McElroy, Sullivan, Miller & Weber, L.L.P

500 W. 5th Street, Suite 1375 Austin, TX 78701 | www.msmtx.com

MAILING ADDRESS: P.O. Box 12127, Austin, TX 78711 | **T.** 512.327.8111 **F.** 512.350.2681

September 16, 2024

Via FTP Upload
Ms. Ellie Guerra
Office of the Chief Clerk
Texas Commission on Environmental Quality
12100 Park 35 Circle, Building F
Austin, Texas 78753

RE: Application for Proposed Permit No. WQ0005417000 (EPA I.D. TX 0143600)
To be Issued to Leprino Foods Company
CN605980739, RN111422333

Dear Ms. Guerra,

The TCEQ Commissioners issued an Interim Order in the above-referenced matter on September 6, 2024. Pursuant to 30 Tex. Admin. Code § 80.118(d), Applicant Leprino Foods Company submits the following documents (*See* **LEPRINO_00001-000378**) which are the original application and revisions to the application for inclusion in the Administrative Record:

- Application for a New Individual Permit to Discharge Industrial Wastewater for Leprino Foods Company located in Lubbock, Texas (**September 23, 2022)**;
- TCEQ Notice of Deficiency Letter to Leprino Food Company (**October 6, 2022)**;
- Leprino Foods Company Response to TCEQ's Notice of Deficiency Letter (**October 10, 2022)**; *and*
- Revised Application – Comments to Draft Permit Package (**March 23, 2023)**.

Leprino Foods Company has retained McElroy, Sullivan, Miller & Weber, L.L.P. to represent it in the above-referenced matter. The undersigned respectfully requests addition to the service list and to be provided with any future notices or correspondence.

If you should require any further from the Applicant at this time, please do not hesitate to let us know.

Sincerely,

/s/ Adam Friedman
Adam Friedman
afriedman@msmtx.com
State Bar No. 24059783
McElroy, Sullivan, Miller & Weber, L.L.P.
ATTORNEY FOR LEPRINO FOODS COMPANY

September 23, 2022

Applications Review and Processing Team (MC 148)
Water Quality Division
Texas Commission of Environmental Quality
P.O. Box 13087
Austin, Texas 77651

RE: Application for a New Individual Permit to Discharge Industrial Wastewater for Leprino Foods Company located in Lubbock, Texas
CN605980739
RN111422333

To Whom It May Concern:

On behalf of Leprino Foods Company (Leprino), please find the enclosed permit application for a new Individual Permit to discharge industrial wastewater into "waters of the state". Enclosed you will find one original and three complete copies for your consideration. The application fee has been paid through TCEQ ePay and a copy of the receipt is provided in Attachment A.

Additional Information

1. The Plain Language Summary (PLS) in English and Spanish, are provided in the Industrial Administrative Report 1.0.

2. Water Quality Assessment Team preliminary modeling for seasonal limits at various flows are provided in Section 1 – Agency Communications.

If you have any questions concerning this application, please contact me at (409) 504-6933. We look forward to working with you in processing this application. Thank you for your consideration.
Sincerely,

TRINITY CONSULTANTS

Allen Rienstra
Senior Staff Scientist

Attachments

Cc. Hannah Bradish – Environmental Compliance Engineer – Leprino Foods Company
Joe Herrud – Senior Director of Environmental Engineering – Leprino Foods Company
Katie Jeziorski – Managing Consultant – Trinity Consultants

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM
APPLICATION FOR A NEW INDUSTRIAL WASTEWATER PERMIT

CN605980739
RN111422333

Leprino Foods Company
Lubbock, Texas

Prepared By:

Katie Jeziorski – Managing Consultant
Allen Rienstra – Consultant

TRINITY CONSULTANTS
12700 Park Central Drive, Suite 2100
Dallas, Texas 75251
(972) 661-8100

September 2022

Project 214401.0274

Trinity Consultants

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1. AGENCY COMMUNICATION

From: James Michalk
To: Hannah Bradish; Joseph Herrud
Cc: Kelly Hawkins; Chris Lewis; Katie Jeziorski; James Frazier; Allen Rienstra
Subject: RE: Meeting for Leprino Foods proposed limits
Date: Thursday, September 8, 2022 2:12:33 PM
Attachments: image001.png

Good afternoon all,

I have completed the additional seasonal effluent limit analysis for a discharge flow of 2.0 MGD.

One thing to please note -- in my earlier emails regarding the model results (summer and seasonal) and potential effluent limit combinations, I said that the effluent limits would include <u>C</u>BOD_5, ammonia-nitrogen (NH_3-N), and minimum effluent dissolved oxygen (DO), since for *Municipal* permits we typically recommend $CBOD_5$ limits (rather than BOD_5 limits) when the permit also includes an NH_3-N limit. However, as an *Industrial* permit, it is my understanding that this permit would need to include a **BOD_5 limit** (not a $CBOD_5$ limit), since the 40 CFR categorical limits actually require a BOD_5 limit for this type of facility/discharge. My model results and the various potential effluent set combinations are unchanged from what I provided previously (although see below for an additional potential monthly grouping for the 1.5 MGD seasonal limit scenario), but I just wanted to clarify that issue.

You can check with the Permitting Section if it would be possible to *request* that the permit include a $CBOD_5$ limit instead of BOD_5 (since the permit would also include an NH_3-N limit), but again it's my understanding that a BOD_5 limit is required in this case.

<u>Modeling Results</u>:
Possible combinations of effluent limits predicted to be adequate to ensure that DO levels will be maintained above the criterion applicable to the lake are as follow:

- For 2.0 MGD, the 'summertime' effluent set (from the analysis performed back in May) of **5 mg/L BOD_5, 1.0 mg/L NH_3-N, and 6 mg/L minimum effluent DO (5/1.0/6)** would most likely be applied for (at least) the months of **April - September** (depending how you wanted to group the other months, per the additional options described below). The predicted necessary limits for April, May, and September aren't (in my opinion) less stringent enough to be worth including those months in the 'cooler' monthly grouping, since we will only allow two groupings of effluent limits for seasonal limits (i.e. some set of 'warmer' months and some set of 'cooler' months).
- For 2.0 MGD for the 'cooler' monthly grouping, the following options were all predicted to be adequate:
  - **October - March** at any of the following effluent sets (BOD_5 / NH_3-N / DO):
    - 8/2/6
    - 7/2/5
    - 6/2/4
    - 5/3/6
  - **November - March** at any of the following effluent sets (BOD_5 / NH_3-N / DO):
    - 9/2/6
    - 8/2/5
    - 7/2/4
    - 6/3/6
  - **November - February** at any of the following effluent sets (BOD_5 / NH_3-N / DO):
    - 12/2/4
    - 13/2/5
    - 14/2/6
    - 11/3/6
    - 8/4/6
- I don't think I looked specifically at the **Nov - Feb** potential monthly grouping for the earlier **1.5 MGD** seasonal effluent limit analysis. Since predicted necessary effluent limits were considerably less stringent at 2.0 MGD for Nov - Feb than they were for Nov - Mar, I also performed some new modeling specifically for the Nov - Feb period at 1.5 MGD, in case you want to consider that alternative monthly grouping of seasonal effluent limits for a possible additional option.
  - For <u>1.5 MGD</u>, **November - February** at any of the following effluent sets (BOD_5 / NH_3-N / DO):
    - 15/2/4

- 16/2/5
- 17/2/6
- 13/3/4
- 14/3/6
- 12/4/6
- 11/4/5
- 10/4/4

Other monthly groupings and effluent set combinations may also be adequate and can be evaluated upon request.

