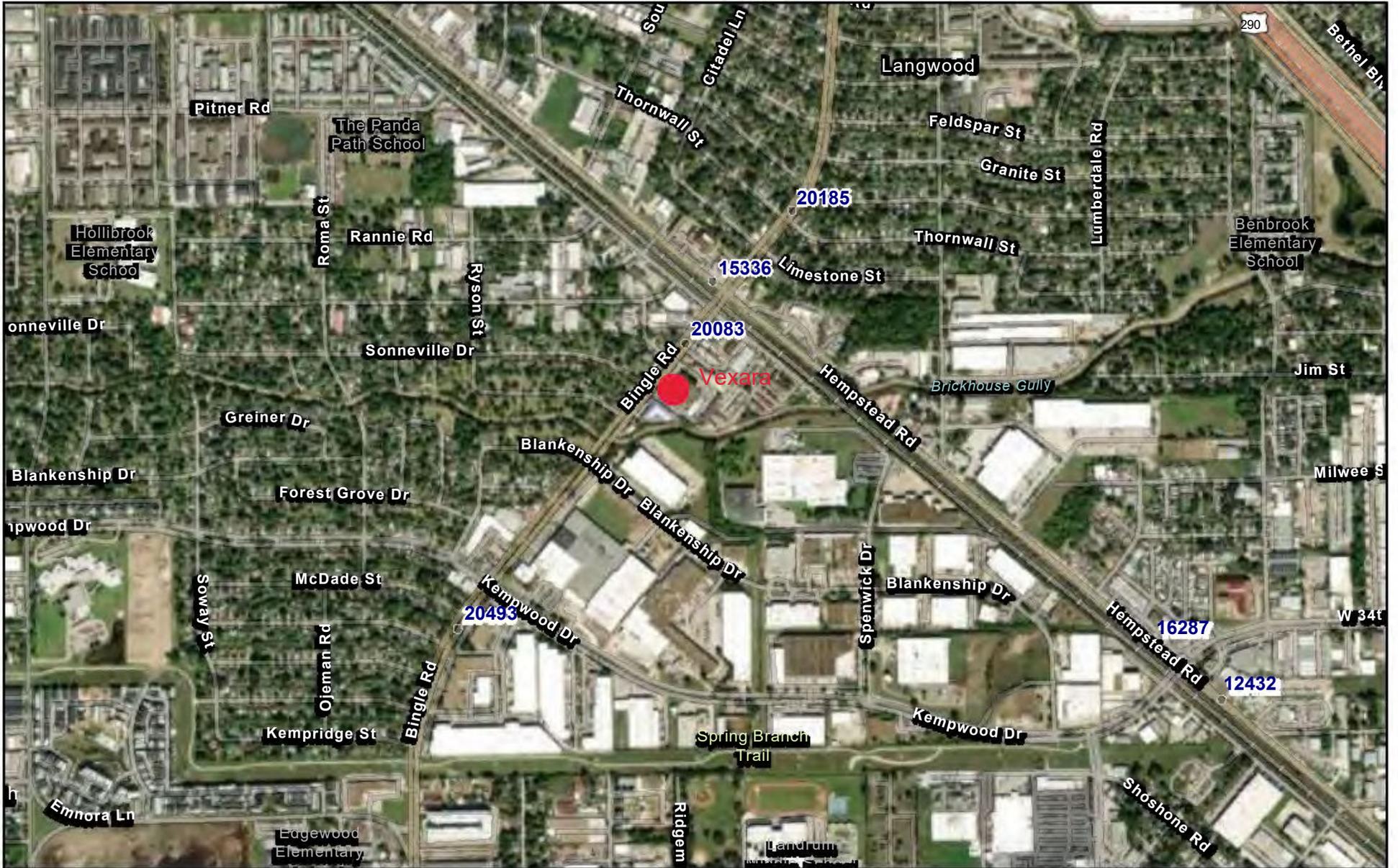
This email is generated through Enviro-Ag Engineering's use of Microsoft 365 and may contain content that is controlled by Enviro-Ag Engineering.

2.5.1: Traffic Counts



Traffic Count Map

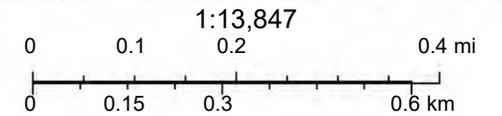
Figure 2.5.1



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



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

2.5.2: TX DOT Travel Maps



1/15/2026

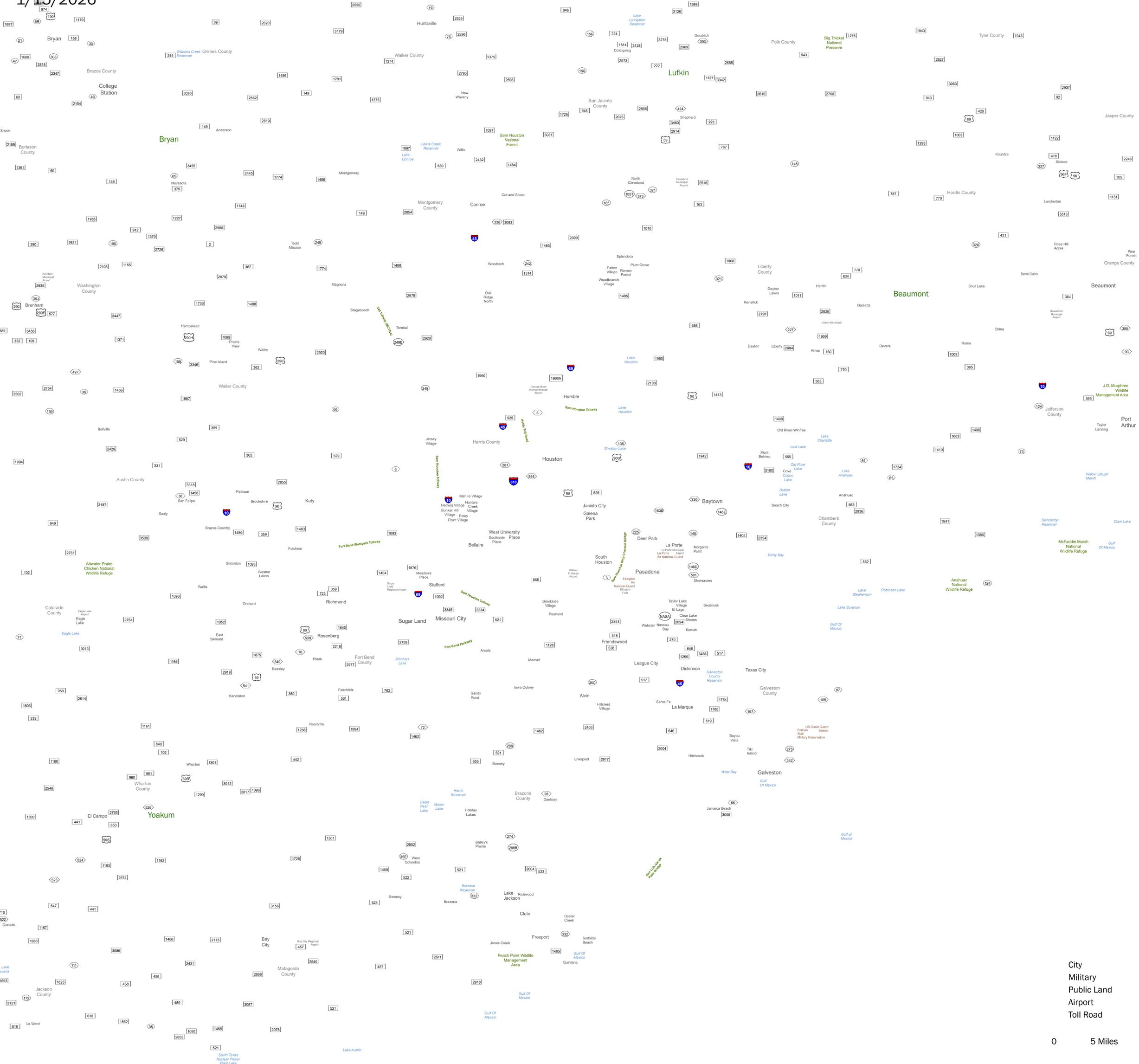


Figure 2.5.2

City
Military
Public Land
Airport
Toll Road
0 5 Miles

2.5.3: TX DOT Coordination Letter & Response





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. [REDACTED] 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 [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

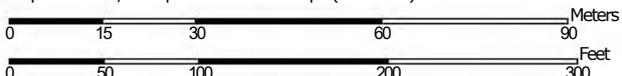


Figure 2.6.1

Soil Map—Harris County, Texas



Map Scale: 1:1,210 if printed on A landscape (11" x 8.5") sheet.



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.

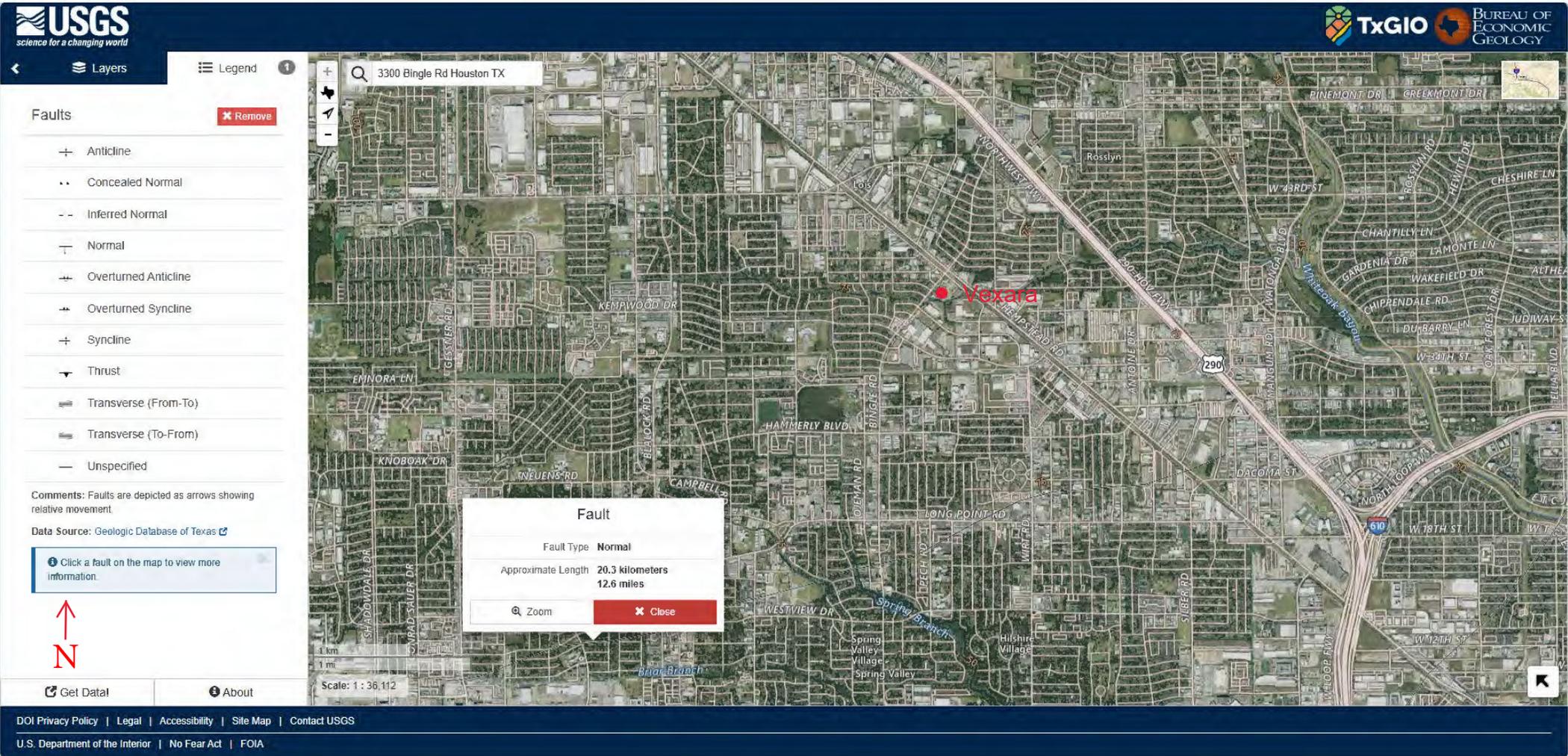
Data Source Information

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

2.6.2: Fault Line Map



Fault Line Map



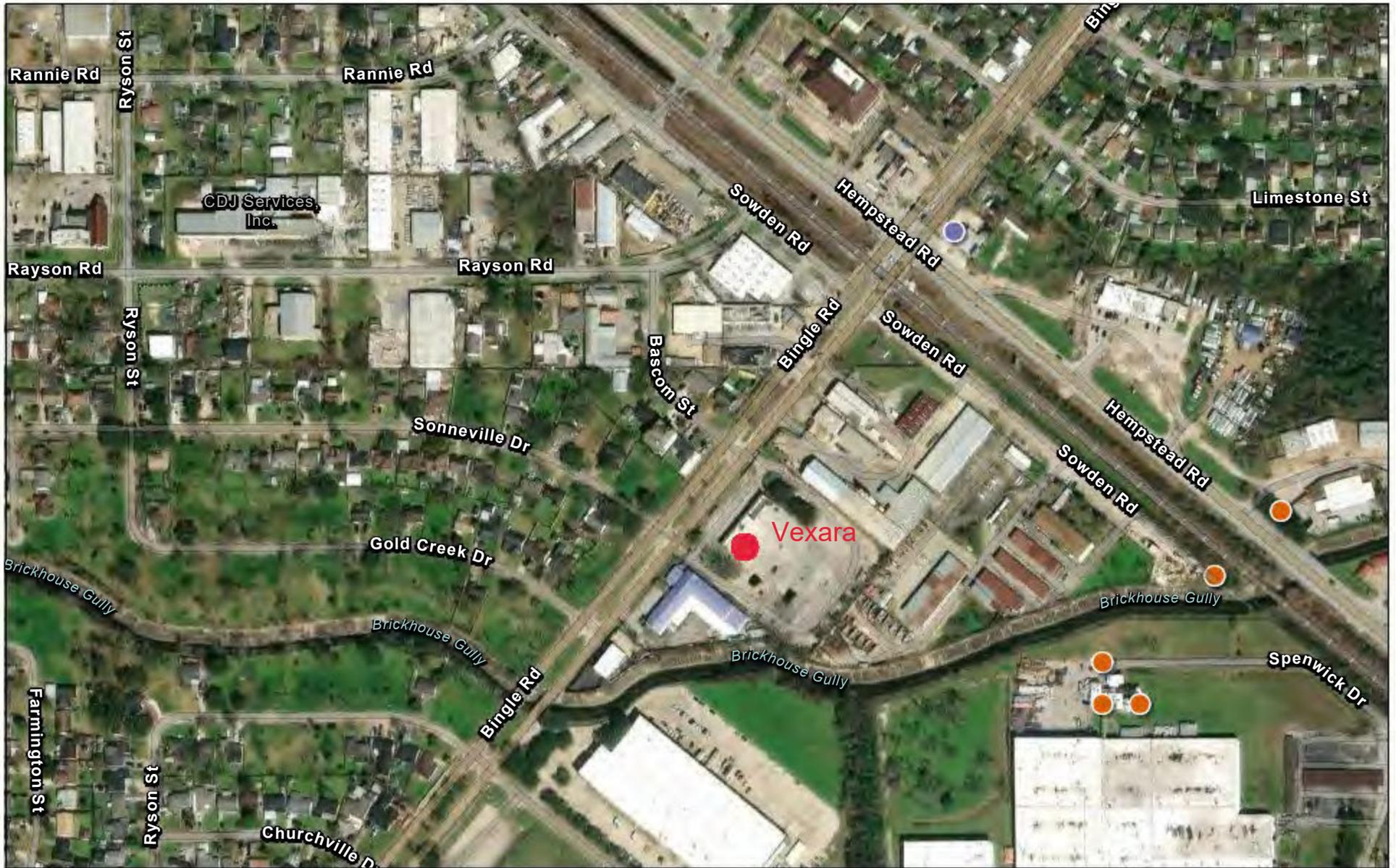
https://webapps.usgs.gov/txgeology/
Figure 2.6.2
1/19/2026