As we have discussed previously, these are only the effluent limits that are related to potential direct dissolved oxygen impacts. The Standards Implementation Team may recommend other effluent limits including for nutrients (phosphorus and/or forms of nitrogen other than ammonia-nitrogen), TDS/sulfate/chloride, and possibly other constituents. I don't know what all other types of limits or requirements may be included in the permit by the Permitting Section for this specific type of facility or discharge.

Please let me know if you have any questions about the DO modeling results or these potential seasonal effluent limit combinations. Thank you again.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Friday, July 29, 2022 8:16 AM
To: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to check back in with you to see if you have had a chance to run the seasonal limits at the 2.0 MGD flow rate?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Friday, July 8, 2022 12:15 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I can, but it might be a little while. I'm working on several other priority projects and permits right now, with another hearing coming up July 20-22.

But remind me if you don't hear back from me by the end of the month.

Jim Michalk

Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Friday, July 8, 2022 12:26 PM
To: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Would it be possible to run the model for seasonal limits at the flow of 2.0 MGD? I know we had originally just requested the 1.5 MGD seasonal analysis but are hoping to see what the 2.0 MGD seasonal limits would look like.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, June 16, 2022 7:42 AM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Reading back over my emails from yesterday, I somehow neglected to include that those seasonal effluent set options were all for **1.5 MGD** model runs, per Hannah's email, so just wanted to clarify that. Have a good day!

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Wednesday, June 15, 2022 6:46 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

And just to be clear, it would be up to you to choose which of those options worked best for you, not that we'd write a permit that included various/multiple different effluent set combination options.

I don't think there's really a place in the permit application forms for an Industrial permit applicant to request specific $CBOD_5$, ammonia-nitrogen, and minimum effluent DO limits (let alone different seasonal limits of those constituents), so I'd probably recommend including some of the email record of our correspondence on this subject in the application with a written request for specific limits, per our preliminary analysis discussions, especially in case I'm not the DO modeler who ends up getting assigned to the permit application. I have my preliminary analysis modeling review files saved where any of the modelers can access them, if they know to look.

Thanks again,

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Wednesday, June 15, 2022 6:10 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good evening all,

I ran a number of different seasonal effluent limit scenarios.

The City of Lubbock's permit (WQ0010353002), Outfall 007, has a seasonal effluent limit split of April - October for the more stringent warmer-weather effluent limits, with less stringent limits in the cooler months of November - March. For Municipal permits, we have what we refer to as an 'effluent set hierarchy' composed of different specific 'sets' of effluent limit combinations (for $CBOD_5$, ammonia-nitrogen, and minimum effluent DO) that are typically applicable to different types of municipal WWTP treatment systems. Without getting too much into the details of that subject, suffice to say that such an approach is not necessarily applicable to Industrial permits, so Industrial permits can have more combinations of those 3 constituents (as effluent limits) than would typically be considered for a Municipal WWTP permit. Which means potentially lots more model runs for possible effluent limit combinations, in order to allow some flexibility to a permittee depending on which of those three constituents you may want to have a little higher limit on. But here's what I've come up with.

Be aware that we would limit seasonal effluent limits to **two** different monthly groupings. If the same monthly grouping is used for the Leprino Foods permit as is currently applicable to Outfall 007 in the City of Lubbock permit, that would result in seasonal effluent limits of:

- 5 mg/L $CBOD_5$, 1.5 mg/L NH_3-N, and 6 mg/L minimum effluent DO (**5/1.5/6**) for the months of **Apr - Oct**, and
- **either 10/2/4; 9/3/6; or 8/3/4** for **Nov - Mar**;

Or, using a different monthly grouping:

- **5/1.5/6** for **May - Sep**, and
- **either 8/2/5 or 7/2/4** for **Oct - Apr**

Other effluent set combinations or monthly groupings may also be adequate and can be evaluated upon request.

Please let me know if you have any questions or need any additional information.

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Wednesday, June 15, 2022 1:53 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Ok, will do.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Wednesday, June 15, 2022 1:07 PM
To: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Please only do the analysis for seasonal limits for the flow rate of 1.5 MGD.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Wednesday, June 15, 2022 10:41 AM
To: Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Hannah Bradish <hbradish@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning all,

Do you want me to take a look at seasonal limits just at either 1.5 MGD or 2.0 MGD, or both? Both is no problem if that helps your decision process.

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Tuesday, June 14, 2022 8:42 AM
To: Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Hannah Bradish <hbradish@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Seasonal limits (CBOD5, ammonia-nitrogen, and/or minimum effluent DO) may be an option but will increase the complexity of this analysis and I will probably not be able to conduct that analysis for you for several weeks as I have depositions, public meetings, prefiled testimony for hearings, and review of judges' decisions for completed hearings starting up again.

Jim Michalk
Water Quality Assessment Team

From: Joseph Herrud <jherrud@leprinofoods.com>
Sent: Monday, June 13, 2022 10:11 AM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Hannah Bradish

<hbradish@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Jim, can you give us any indication of seasonal variations for any of the parameters? We've used the City's permits as a guideline and theirs has seasonal limit differences.

Thanks!
Joe

Joe Herrud, P.E.
Senior Director of Environmental Engineering
Technical Services
Leprino Foods Company
jherrud@leprinofoods.com
303-480-2894 Office
303-859-8923 Cell

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Friday, June 10, 2022 12:57 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I completed the updated dissolved oxygen modeling analysis for a reduced flow of 1.5 MGD. I'm afraid that didn't make a whole lot of difference.

Effluent limits of **5 mg/L $CBOD_5$ and 6 mg/L minimum effluent DO** are still predicted to be necessary, just with an **ammonia-nitrogen of 1.5 mg/L** instead of 1.0 mg/L.

Let me know if you have any questions or would like for me to take a look at anything else.

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Tuesday, June 7, 2022 8:27 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning Hannah,

I will take a look.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, June 2, 2022 4:56 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis

<CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Would it be possible to get updated values if for a maximum flowrate of 1.5 MGD? How would this impact the CBOD, DO and Ammonia limits you provided previously?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Wednesday, May 11, 2022 2:48 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I have completed the dissolved oxygen (DO) preliminary modeling analysis for the proposed Leprino Foods project. For a discharge of **2.0 MGD** directly into Canyon Lake Number 6, an effluent set of **5 mg/L $CBOD_5$, 1.0 mg/L ammonia-nitrogen, and 6 mg/L minimum effluent DO** is predicted to be necessary. These effluent limits are stringent, but are comparable to those recommended for municipal wastewater discharge permits of comparable size discharging directly into small and narrow reservoirs similar to this one. Based on the road encircling the lake, the public parking areas along it, and several docks along the shoreline, this lake appears to have a significant public recreation use, so stringent effluent limits like this may help to moderate potential public concern about a 2 MGD wastewater discharge of any sort going into this lake. But that potential for public concern (including the possibility of a public meeting and a contested case hearing if the permit application is protested) is something to keep in mind regardless of the stringency of these effluent limit recommendations.