2.7.1: Texas Water Development Board Map



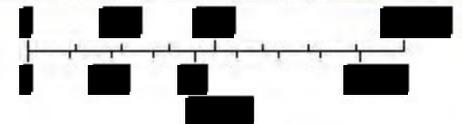
Figure 2.7.1

Vexara Pharmaceuticals



Texas Water Development Board
January 19, 2026

- Well Reports
- TWDB Groundwater



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

2.8.1: FIRM Map

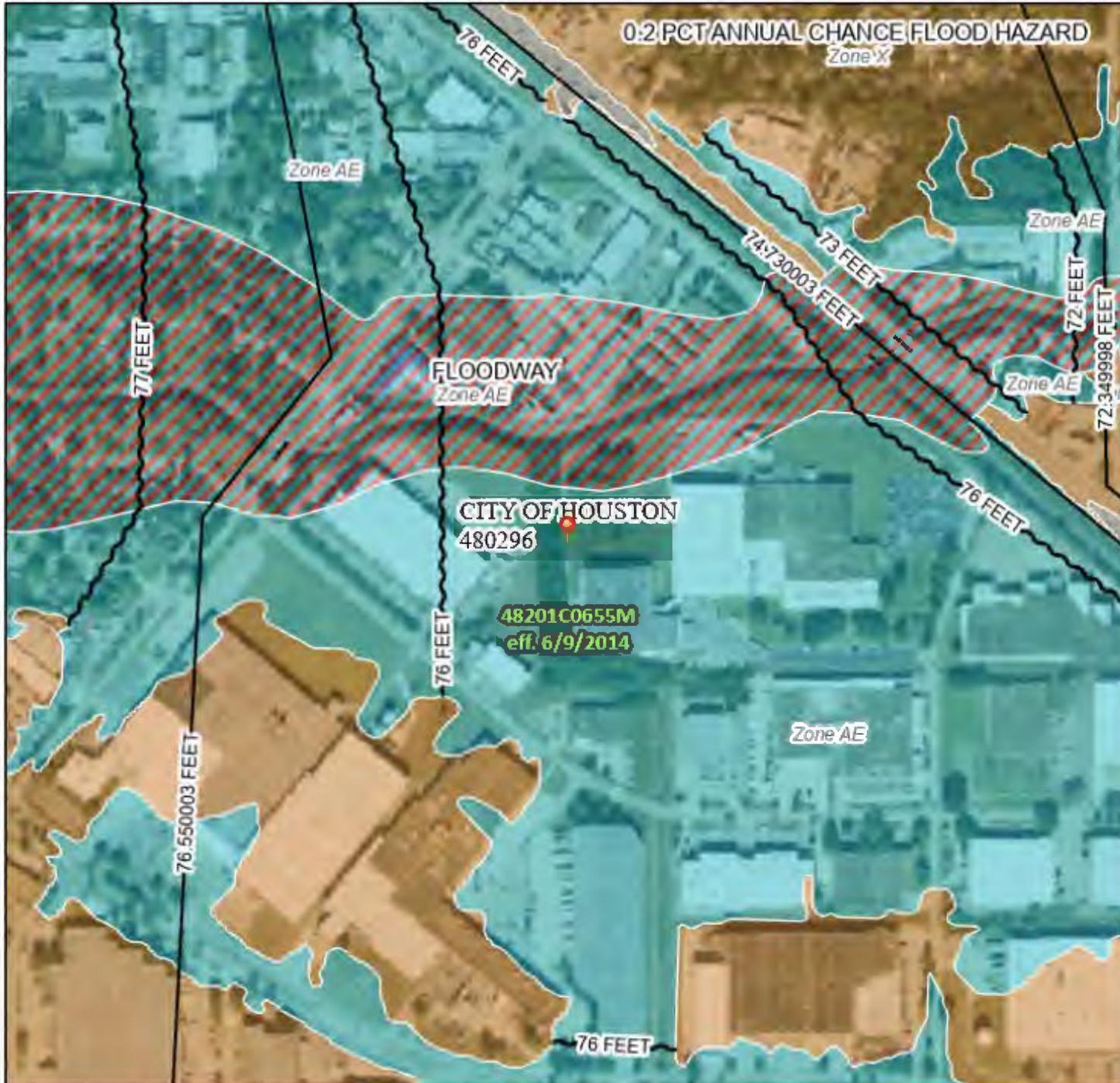


Figure 2.8.1

National Flood Hazard Layer FIRMette



95°29'56"W 29°49'35"N



Legend

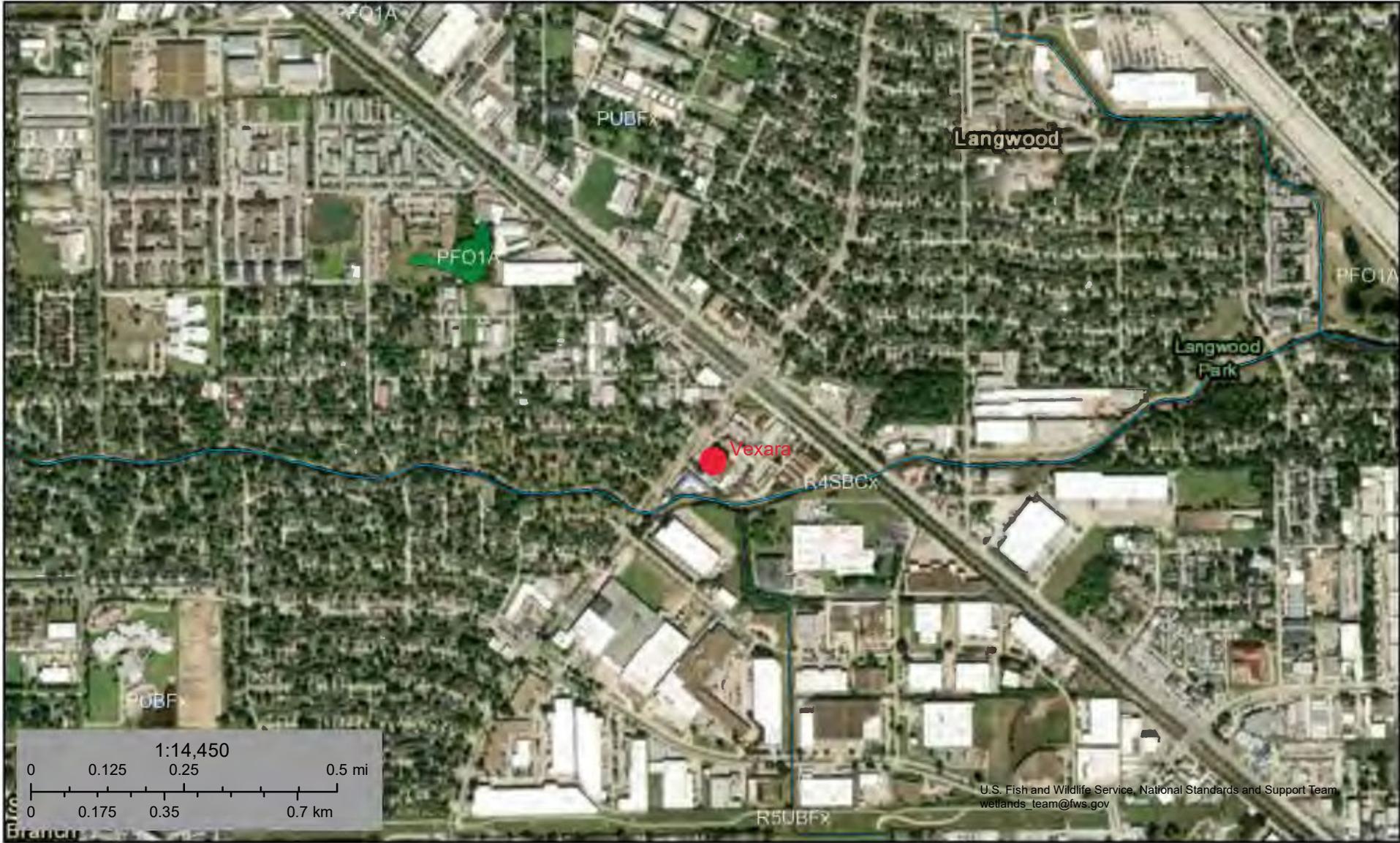
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | |
|---|--|
| <p>SPECIAL FLOOD HAZARD AREAS</p> | <ul style="list-style-type: none"> Without Base Flood Elevation (BFE)
<i>Zone A, V, A99</i> With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> Regulatory Floodway |
| <p>OTHER AREAS OF FLOOD HAZARD</p> | <ul style="list-style-type: none"> 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 <i>Zone X</i> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> Area with Flood Risk due to Levee <i>Zone D</i> |
| <p>OTHER AREAS</p> | <ul style="list-style-type: none"> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> Effective LOMRs Area of Undetermined Flood Hazard <i>Zone D</i> |
| <p>GENERAL STRUCTURES</p> | <ul style="list-style-type: none"> Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall |
| <p>OTHER FEATURES</p> | <ul style="list-style-type: none"> 20.2 Cross Sections with 1% Annual Chance 17.5 Water Surface Elevation Coastal Transect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transect Baseline Profile Baseline Hydrographic Feature |
| <p>MAP PANELS</p> | <ul style="list-style-type: none"> Digital Data Available No Digital Data Available Unmapped |
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2.8.2: Wetland Map



Figure 2.8.2 - Wetland Map



January 19, 2026

Wetlands

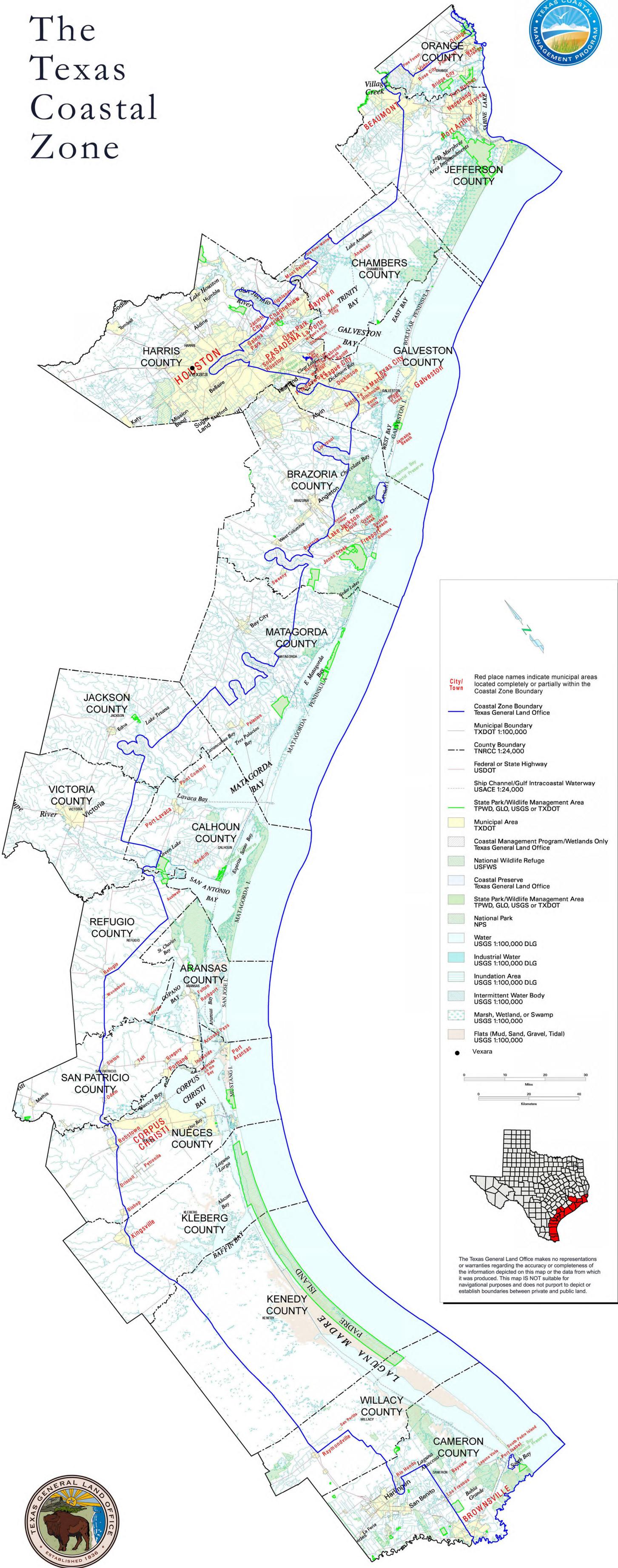
- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

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.

2.8.3: Coastal Map



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





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:
 Project Code: 2026-0038022
 Project Name: Vexara - R

01/19/2026 18:05:52 UTC

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 [REDACTED] 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 Fisheries¹, 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 <i>Perimyotis subflavus</i> 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 <i>Charadrius melodus</i> 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 <i>Calidris canutus rufa</i> 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 <i>Grus americana</i> 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 <i>Macrochelys temminckii</i> 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 <i>Danaus plexippus</i> 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 <i>Hymenoxys texana</i> 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 <i>Haliaeetus leucocephalus</i> 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 (■)

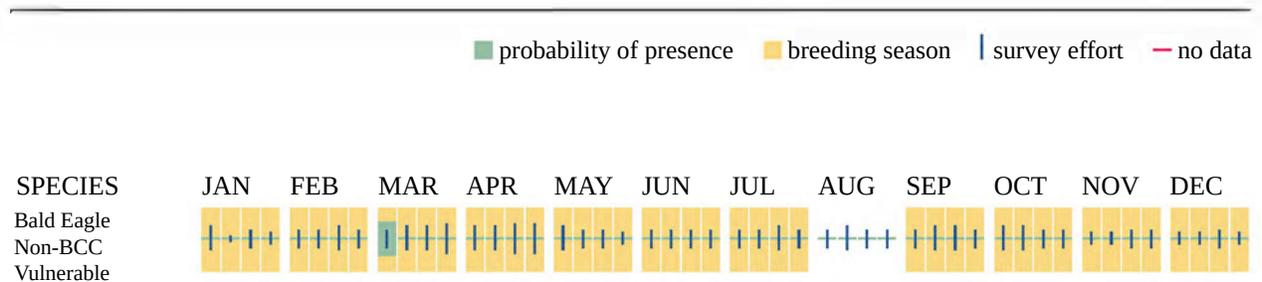
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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-incident-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 <i>Haliaeetus leucocephalus</i> 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 <i>Chaetura pelagica</i> 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 <i>Spiza americana</i> 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
<p>Forster's Tern <i>Sterna forsteri</i> 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</p>	Breeds Mar 1 to Aug 15
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere
<p>Long-billed Curlew <i>Numenius americanus</i> 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</p>	Breeds elsewhere
<p>Painted Bunting <i>Passerina ciris</i> 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</p>	Breeds Apr 25 to Aug 15
<p>Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561</p>	Breeds elsewhere
<p>Prairie Loggerhead Shrike <i>Lanius ludovicianus excubitorides</i> 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</p>	Breeds Feb 1 to Jul 31
<p>Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439</p>	Breeds Apr 1 to Jul 31
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398</p>	Breeds May 10 to Sep 10
<p>Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938</p>	Breeds Mar 10 to Jun 30
<p>Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669</p>	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 (■)

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Breeding Season (■)

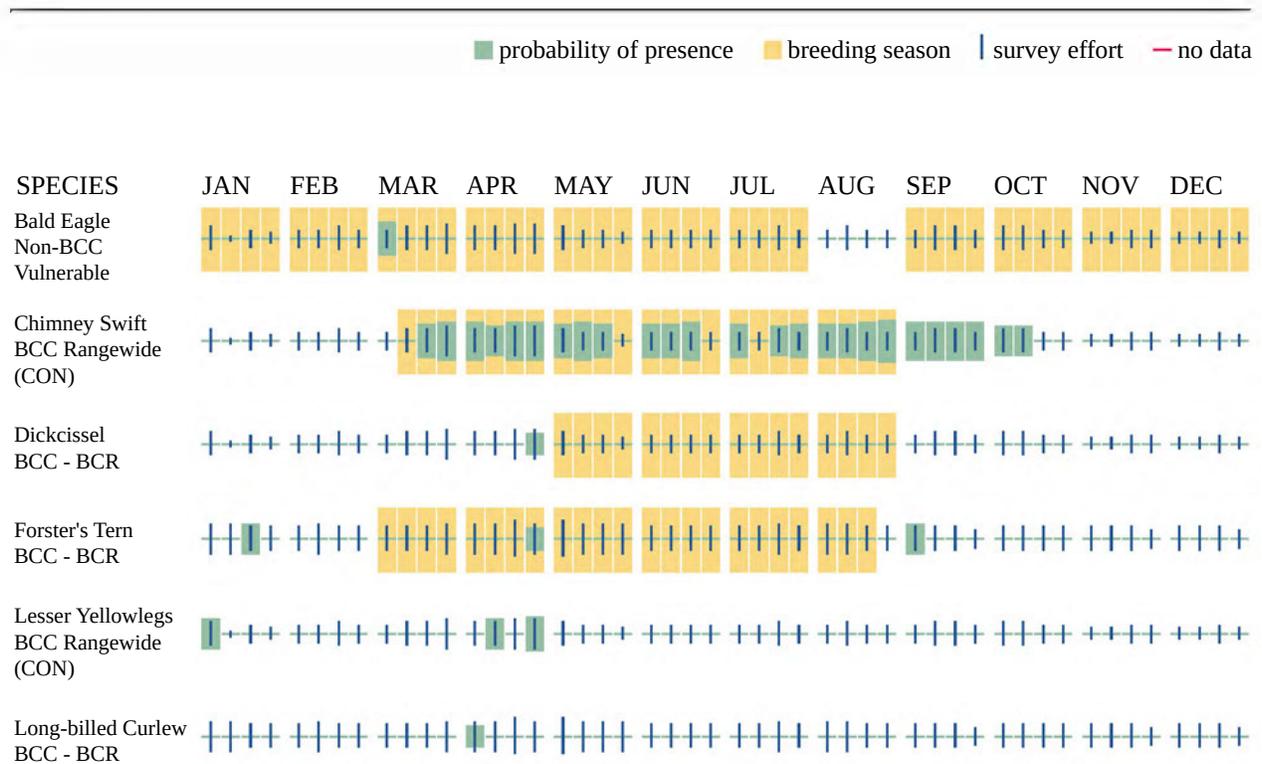
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