Just so you're aware, I needed to do the following for my modeling analysis. Upon closer inspection of the survey schematic provided, I noticed that the distance out into the lake shown on the schematic (from shoreline out to the outfall structure) was only about the same distance as the width of Canyon Lake Drive and the "slick bore under Canyon Lake Drive" that lies beneath the road, as shown on the other side of the survey schematic. In other words, only a distance of about 35 to 40 feet out into the lake, whereas the lake is over 700 feet wide at this point. So I had to use elevation information from the USGS topographic map as well (which predated construction/impoundment of the lake) to develop depth estimates for entire lake cross-sections, which seemed consistent with the steady decrease in elevation shown on the survey schematic for the area near the shoreline. This resulted in significantly deeper maximum (roughly mid-lake) depths, though I estimated the *average cross-sectional depth* (shoreline-to-opposite-shoreline) in the vicinity of the proposed discharge location still at around 6 feet deep (getting gradually a little deeper going downstream toward the dam, but the most critical portion of the model was the initial 10-acre area in the immediate vicinity of the discharge). I think the modeling is protective but not overly conservative.

If you'd like to explore other potential options to help reduce the amount of oxygen-demanding constituents (and other components that may be of concern in the discharge) by the time the discharge enters the lake, such as constructed wetlands or effluent polishing ponds between a revised discharge location and entry into the lake, let us know, but you would need to develop the details of those wetlands or ponds for us to take into consideration for an updated analysis.

Also be aware that the North Fork Double Mountain Fork Brazos River (Segment ID 1241A) is listed as impaired on the current (2020) Clean Water Act Section 303(d) list for elevated bacteria levels in water (recreation use) and that the impaired portion of the river includes the section that has been impounded to create Canyon Lake Number 6. The Double Mountain Fork Brazos River (classified Segment No. 1241) farther downstream is also considered impaired for elevated bacteria levels in water (recreation use). These impairments are unchanged on the Draft 2022 303(d) list, which has not yet been approved. There are no completed or underway Total Maximum Daily Load (TMDL) projects applicable to the proposed discharge route.

Please let me know if you have any additional questions. Thank you, and sorry again for the delay in completing this review.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Monday, May 9, 2022 9:52 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to check back in on this to see if you have some preliminary permit limits?

We have approached the phase of the project where we need to know if our design is adequate to confirm our budget and are in much need of the estimated permit limits to confirm this.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Tuesday, April 26, 2022 8:18 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning Hannah,

No, I've been totally swamped with 5 different hearings (and their pre- and post-hearing procedures), especially throughout March and April, but the Replies to Closing Arguments for one filed last week, and for another one files this week, and Discovery for the last of the 5 also files this week. I should have a little break after this week before the 3 that haven't gone to hearing yet really get going again (hearings scheduled for May, June, and July, but with prefiled testimony, depositions, etc. before those dates). But in the meantime, I have multiple permits I need to finish reviewing this week in order to get them into a quarterly update that goes out for public comment and to EPA for review, if possible.

So I won't be able to get back to this project until at least next week sometime, but I'm also behind on a lot of additional permit reviews and other projects because of all these hearings.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Monday, April 25, 2022 4:01 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>

Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to check in with you to see if you have had a chance to evaluate the water body and determine some preliminary expected permit limits for our proposed discharge?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 4:01 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Ok, thank you very much.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 4:47 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Of course. I did confirm this is the updated version with accurate discharge location. I also confirmed that the average operating depth of the lake is that 3131.5 elevation line.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 3:05 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Perfect, thanks Hannah.

Jim

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 3:49 PM
To: James Michalk <james.michalk@tceq.texas.gov>

Subject: RE: Meeting for Leprino Foods proposed limits

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 2:42 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Just finished. Still time?

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 3:13 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Sounds good. Feel free to call my cell when you are ready.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 1:47 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Probably just 30, it's with my team leader.

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 2:46 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

I have a meeting that starts at 4 central. Is your meeting 30 minutes or an hour?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 1:44 PM

To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hannah,

I have a meeting at 3:00, how about after that?

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 2:36 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Yes, that is where Sarah and I landed on BOD concentration.

It may be easiest to explain what you are looking at on the PDF over the phone. Would you have some time for me to call you?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 12:37 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I believe the last emails between you and Sarah were indicating that I should use a BOD_5 concentration of 31.12 mg/L as the starting point for my dissolved oxygen modeling analysis.

I can't tell what I'm looking at on the pdf you provided. Can you help me out?

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 10:28 AM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis

<CLewis@probstgroup.com>; Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to circle back with you to send you the updated lake survey and check to confirm you have received what you need from the BOD and TSS effluent limits. Please let me know if you need anything else from me in order to start the waterbody DO modeling.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: Hannah Bradish
Sent: Tuesday, March 22, 2022 9:21 AM
To: Sarah Johnson <Sarah.Johnson@tceq.texas.gov>
Cc: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: Re: Meeting for Leprino Foods proposed limits

Hi Sarah,

I have reviewed the guidance you provided and no revisions are necessary. We have considered all materials.

Thanks!

Hannah Bradish

Sent from my iPhone

> On Mar 17, 2022, at 1:52 PM, Sarah Johnson <Sarah.Johnson@tceq.texas.gov> wrote:
>
> Good afternoon-
>
> Thank you for the information. The spreadsheet appears to apply the federal effluent limit guidelines correctly. I also reviewed the 40 CFR Part 405 development document, which on page 3 ("Method of Application") states that all other (non-dairy) materials such as sugar must also be considered. Please confirm if any such additional materials/ingredients will be used and update the calculations accordingly if needed (see Table 9, page 41 of the document for common material compositions).
>
> If the spreadsheet is correct as is and no revisions are needed, then the technology-based effluent limit of **31.12 mg/L BOD_5 daily average** will be used as the starting point in the dissolved oxygen model. Jim Michalk and I will confer and we'll reach out to you if a meeting is needed.
>
> Regards,
>
> Sarah A. Johnson, Ph. D.
>
> Environmental Permit Specialist

Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 2101
Austin, TX 78753
Office Phone: 512-239-4649

Customer Satisfaction Survey

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 17, 2022 2:50 PM
To: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Cc: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Sarah,

We have the finalized BOD input and Effluent Limit numbers sorted out. I have attached the calculation spreadsheet along with a process flow diagram that corresponds to the BOD loading calculations. Please note that the information in these spreadsheets is confidential.

With this calculation, we now show the following categorical limits:

EFFLUENT LIMITS IN CONCENTRATION FOR ULTIMATE BUILDOUT				
	Average Flowrate		**Max Flow rate**	
	2.31		***2.94***	
	Monthly Average	***Daily Max***	***Monthly Average***	***Daily Max***
BOD_5 (mg/L)	**31.12**	**62**	**24**	**49**
TSS (mg/L)	**38.91**	**78**	**31**	**62**
pH s.u		**6.5-9 s.u**		

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Sent: Friday, February 4, 2022 7:41 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning-

That works for me. I look forward to hearing from you.

Sarah A. Johnson, Ph. D.

Environmental Permit Specialist
Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 2101
Austin, TX 78753
Office Phone: 512-239-4649

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, February 3, 2022 4:34 PM
To: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Cc: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Sarah,

We are updating our calculations and preparing a spreadsheet to send to you. Once that is ready to go, I was hoping to review it with you to make sure everything makes sense. I want to have the calculations done next week and then we can set up a meeting time if that works for you?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718
hbradish@leprinofoods.com

From: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Sent: Wednesday, February 2, 2022 8:53 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: James Michalk <james.michalk@tceq.texas.gov>
Subject: Meeting for Leprino Foods proposed limits

Good morning-

Jim passed along your request to meet regarding calculation of the technology-based effluent limits (TBELs) per the effluent limit guidelines (ELGs) in 40 CFR Part 405. I'm available Friday, but given the winter storm predicted it's probably best not to schedule then in case things shut down. The next earliest I could meet would be Monday morning (Feb. 7), from 8:30-12:00, Tuesday morning from 9:00-12:00, or Wednesday afternoon from 1:30-4:00. Please let me know which time works best and any specific items you wish to discuss so I can prepare accordingly.

Regards,

Sarah A. Johnson, Ph. D.

Environmental Permit Specialist
Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 2101
Austin, TX 78753
Office Phone: 512-239-4649

Customer Satisfaction Survey

[EXTERNAL EMAIL]
WARNING: This email originated outside of Leprino. Even if this looks like an internal Leprino email, it is not.
DO NOT provide your username, password, or any other personal information in response to this or any other email.
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DO NOT CLICK links or attachments unless you are positive the content is safe.
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[EXTERNAL EMAIL]
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[EXTERNAL EMAIL]
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[EXTERNAL EMAIL]
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DO NOT provide your username, password, or any other personal information in response to this or any other email.
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DO NOT CLICK links or attachments unless you are positive the content is safe.
IF IN DOUBT about the safety of this message, use the Report Phishing drop-down.

[EXTERNAL EMAIL]
WARNING: This email originated outside of Leprino. Even if this looks like an internal Leprino email, it is not.
DO NOT provide your username, password, or any other personal information in response to this or any other email.
LEPRINO WILL NEVER ask you for your username or password via email.

2. INDUSTRIAL ADMINISTRATIVE REPORT 1.0

INDUSTRIAL ADMINISTRATIVE REPORT 1.0

This report is required for all applications for TPDES permits and TLAPs. Contact the Applications Review and Processing Team at 512-239-4671 with any questions about completing this report

Item 1. Application Information and Fees (Instructions, Page 26)

a. Complete each field with the requested information, if applicable.

Applicant Name: Leprino Foods Company EPA ID No.: TX0 New Permit

Permit No.: WQ000 New Permit Expiration Date: New Permit

b. Check the box next to the appropriate authorization type.

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

c. Check the box next to the appropriate facility status.

☐ Active ☒ Inactive

d. Check the box next to the appropriate permit type.

☒ TPDES Permit ☐ TLAP

e. Check the box next to the appropriate application type.

☒ New

☐ Renewal with changes ☐ Renewal without changes

☐ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal ☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request: N/A

g. Application Fee

EPA Classification	**New**	**Major Amend. (with or without renewal)**	**Renewal (with or without changes)**	**Minor Amend. / Minor Mod. (without renewal)**
Minor facility not subject to EPA categorical effluent guidelines (*40 CFR Parts 400-471*)	☐ $350	☐ $350	☐ $315	☐ $150
Minor facility subject to EPA categorical effluent guidelines (*40 CFR Parts 400-471*)	☒ $1,250	☐ $1,250	☐ $1,215	☐ $150
Major facility	N/A [1]	☐ $2,050	☐ $2,015	☐ $450

For TCEQ Use Only

Segment Number ______________________County ____________________
Expiration Date _______________________Region ____________________

[1] All facilities are designated as minors until formally classified as a major by EPA.

h. Payment Information

Mailed

Check or money order No.: Click to enter text. Check or money order amt.: Click to enter text.

Named printed on check or money order: Click to enter text.

Epay

Voucher number: Click to enter text. Copy of voucher attachment: Click to enter text.

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN605980739

Note: Locate the customer number using the TCEQ's Central Registry Customer Search[2].

b. Legal name of the entity (applicant) applying for this permit: Leprino Foods Company

Note: The owner of the facility must apply for the permit. The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

☒ Mr. ☐ Ms. First/Last Name: Steve Fritzler

Title: Vice President Eastern Region Credential: Click to enter text.

d. Will the applicant have overall financial responsibility for the facility?

☒ Yes ☐ No

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 3. Co-applicant Information (Instructions, Page 27)

☒ Check this box if there is no co-applicant.; otherwise, complete the below questions.

a. Legal name of the entity (co-applicant) applying for this permit: N/A

Note: The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

b. Customer Number (if applicant is an existing customer): CN 6059800739

Note: Locate the customer number using the TCEQ's Central Registry Customer Search.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

☐ Mr. ☐ Ms. First/Last Name: N/A

Title: N/A Credential: N/A

d. Will the co-applicant have overall financial responsibility for the facility?

☐ Yes ☐ No

---

[2] https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 4. Core Data Form (Instructions, Pages 27)

a. Complete one Core Data Form (TCEQ Form 10400) for each customer (applicant and co-applicant(s)) and include as an attachment. If the customer type selected on the Core Data Form is Individual, complete Attachment 1 of the Administrative Report. Attachment: B

Item 5. Application Contact Information (Instructions, Page 27)

Provide names of two individuals who can be contact for additional information about this application. Indicate if the individual can be contact about administrative or technical information, or both.

a. ☒ Administrative Contact . ☐ Technical Contact

☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: N/A

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

b. ☒ Administrative Contact . ☒ Technical Contact

☒ Mr. ☐ Ms. Full Name (First and Last): Allen Rienstra

Title: Consultant Credential: Click to enter text.

Organization Name: Trinity Consultants

Mailing Address: 6150 Clifton Street

City: Beaumont State: Texas Zip Code: 77708

Phone No: 409-504-6933 Fax No: N/A Email: allen.rienstra@trinityconsultants.com

Attachment: N/A

Item 6. Permit Contact Information (Instructions, Pages 28)

Provide two names of individuals that can be contacted throughout the permit term.

a. ☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

b. ☒ Mr. ☐ Ms. Full Name (First and Last): Allen Rienstra

Title: Consultant Credential: Click to enter text.

Organization Name: Trinity Consultant

Mailing Address: 6150 Clifton Street

City: Beaumont State: Texas Zip Code: 77708

Phone No: 409-504-6933 Fax No: N/A Email: allen.rienstra@trinityconsultants.com

Attachment: N/A

Item 7. Billing Contact Information (Instructions, Page 28)

The permittee is responsible for paying the annual fee. The annual fee will be assessed for permits **in effect on September 1 of each year**. The TCEQ will send a bill to the address provided in this section. The permittee is responsible for terminating the permit when it is no longer needed (form TCEQ-20029).

Provide the complete mailing address where the annual fee invoice should be mailed and the name and phone number of the permittee's representative responsible for payment of the invoice.

☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

Item 8. DMR/MER Contact Information (Instructions, Page 28)

Provide the name and mailing address of the person delegated to receive and submit DMRs or MERs. **Note:** DMR data must be submitted through the NetDMR system. An electronic reporting account can be established once the facility has obtained the permit number.

☒ Mr. ☐ Ms. Full Name (First and Last): James Frazier

Title: Environmental Scientist II Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-264-5372 Fax No: N/A Email: jfrazier@leprinofoods.com

Item 9. NOTICE INFORMATION (Instructions, Pages 28

a. Individual Publishing the Notices

☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

b. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package (only for NORI, NAPD will be sent via regular mail)

☒ E-mail: allen.rienstra@trinityconsultants.com; hbradish@leprinofoods.com

☐ Fax: N/A

☒ Regular Mail (USPS)

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

c. Contact in the Notice

☐ Mr. ☒ Ms Full Name (First and Last): Kim DeVigil

Title: Director of Communications Credential: Click to enter text.