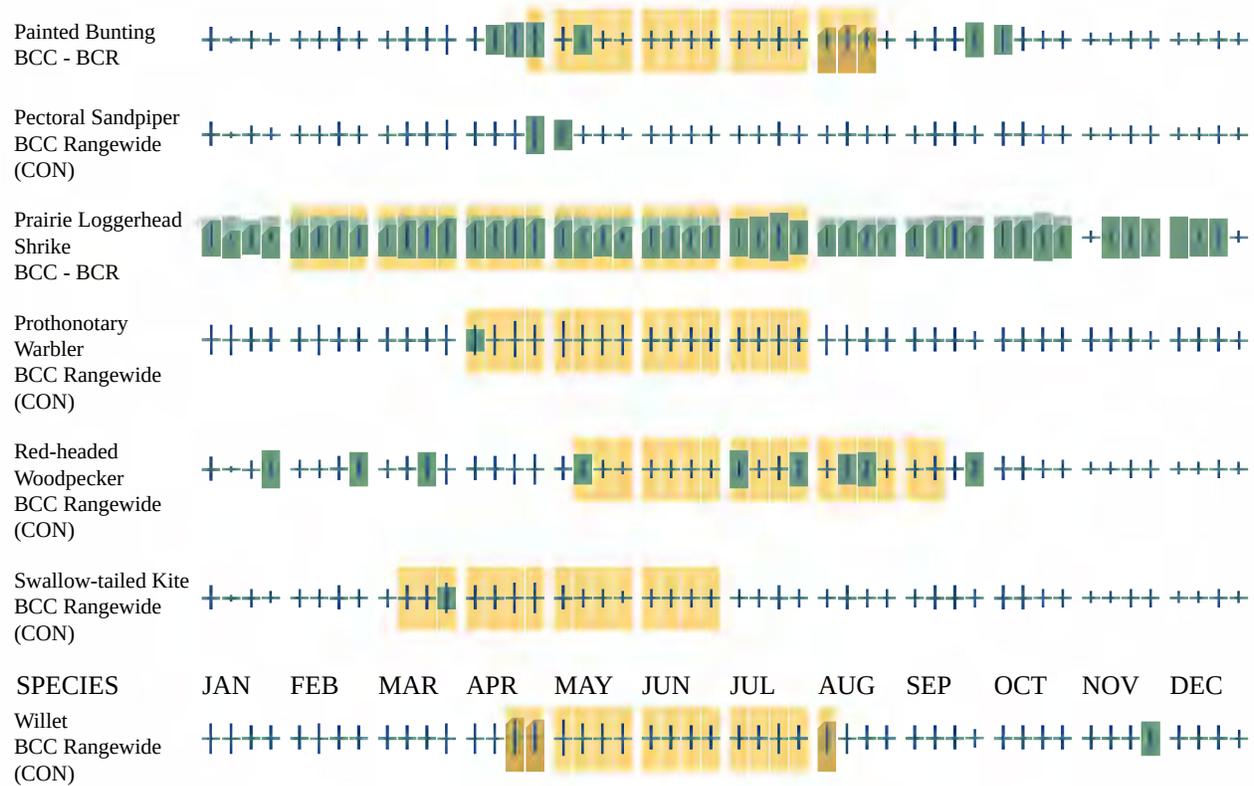
Survey Effort (|)

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

No Data (-)

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Additional information can be found using the following links:

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- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-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

2.10.1: Houston Wind Rose

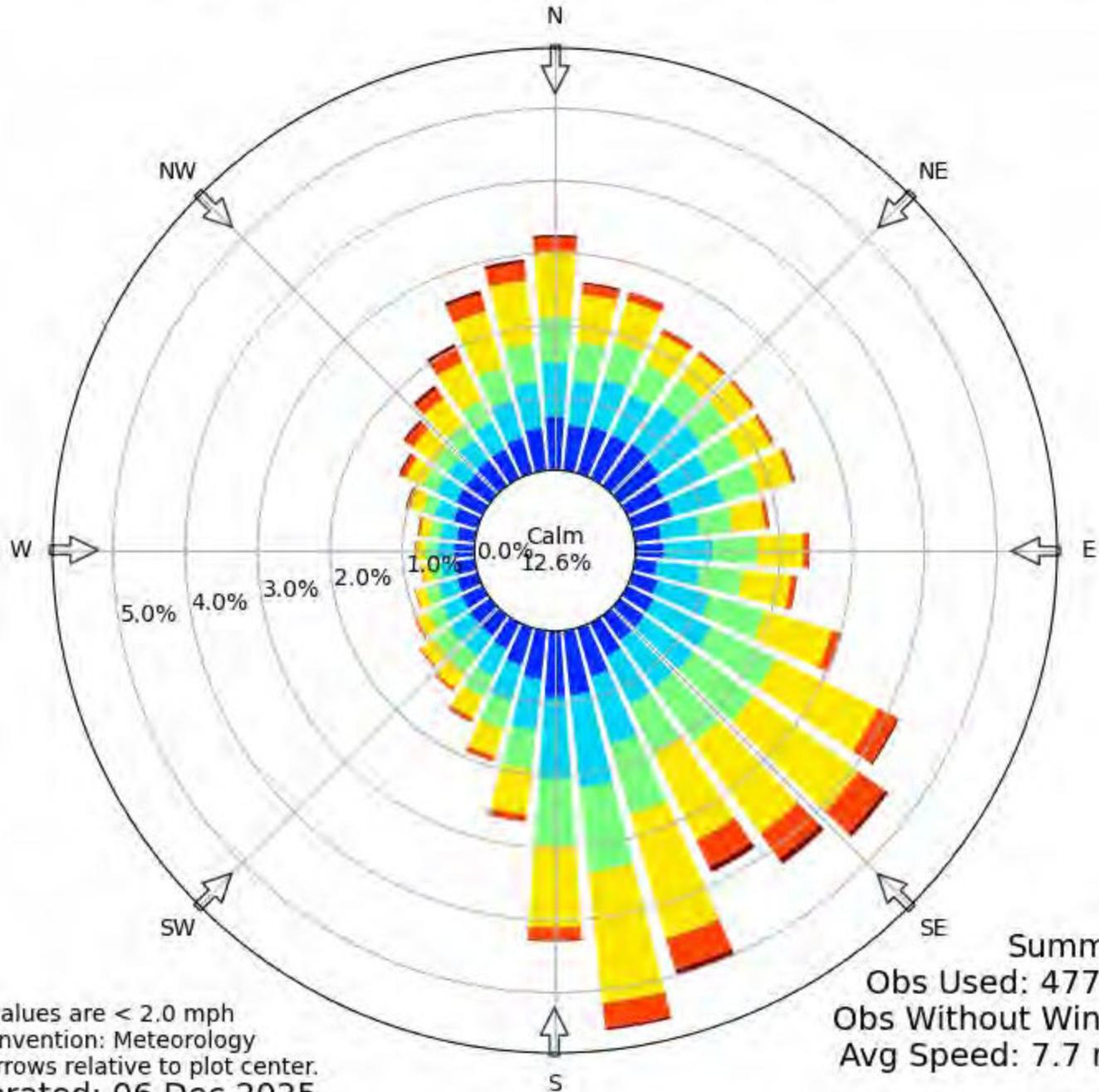


Figure 2.10.1



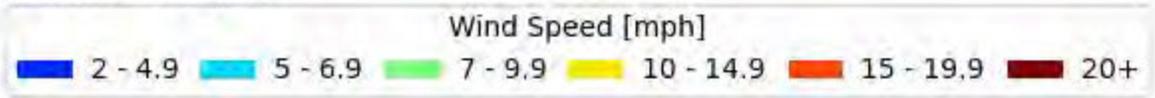
Windrose Plot for [IAH] Houston Intercontinental

Obs Between: 01 Jan 1970 01:00 AM - 06 Dec 2025 02:53 AM America/Chicago



Calm values are < 2.0 mph
Bar Convention: Meteorology
Flow arrows relative to plot center.
Generated: 06 Dec 2025

Summary
Obs Used: 477862
Obs Without Wind: 0
Avg Speed: 7.7 mph



2.11.1: National Register of Historic Places



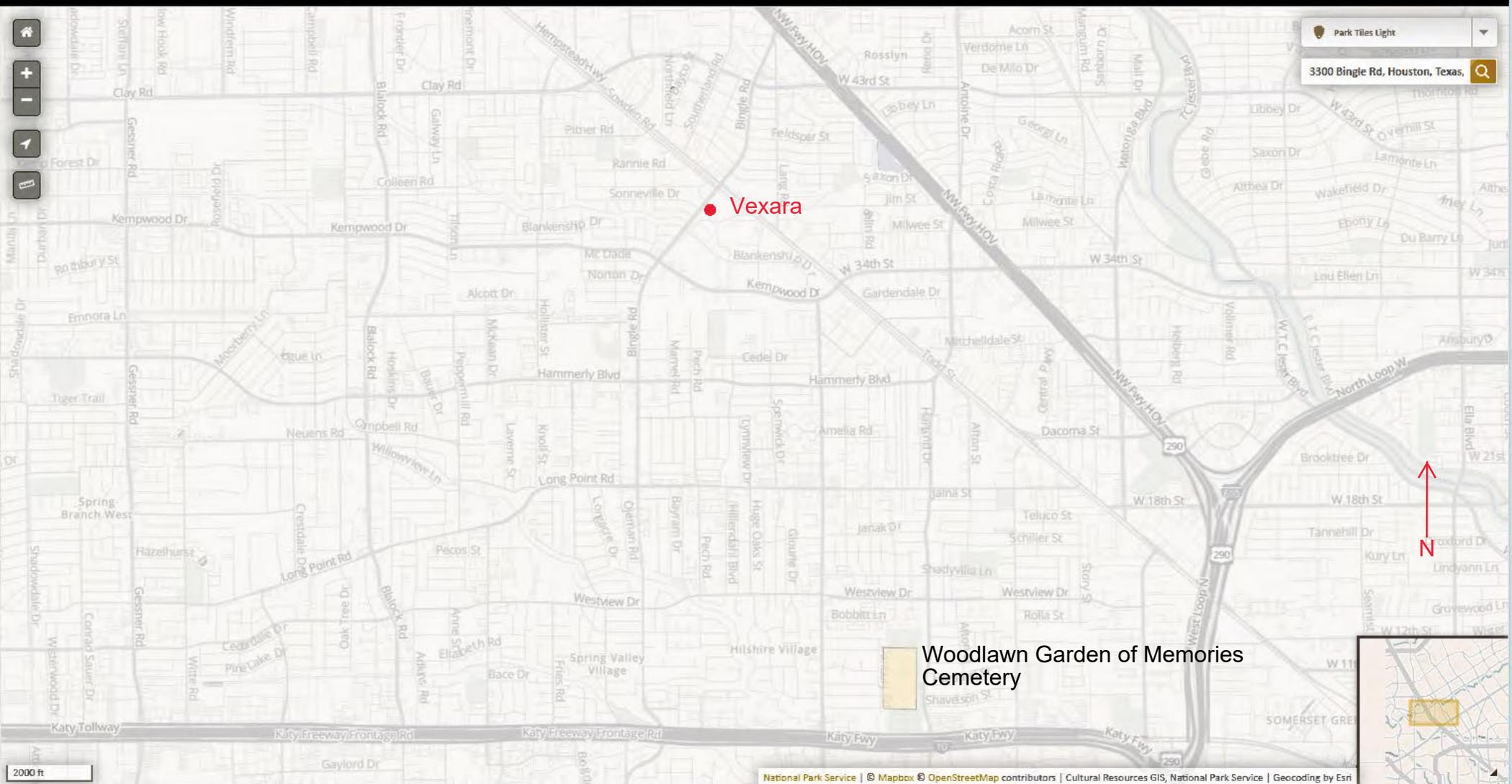
Figure 2.11.2

National Register of Historic Places

National Park Service
U.S. Department of the Interior



Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. Last minor update, September 2020.