Organization Name: Leprino Foods Company

Phone No: 303-264-5336 Fax No: N/A Email: kdevigil@leprinofoods.com

d. Public Viewing Location Information

Note: If the facility or outfall is located in more than one county, provide a public viewing place for each county.

Public building name: TCEQ – Region 2 Location within the building: Reception Area

Physical Address of Building: 5012 50th St #100

City: Lubbock County: Lubbock

e. Bilingual Notice Requirements

This information is required for new, major amendment, and renewal applications. It is not required for minor amendment or minor modification applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are required.

1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

   ☒ Yes ☐ No ☐ N/A (Minor amendment or modification)

   If no, publication of an alternative language notice is not required; skip to Item 8 (Regulated Entity and Permitted Site Information.)

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

   ☒ Yes ☐ No ☐ N/A (Minor amendment or modification)

3. Do the students at these schools attend a bilingual education program at another location?

   ☐ Yes ☒ No ☐ N/A (Minor amendment or modification)

4. Would the school be required to provide a bilingual education program, but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☐ Yes ☒ No ☐ N/A (Minor amendment or modification)

5. If the answer is yes to question 1, 2, 3, or 4, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

f. Plain Language Summary Template – Complete the Plain Language Summary at the end of this application.

Item 10. Regulated Entity and Permitted Site Information (Instructions Pages 29-30)

a. TCEQ issued Regulated Entity Number (RN), if available: RN 111422333

Note: If your business site is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search the TCEQ's

LEPRINO_000026

Central Registry to determine the RN or to see if the larger site may already be registered as a Regulated Entity. If the site is found, provide the assigned RN.

b. Name of project or site (the name known by the community where located): Leprino Foods Lubbock Manufacturing Facility

c. Is the location address of the facility in the existing permit the same?

☐ Yes ☐ No ☒ N/A (new permit)

Note: If the facility is located in Bexar, Comal, Hays, Kinney, Medina, Travis, Uvalde, or Williamson County, additional information concerning protection of the Edwards Aquifer may be required.

d. Owner of treatment facility:

☐ Mr. ☐ Ms. Full Name (First and Last): N/A

or Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 970-347-5115 Fax No: N/A Email: jherrud@leprinofoods.com

e. Ownership of facility: ☐ Public ☒ Private ☐ Both ☐ Federal

f. Owner of land where treatment facility is or will be: Leprino Foods Company

☐ Mr. ☐ Ms. Full Name (First and Last): N/A

or Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 970-347-5115 Fax No: N/A Email: jherrud@leprinofoods.com

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years (In some cases, a lease may not suffice - see instructions). Attachment: N/A

g. Owner of effluent TLAP disposal site (if applicable): N/A

☐ Mr. ☐ Ms. Full Name (First and Last): **N/A**

or Organization Name: **N/A**

Mailing Address: **N/A**

City: **N/A** State: **N/A** Zip Code: **N/A**

Phone No: **N/A** Fax No: **N/A** Email: **N/A**

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: **N/A**

h. Owner of sewage sludge disposal site (if applicable):

☐ Mr. ☐ Ms. Full Name (First and Last): **N/A**

or Organization Name: **N/A**

Mailing Address: **N/A**

City: **N/A** State: **N/A** Zip Code: **N/A**

Phone No: **N/A** Fax No: **N/A** Email: **N/A**

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: N/A

Item 11. TDPES Discharge/TLAP Disposal Information (Instructions, Pages 31-32)

a. Is the facility located on or does the treated effluent cross Native American Land?

☐ Yes ☒ No

b. Attach an original full size USGS Topographic Map (or an 8.5"×11" reproduced portion for renewal or amendment applications) with all required information. Check the box next to each item below to confirm it has been included on the map.

☒ One-mile radius

☒ Three-miles downstream information

☒ Applicant's property boundaries

☒ Treatment facility boundaries

☒ Labeled point(s) of discharge

☒ Highlighted discharge route(s)

☐ Effluent disposal site boundaries

☒ All wastewater ponds

☐ Sewage sludge disposal site

☒ New and future construction

Attachment: D

c. Is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: N/A

d. Are the point(s) of discharge in the existing permit correct?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: Outfall 001 discharges into Canyon Lake #6 – Classified Segment 1241A

e. Are the discharge route(s) in the existing permit correct?

☐ Yes ☒ No or New Permit

If no, or a new permit, provide an accurate description of the discharge route: Discharges to multiple energy dissipation controls will be pumped from the facility via a 14" force main approximately 2.7 miles to energy dissipation structures, then to a 24" HDPE line to the outfall structure located in Canyon Lake #6.

f. City nearest the outfall(s): Lubbock

g. County in which the outfalls(s) is/are located: Lubbock

h. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

☐ Yes ☒ No

If yes, indicate by a check mark if: ☐ Authorization granted ☐ Authorization pending

For new and amendment applications, attach copies of letters that show proof of contact and provide the approval letter upon receipt. Attachment: N/A

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: N/A

i. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: N/A

j. City nearest the disposal site: N/A

k. County in which the disposal site is located: **N/A**

l. Disposal Site Latitude: **N/A** Longitude: **N/A**

m. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: **N/A**

n. For TLAPs, identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: **N/A**

Item 12. MISCELLANEOUS INFORMATION (Instructions, Page 33)

a. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

☐ Yes ☒ No

If yes, list each person: **N/A**

b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the account no.: **N/A** and total amount due: **N/A**

c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the enforcement order no.: **N/A** and amount due: **N/A**

Item 13. SIGNATURE PAGE (Instructions, Pages 33-34)

Permit No: WQ000 New Permit

Applicant Name: Joseph Herrud

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

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document and can provide documentation in proof of such authorization upon request.

Signatory name (typed or printed): Joseph Herrud

Signatory title: Senior Director of Environmental Engineering

Signature: ______________________________ Date: ____________________
(Use blue ink)

Subscribed and Sworn to before me by the said ______________________________

on this ______________________ day of ____________________, 20______.

My commission expires on the ______________ day of ____________________, 20______.

____
Notary Public

[SEAL]

____
County, Texas

Note: *If co-applicants are necessary, each entity must submit an original, separate signature page.*

ATTACHMENT 1

INDIVIDUAL INFORMATION

Item 1. Individual information (Instructions, Page 38)

Complete this attachment if the facility applicant or co-applicant is an individual. Make additional copies of this attachment if both are individuals.

Prefix (Mr., Ms., or Miss): N/A

Full legal name (first, middle, and last): **N/A**

Driver's License or State Identification Number: **N/A**

Date of Birth: **N/A**

Mailing Address: **N/A**

City, State, and Zip Code: **N/A**

Phone No.: **N/A N/A**

Fax No.: **N/A**

E-mail Address: **N/A**

CN: **N/A**

Plain Language Summary for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

Leprino Foods Company (CN605980739) proposes to operate Leprino Foods Lubbock Manufacturing Facility (RN111422333) a cheese (except cottage cheese) manufacturing facility. The facility will be located approximately 0.5 miles east of East Loop 289, north of E 19^{th} St and south of E 4^{th} St, in Lubbock, Lubbock County, Texas 76403. The new application to discharge 2,000,000 gallons per day of treated wastewater, composing of food manufacturing process water, and cooling water for discharge to Outfall 001. With the exception of brine water, process wastewater and cooling water will treated by an onsite wastewater treatment plant. Wastewater and cooling water discharge will be continuous. All flows will be pumped from the facility through a 14" force main to an energy dissipation structure thence to a 24" HDPE line to the outfall structure (001) located in Canyon Lake #6 – classified segment 1241A. Process and cooling water will be supplied by Lubbock Public Water System owned and operated by the City of Lubbock (CN600130736, RN101248722). The facility will be equipped with four lagoons for purpose of wastewater management. Brine will be kept separate from the wastewater streams in production and have dedicated lift stations to send to two evaporation lagoons. Two additional lagoons will be utilized for effluent storage in the event of corrective action measures of emergency conditions. Solids collected in the evaporation lagoons will be removed on a two-year cycle by registered waste haulers. Domestic sewage will be routed to the Southeast Water Reclamation Plant Wastewater Treatment Facility WQ0010353002.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP

AGUAS RESIDUALES INDUSTRIALES/AGUAS PLUVIALES

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no son representaciones federales exigibles de la solicitud de permiso.

Leprino Foods Company (CN605980739) propone operar Leprino Foods Lubbock Manufacturing Facility (RN111422333) una instalación de fabricación de queso (excepto queso cottage). La instalación estará ubicada aproximadamente a 0,5 millas al este de East Loop 289, al norte de E 19th St y al sur de E 4th St, en Lubbock, Condado de Lubbock, Texas 76403. La nueva solicitud de vertido de 2.000.000 de galones diarios de aguas residuales tratadas, compuestas por agua de proceso de fabricación de alimentos y agua de refrigeración para su vertido en el emisor 001. Con la excepción del agua de salmuera, las aguas residuales de proceso y el agua de refrigeración serán tratadas por una planta de tratamiento de aguas residuales in situ. El vertido de aguas residuales y de refrigeración será continuo. Todos los flujos se bombearán desde la instalación a través de una tubería de impulsión de 14" hasta una estructura de disipación de energía y de ahí a una línea de HDPE de 24" hasta la estructura de vertido (001) situada en el lago Canyon #6 - segmento clasificado 1241A. El agua de proceso y de refrigeración será suministrada por el sistema público de agua de Lubbock, propiedad de la ciudad de Lubbock y operado por ella (CN600130736, RN101248722). La instalación estará equipada con cuatro lagunas para la gestión de las aguas residuales. La salmuera se mantendrá separada de los flujos de aguas residuales en la producción y tendrá estaciones de bombeo específicas para enviarla a dos lagunas de evaporación. Otras dos lagunas se utilizarán para el almacenamiento de efluentes en caso de que se adopten medidas correctoras en situaciones de emergencia. Los sólidos recogidos en las lagunas de evaporación serán retirados en un ciclo de dos años por transportistas de residuos registrados. Las aguas residuales domésticas se dirigirán a la planta de tratamiento de aguas residuales del sureste WQ0010353002.

3. INDUSTRIAL ADMINISTRATIVE REPORT 1.1

INDUSTRIAL ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Item 1. AFFECTED LANDOWNER INFORMATION (Instructions, Pages 35-36)

a. Attach a landowner map or drawing, with scale, as applicable. Check the box next to each item to confirm it has been provided.

☒ The applicant's property boundaries.

☒ The facility site boundaries within the applicant's property boundaries.

☒ The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone.

☒ The property boundaries of all landowners surrounding the applicant's property. (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)

☒ The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream.

☒ The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge.

☒ The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides.

☒ The boundaries of the effluent disposal site (e.g., irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property.

☒ The property boundaries of all landowners surrounding the applicant's property boundaries where the effluent disposal site is located.

☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners within one-quarter mile of the applicant's property boundaries where the sewage sludge land application site is located.

☐ The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (e.g., sludge surface disposal site or sludge monofil) is located.

Attachment: F

b. Check the box next to the format of the landowners list:

☒ Readable/Writeable CD ☐ Four sets of labels

Attachment: F

d. Provide the source of the landowners' names and mailing addresses: Lubbock County Appraisal District

e. As required by Texas Water Code § 5.115, is any permanent school fund land affected by this application?

☐ Yes ☒ No

If yes, provide the location and foreseeable impacts and effects this application has on the land(s): N/A

Item 2. ORIGINAL PHOTOGRAPHS (Instructions, Page 37)

Provide original ground level photographs. Check the box next to each of the following items to indicate it is included.

☒ At least one original photograph of the new or expanded treatment unit location.

☒ At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.

☒ At least one photograph of the existing/proposed effluent disposal site.

☒ A plot plan or map showing the location and direction of each photograph.

Attachment: G

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4. SUPPLEMENTAL PERMIT INFORMATION FORM

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: _____Renewal _____Major Amendment ____Minor Amendment _____New

County: ______________________________________ Segment Number: __________________

Admin Complete Date: _______________________

Agency Receiving SPIF:

______ Texas Historical Commission ______ U.S. Fish and Wildlife

______ Texas Parks and Wildlife Department ______ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 37)

The SPIF must be completed as a separate document. The TCEQ will mail a copy of the SPIF to each agency as required by the TCEQ agreement with EPA. If any of the items are not completely addressed or further information is needed, you will be contacted to provide the information before the permit is issued. Each item must be completely addressed.

Do not refer to a response of any item in the permit application form. Each attachment must be provided with this form separately from the administrative report of the application. The application will not be declared administratively complete without this form being completed in its entirety including all attachments.

The following applies to all applications:

1. Permittee Name: Leprino Foods Company

2. Permit No.: WQ000 New Permit EPA ID No.: TX0 New Permit

3. Address of the project (location description that includes street/highway, city/vicinity, and county): The Production Plant street address is 4301 East 19th Street, Lubbock, TX. The Wastewater Treatment Plant street address is 4502 East 4th Street, Lubbock, TX 79403. The Production Plant and the Treatment Plant are located on two contiguous tracts owned by Leprino Foods Company. The property is located approximately 0.5 miles to the east of Texas 289 Loop Frontage and bordered on the south by E 19th St, and on the north by E 4th Street,

4. Provide the name, address, phone and fax number, and email address of an individual that can be contacted to answer specific questions about the property.

   Full Name (First and Last): Hannah Bradish

   Organization Name: Leprino Foods Company Mailing Address: 1830 W. 38th Ave.

   City: Denver State: Colorado Zip Code: 80211

   Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

5. List the county in which the facility is located: Lubbock

LEPRINO_000038

6. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property: N/A

7. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number: Discharges will be pumped from the facility via a 14” force main approximately 2.7 miles to two energy dissipation structures, then to a 24” HDPE line to a subsurface outfall structure located in Canyon Lake #6.

8. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report.) Attachment: H

9. Provide original photographs of any structures 50 years or older on the property. Attachment: N/A

10. Does your project involve any of the following? Check all that apply.

    ☒ Proposed access roads, utility lines, construction easements

    ☐ Visual effects that could damage or detract from a historic property’s integrity

    ☐ Vibration effects during construction or as a result of project design

    ☐ Additional phases of development that are planned for the future

    ☐ Sealing caves, fractures, sinkholes, other karst features

    ☐ Disturbance of vegetation or wetlands

11. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features): Surface area to be disturbed is approximately 45 acres. Structural fill will be added for site preparation. No caves or karst features are expected to be present within the construction area.

12. Describe existing disturbances, vegetation, and land use: Construction activities have started and are covered under a Stormwater General Permit for Construction Activities (held by Whiting Turner).

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

13. List construction dates of all buildings and structures on the property: 11/22/2022

14. Provide a brief history of the property, and name of the architect/builder, if known: Property has been used for agricultural farming and is undeveloped. The Probst Group is the engineering firm of record for designing the facility layout and treatment facility.