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

- Legend**
- Vexara
 - National Registered Historic Places

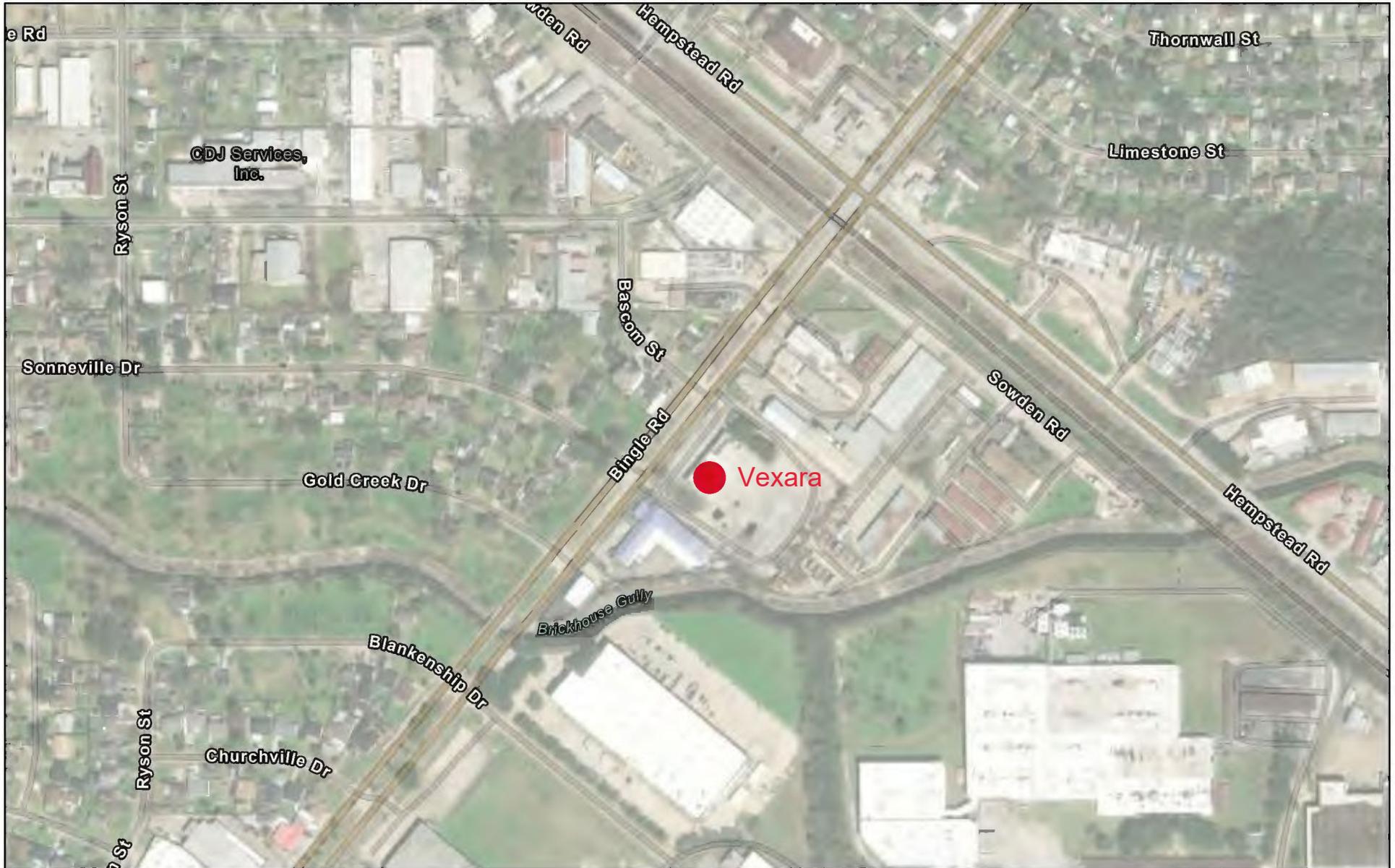
National Park Service | © Mapbox | OpenStreetMap contributors | Cultural Resources GIS, National Park Service | Geocoding by Esri

2.11.2: TxDOT PALM Map



Figure 2.11.2

TxDOT PALM Map



1/19/2026

PALM Legend Layer Houston

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

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

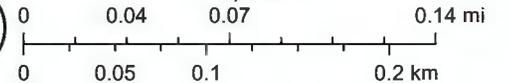
High Resolution 30cm Imagery

Citations

1.2m Resolution Metadata



1:4,752



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

2.11.3: SHPO Consultation Request





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 [REDACTED] 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,