5. INDUSTRIAL TECHNICAL REPORT 1.0

TECHNICAL REPORT 1.0
INDUSTRIAL

The following information **is required** for all applications for a TLAP or an individual TPDES discharge permit.

For additional information or clarification on the requested information, refer to the Instructions for Completing the Industrial Wastewater Permit Application[1] available on the TCEQ website.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate that the item has been considered. Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided for the item the attachment addresses.

NOTE: This application is for an industrial wastewater permit only. Additional authorizations from the TCEQ Waste Permits Division or the TCEQ Air Permits Division may be needed.

1. FACILITY/SITE INFORMATION (Instructions, Pages 39-40)

a. Describe the general nature of the business and type(s) of industrial and commercial activities. Include all applicable SIC codes (up to 4).

Leprino Foods Company proposes to construct a new mozzarella cheese and nutrition manufacturing facility in Lubbock, Texas. The manufactured dairy-based cheese will be for commercial food operators for public consumption. The Facility will be operating under the Primary Standard Industry Code: 2022 (Natural, Processed, and Imitation Cheese) and NAICS Code: 311513. See Attachment I for more details.

b. Describe all wastewater-generating processes at the facility.

Raw fluid milk is brought into the facility as the main ingredient to the cheese make process. The milk is reacted to coagulate the proteins and form cheese curds and liquid whey. The liquid whey is separated from the cheese and processed into nutrition products through separation and drying processes which removes the associated water. The associated water (COW water) and potable water used for daily sanitation is discharged to the onsite wastewater treatment plant and then discharged to Outfall 001. The brine used to cool and add salt to the cheese is managed in a separate evaporation system. Cooling water discharges, boiler water, and reverse osmosis reject water will also be sent to the wastewater treatment facility and then discharged to Outfall 001. See Attachment I for more details.

[1] https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html

c. Provide a list of raw materials, major intermediates, and final products handled at the facility.

Materials List

Raw Materials	Intermediate Products	Final Products
Milk	Permeate	Mozzarella Cheese
Nonfat dry milk	Liquid Whey	Whey Protein Powder
Salt	Cream	Sweet Whey Powder
Cellulose	Skim Milk	Permeate Powder
		Cream

Attachment: N/A

d. Attach a facility map (drawn to scale) with the following information:

- Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.
- The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, outfalls, and sampling points, if significantly different from outfall locations.

Attachment: K

e. Is this a new permit application for an existing facility?

☐ Yes ☒ No

If **yes**, provide background discussion: N/A

f. Is/will the treatment facility/disposal site be located above the 100-year frequency flood level.

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: FEMA FIRM 48303CO310E

If **no**, provide the elevation of the 100-year frequency flood plain and describe what protective measures are used/proposed to prevent flooding (including tail water and rainfall run-on controls) of the treatment facility and disposal area: N/A

Attachment: N/A

g. For **new** or **major amendment** permit applications, will any construction operations result in a discharge of fill material into a water in the state?

☒ Yes ☐ No ☐ N/A (renewal only)

h. If **yes** to Item 1.g, has the applicant applied for a USACE CWA Chapter 404 Dredge and Fill permit?

☐ Yes ☒ No

If **yes**, provide the permit number: NWP-58

If **no**, provide an approximate date of application submittal to the USACE: N/A

2. TREATMENT SYSTEM (Instructions, Page 40)

a. List any physical, chemical, or biological treatment process(es) used/proposed to treat wastewater at this facility. Include a description of each treatment process, starting with initial treatment and finishing with the outfall/point of disposal.

The wastewater treatment plant (WWTP) will use a combination of anaerobic and aerobic activated sludge systems to treat high strength wastewater (HSW) and low strength wastewater (LSW) generated in production. The outfall point of disposal will be Canyon Lake #6. For wastewater treatment details please refer to Memo: Detailed Process Description for Project Armadillo found in Attachment P.

b. Attach a flow schematic **with a water balance** showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal.

Attachment: L

3. IMPOUNDMENTS (Instructions, Pages 40-42)

Does the facility use or plan to use any wastewater impoundments (e.g., lagoons or ponds?)

☒ Yes ☐ No

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a - 3.e** for **new or proposed** impoundments. **NOTE:** See instructions, Pages 40-42, for additional information on the attachments required by Items 3.a – 3.e.

a. Complete the table with the following information for each existing, new, or proposed impoundment:

Use Designation: Indicate the use designation for each impoundment as Treatment (**T**), Disposal (**D**), Containment (**C**), or Evaporation (**E**).

Associated Outfall Number: Provide an outfall number if a discharge occurs or will occur.

Liner Type: Indicate the liner type as Compacted clay liner (**C**), In-situ clay liner (**I**), Synthetic/plastic/rubber liner (**S**), or Alternate liner (**A**). **NOTE:** See instructions for further detail on liner specifications. If an alternate liner (A) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

Leak Detection System: If any leak detection systems are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no.

Groundwater Monitoring Wells and Data: If groundwater monitoring wells are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no. Attach any existing groundwater monitoring data.

Dimensions: Provide the dimensions, freeboard, surface area, storage capacity of the impoundments, and the maximum depth (not including freeboard). For impoundments with irregular shapes, submit surface area instead of length and width.

Compliance with 40 CFR Part 257, Subpart D: If the impoundment is required to be in compliance with 40 CFR Part 257, Subpart D, enter **Y** for yes. Otherwise, enter **N** for no.

Date of Construction: Enter the date construction of the impoundment commenced (mm/dd/yy).

Impoundment Information

Parameter	Evaporation Lagoon	Evaporation Lagoon	Non-Compliant Effluent Lagoon	Calamity Lagoon
Use Designation: (T) (D) (C) or (E)	E	E	C	T
Associated Outfall Number	N/A	N/A	001	001
Liner Type (C) (I) (S) or (A)	S	S	S	S
Alt. Liner Attachment Reference	N/A	N/A	N/A	N/A
Leak Detection System, Y/N	Y	Y	Y	Y
Groundwater Monitoring Wells, Y/N	N	N	N	N
Groundwater Monitoring Data Attachment	N	N	N	N
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y	Y	Y	Y
Length (ft)	635	635	590	Irregular
Width (ft)	635	635	320	Irregular
Max Depth From Water Surface (ft), Not Including Freeboard	5.5	5.5	10.5	6.5
Freeboard (ft)	18”	18”	18”	18”
Surface Area (acres)	9.25	9.25	3.25	0.8
Storage Capacity (gallons)	12,500,000	12,500,000	10,500,000	1,500,000
40 CFR Part 257, Subpart D, Y/N	N	N	N	N
Date of Construction (estimated)	09/01/2022	09/01/2022	09/01/2022	09/01/2022

Impoundment Information

Parameter	Pond # N/A	Pond # N/A	Pond # N/A	Pond # N/A
Use Designation: (T) (D) (C) or (E)	N/A	N/A	N/A	N/A
Associated Outfall Number	N/A	N/A	N/A	N/A
Liner Type (C) (I) (S) or (A)	N/A	N/A	N/A	N/A
Alt. Liner Attachment Reference	N/A	N/A	N/A	N/A
Leak Detection System, Y/N	N/A	N/A	N/A	N/A
Groundwater Monitoring Wells, Y/N	N/A	N/A	N/A	N/A
Groundwater Monitoring Data Attachment	N/A	N/A	N/A	N/A
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	N/A	N/A	N/A	N/A
Length (ft)	N/A	N/A	N/A	N/A
Width (ft)	N/A	N/A	N/A	N/A
Max Depth From Water Surface (ft), not including freeboard	N/A	N/A	N/A	N/A
Freeboard (ft)	N/A	N/A	N/A	N/A
Surface Area (acres)	N/A	N/A	N/A	N/A
Storage Capacity (gallons)	N/A	N/A	N/A	N/A