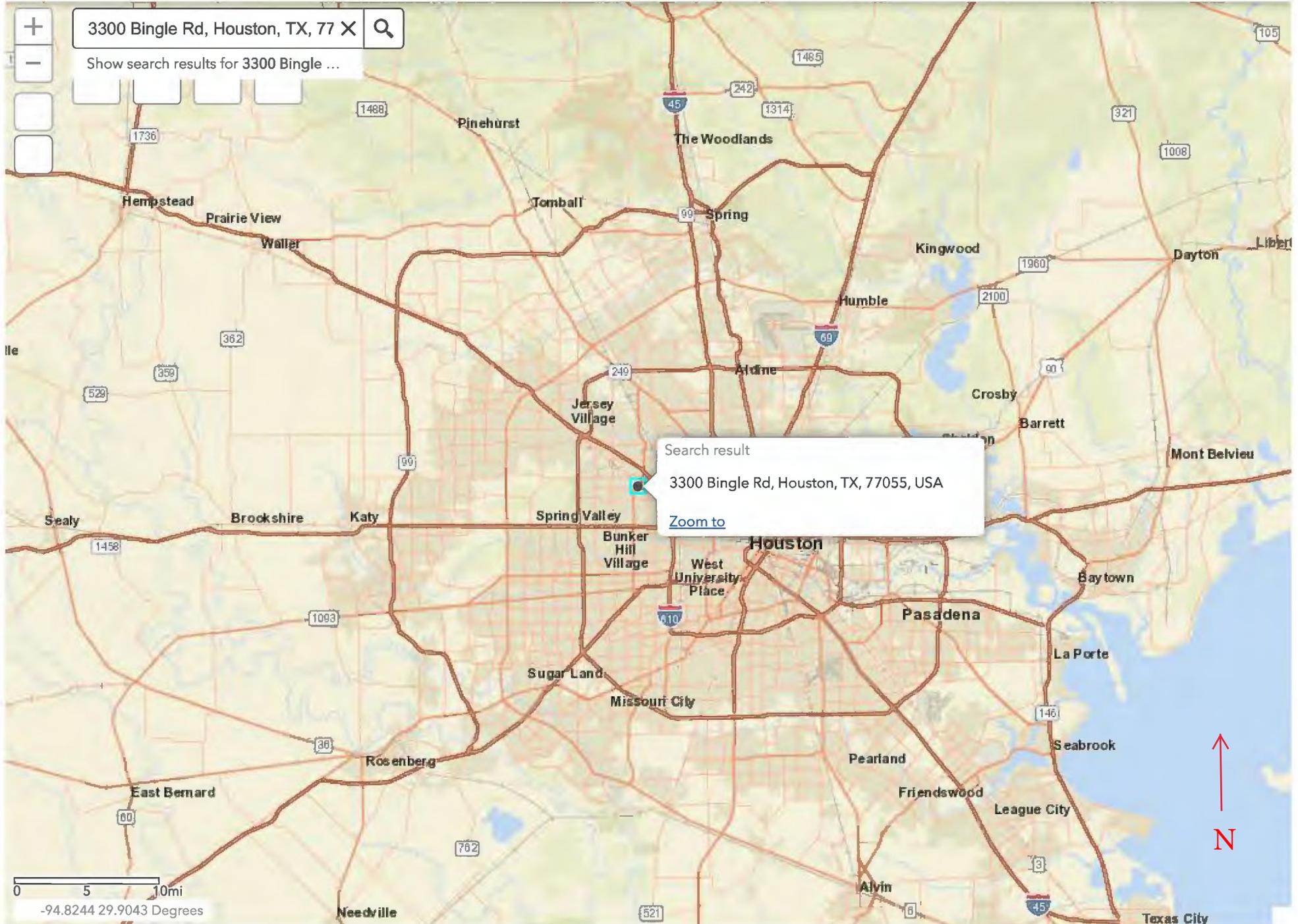


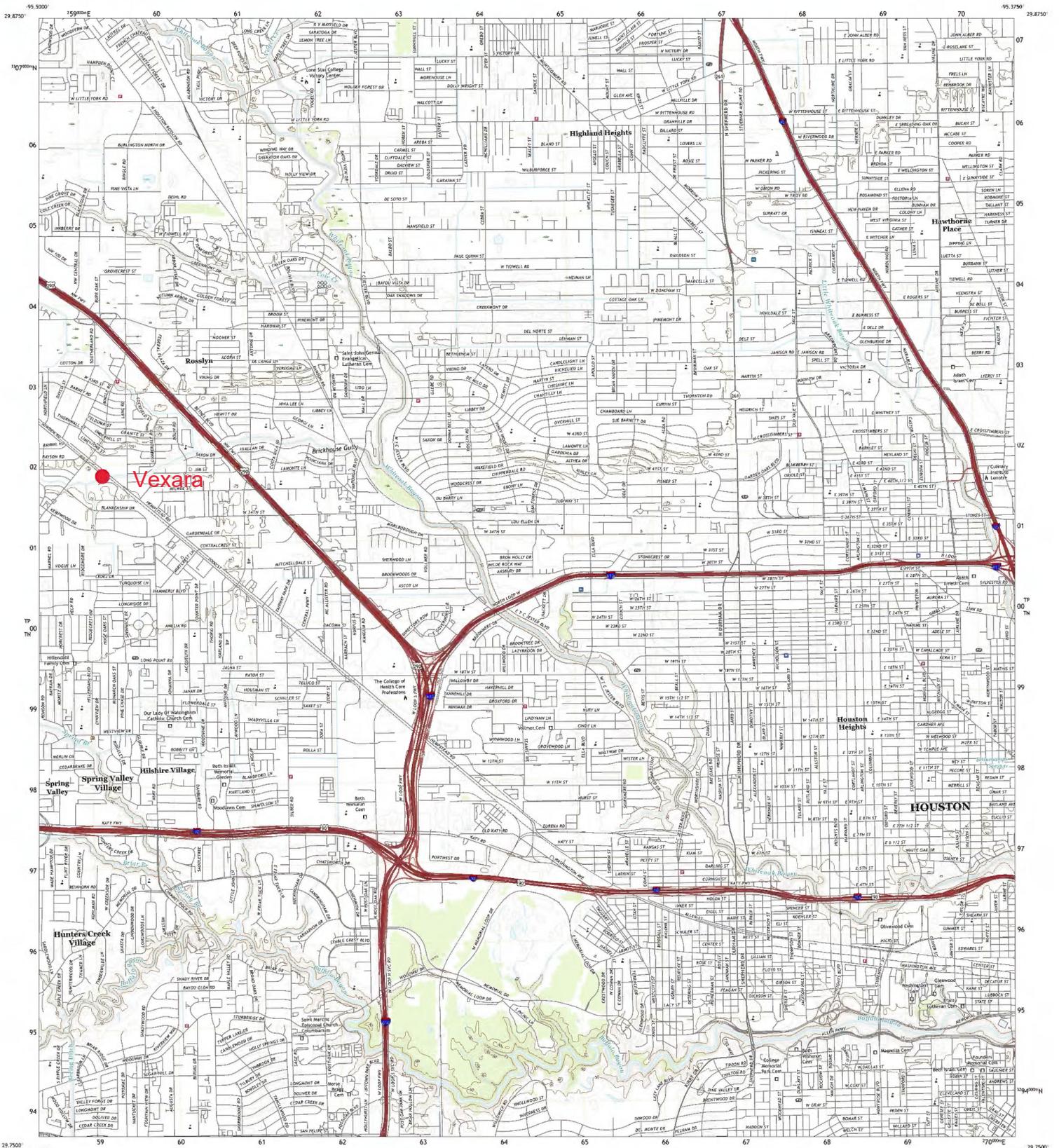
Amy Peoples
Enviro-Ag Engineering, Inc.

Enclosures

Cc: Vexara Pharmaceuticals LLC
EAE file

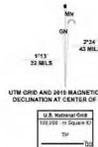
Figure 1.7 - Vicinity Map





Produced by the United States Geological Survey
 North American Datum of 1983 (NAD83)
 World Geodetic System of 1984 (WGS84). Projection and
 1000-meter grid/Universal Transverse Mercator, Zone 18R
 This map is not a legal document. Boundaries may be
 generalized for this map scale. Private lands within government
 reentrances may not be shown. Obtain permission before
 entering private lands.

Imagery: U.S. MAP, September 2016, November 2016
 Roads: U.S. Census Bureau, 2015
 Names: National Hydrography Dataset, 1979-2010
 Contour: National Elevation Dataset, 2010
 Boundaries: Multiple sources, see metadata file 2015
 Waterbodies: FWS National Wetlands Inventory, not available



SCALE 1:24 000

CONTOUR INTERVAL, 5 FEET
 NORTH AMERICAN VERTICAL DATUM OF 1988
 This map was produced in conformance with the
 National Geospatial Program US Topo Product Standard.



ROAD CLASSIFICATION

	Expressway		Local Connector
	Secondary Hwy		Local Road
	Interstate Route		State Route

1	2	3
4	5	6
7	8	9

ADJACENT QUADRANGLES



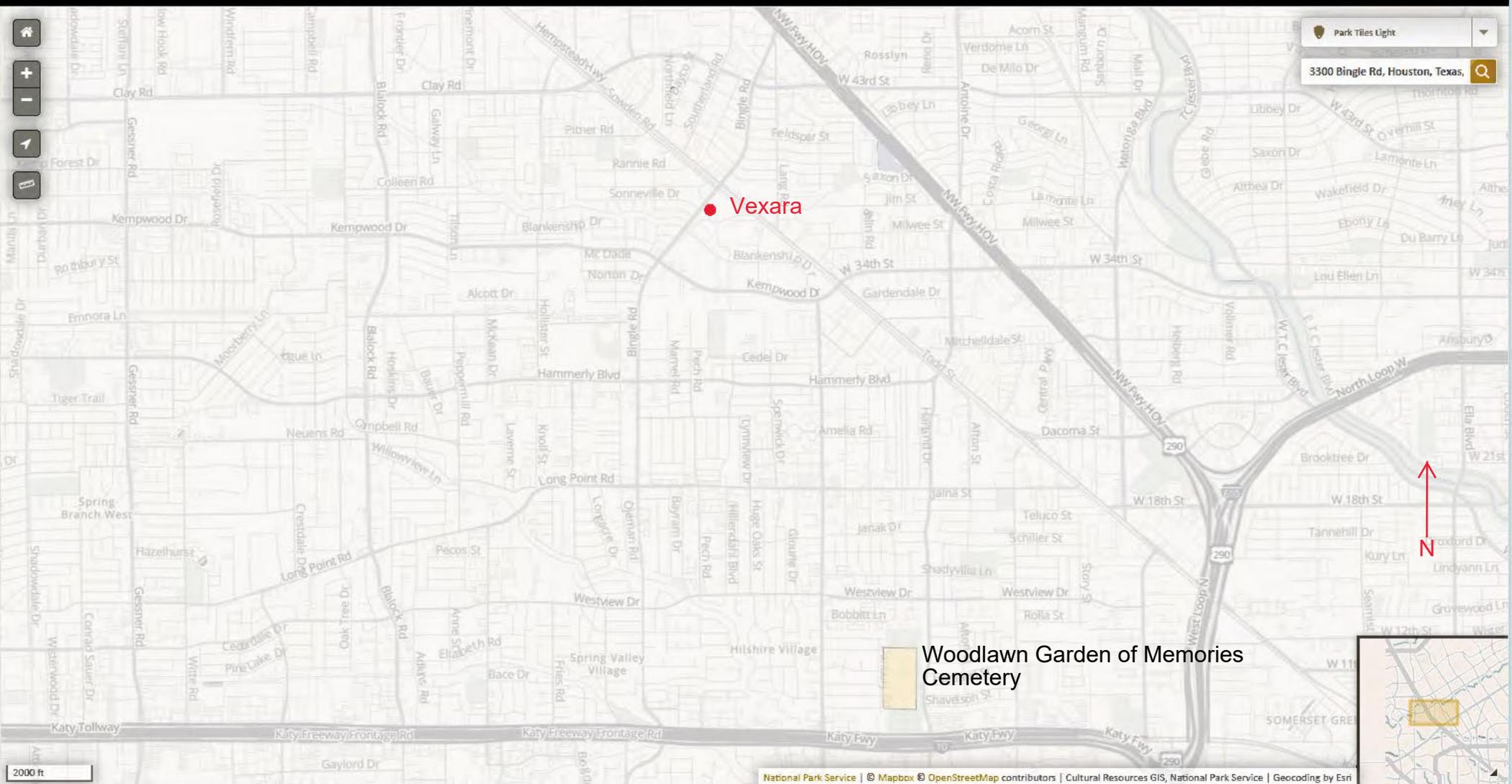
Figure 2.11.2

National Register of Historic Places

National Park Service
U.S. Department of the Interior



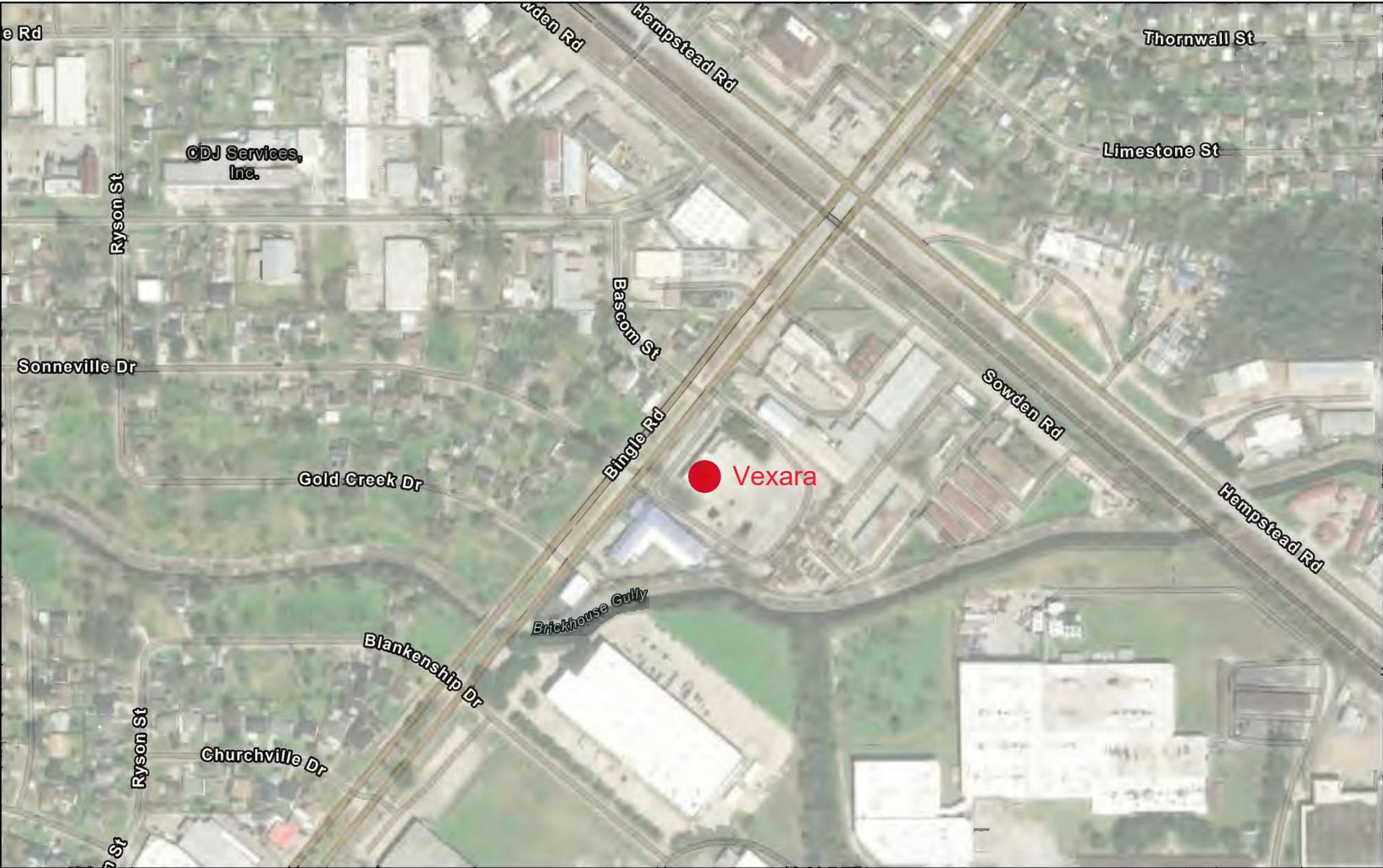
Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. Last minor update, September 2020.



<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



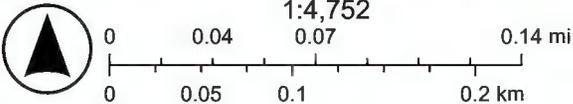
1/19/2026

PALM Legend Layer Houston

	0-water		3-Survey
	1-Survey		3-No Survey
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World Imagery
 Low Resolution 15m Imagery
 High Resolution 60cm Imagery

High Resolution 30cm Imagery
 Citations
 1.2m Resolution Metadata

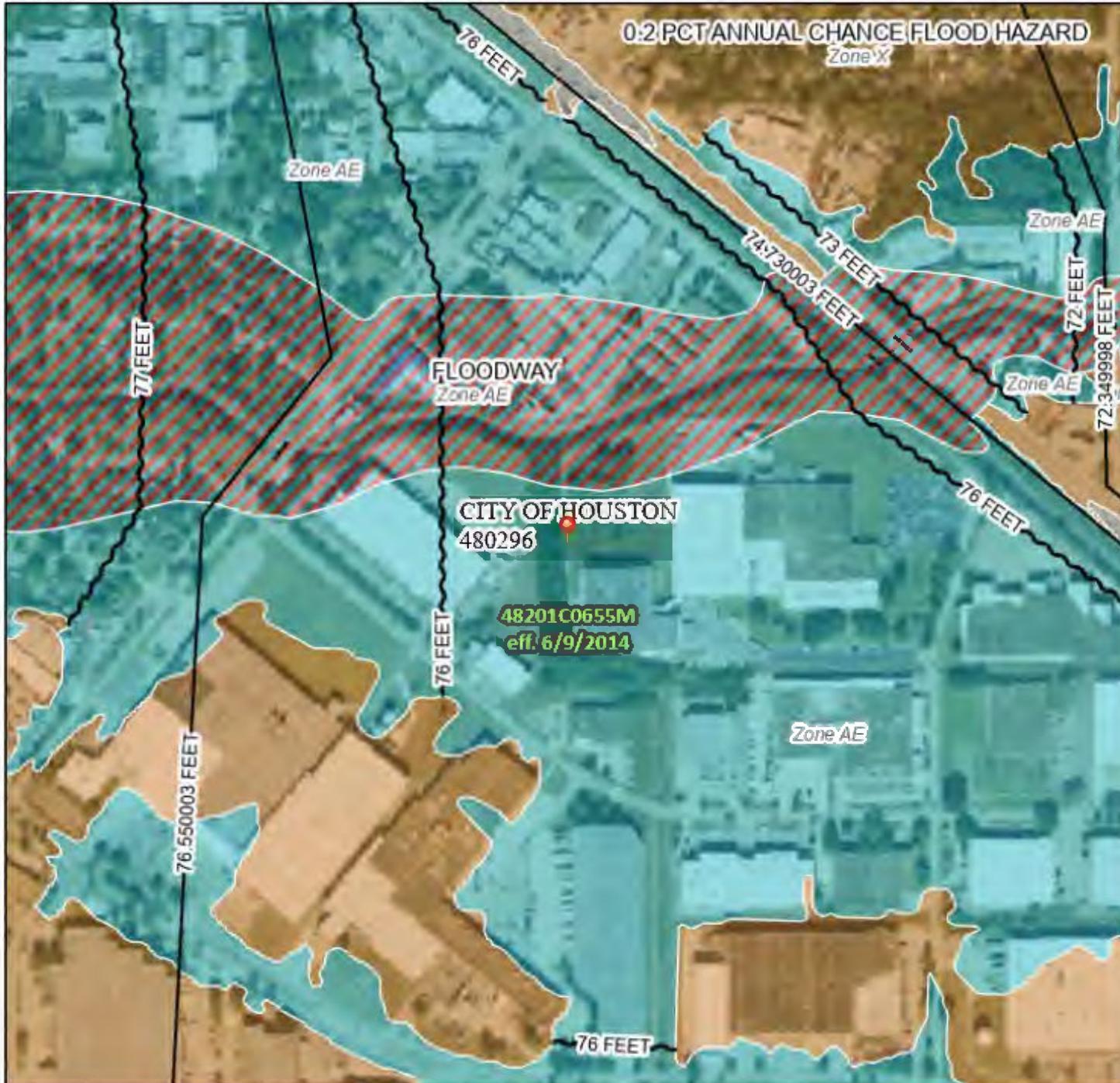


1:4,752
 Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

National Flood Hazard Layer FIRMette



95°29'56"W 29°49'35"N



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 |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard Zone D |
| | | Channel, Culvert, or Storm Sewer |
| OTHER FEATURES | | Levee, Dike, or Floodwall |
| | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| MAP PANELS | | 17.5 Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
| | | 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.



Basemap Imagery Source: USGS National Map 2023

95°29'19"W 29°49'4"N

References

REFERENCES

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