Parameter	Pond # N/A	Pond # N/A	Pond # N/A	Pond # N/A
40 CFR Part 257, Subpart D, Y/N	N/A	N/A	N/A	N/A
Date of Construction	N/A	N/A	N/A	N/A

Attachment: N

The following information (**Items 3.b – 3.e**) is required only for **new or proposed** impoundments.

b. For new or proposed impoundments, attach any available information on the following items. If attached, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed**.

i. Liner data

☐ Yes ☐ No ☒ Not yet designed

ii. Leak detection system or groundwater monitoring data

☐ Yes ☐ No ☒ Not yet designed

iii. Groundwater impacts

☐ Yes ☒ No ☐ Not yet designed

NOTE: Item b.iii is required if the bottom of the pond is not above the seasonal high-water table in the shallowest water-bearing zone.

Attachment: N

For TLAP applications: Items 3.c – 3.e are **not required**, continue to Item 4.

c. Attach a USGS map or a color copy of original quality and scale which accurately locates and identifies all known water supply wells and monitor wells within ½-mile of the impoundments.

Attachment: N

d. Attach copies of State Water Well Reports (e.g., driller's logs, completion data, etc.), and data on depths to groundwater for all known water supply wells including a description of how the depths to groundwater were obtained.

Attachment: N

e. Attach information pertaining to the groundwater, soils, geology, pond liner, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

Attachment: N

4. OUTFALL/DISPOSAL METHOD INFORMATION (Instructions, Pages 42-43)

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge operations, and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/or numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

Outfall Latitude and Longitude

Outfall Number	Latitude-decimal degrees	Longitude-decimal degrees
001	33.576301	-101.812924

Outfall Location Description

Outfall Number	Location Description
001	At Canyon Lake #6 approximately 30 from the edge of water on the bank (water surface elevation=3131.50) and approximately 3' from the top of the outfall box to the water surface.

Description of Sampling Points (if different from Outfall location)

Outfall Number	Description of Sampling Point
001	Sampling point will be collected in the main WWTP just downstream after treatment from the effluent pumps.

Outfall Flow Information – Permitted and Proposed

Outfall Number	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
001	N/A	N/A	2.0	2.5	10/01/2024

Outfall Discharge – Method and Measurement

Outfall Number	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	Electro-magnetic flowmeter

Outfall Discharge – Flow Characteristics

Outfall Number	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
001	N	Y	N	24	31	12
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Outfall Number	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Wastestream Contributions

Outfall No.: 001

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Milk Receiving	0.14	7.18
Cheese	0.64	32.82
Processing	0.05	2.56
Nutrition	0.56	28.72
Boilers/Utilities	0.56	2.56
Cooling Tower/Evap. Condenser Blowdown	0.25	12.82
Potential RO Reject	0.26	13.33

Outfall No.: N/A

Contributing Wastestreams	Volume (MGD)	% of Total Flow

Outfall No.: N/A

Contributing Wastestreams	Volume (MGD)	% of Total Flow

Contributing Wastestreams	Volume (MGD)	% of Total Flow

Attachment: L

5. BLOWDOWN AND ONCE-THROUGH COOLING WATER DISCHARGES (Instructions, Page 44)

a. Does the facility use/propose to use any cooling towers which discharge blowdown or other wastestreams to the outfall(s)?

☒ Yes ☐ No

NOTE: If the facility uses or plans to use cooling towers, Item 12 **is required**.

b. Does the facility use or plan to use any boilers that discharge blowdown or other wastestreams to the outfall(s)?

☒ Yes ☐ No

c. Does or will the facility discharge once-through cooling water to the outfall(s)?

☐ Yes ☒ No

NOTE: If the facility uses or plans to use once-through cooling water, Item 12 **is required**.

d. If **yes** to Items 5.a, 5.b, **or** 5.c, attach the SDS with the following information for each chemical additive.

- Manufacturers Product Identification Number
- Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)
- Chemical composition including CASRN for each ingredient
- Classify product as non-persistent, persistent, or bioaccumulative
- Product or active ingredient half-life
- Frequency of product use (e.g., 2 hours/day once every two weeks)
- Product toxicity data specific to fish and aquatic invertebrate organisms
- Concentration of whole product or active ingredient, as appropriate, in wastestream.

Attach a summary of this information in addition to the submittal of the SDS for each specific wastestream and the associated chemical additives and specify which outfalls are affected.

Attachment: M

e. Cooling Towers and Boilers

If **yes** to either Item 5.a **or** 5.b, complete the following table.

Cooling Towers and Boilers

Type of Unit	Number of Units	Dly Avg Blowdown (gallons/day)	Dly Max Blowdown (gallons/day)
Cooling Towers (1 unit) /Evaporative Condensers (6 units)	7	250,000	275,000
Boilers	5	35,000	50,000

6. STORMWATER MANAGEMENT (Instructions, Page 44)

Are there any existing/proposed outfalls which discharge stormwater associated with industrial activities, as defined at *40 CFR § 122.26(b)(14)*, commingled with any other wastestream?

☐ Yes ☒ No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in some manner which may result in exposure of the activities or materials to stormwater: N/A

7. DOMESTIC SEWAGE, SEWAGE SLUDGE, AND SEPTAGE MANAGEMENT AND DISPOSAL (Instructions, Page 45)

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.

☒ Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. **Complete Item 7.b**.

☒ Domestic sewage disposed of by an on-site septic tank and drainfield system. **Complete Item 7.b**.

☐ Domestic and industrial treatment sludge **ARE commingled** prior to use or disposal.

☐ Industrial wastewater and domestic sewage are treated separately, and the respective sludge **IS NOT commingled** prior to sludge use or disposal. **Complete Worksheet 5.0**.

☐ Facility is a POTW. **Complete Worksheet 5.0**.

☐ Domestic sewage is not generated on-site.

☐ Other (e.g., portable toilets), specify and **Complete Item 7.b**: N/A

b. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste-disposal facility which receives the domestic sewage/septage. If hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.

Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.
Southeast Water Reclamation Plant Wastewater Treatment Facility	WQ0010353002
Septic System Hauler - TBD	TBD

8. IMPROVEMENTS OR COMPLIANCE/ENFORCEMENT REQUIREMENTS (Instructions, Page 45)

a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?

☐ Yes ☒ No

b. Has the permittee completed or planned for any improvements or construction projects?

☐ Yes ☒ No

c. If **yes** to either 8.a **or** 8.b, provide a brief summary of the requirements and a status update: N/A

9. TOXICITY TESTING (Instructions, Page 45)

Have any biological tests for acute or chronic toxicity been made on any of the discharges or on a receiving water in relation to the discharge within the last three years?

☐ Yes ☒ No

If **yes**, identify the tests and describe their purposes: N/A

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA.

Attachment: N/A

10. OFF-SITE/THIRD PARTY WASTES (Instructions, Page 45)

a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

☐ Yes ☒ No

If **yes**, provide responses to Items 10.b through 10.d below.

If **no**, proceed to Item 11.

b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility's activities.

Attachment: Click to enter text.

c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility's wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

☐ Yes ☐ No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

Attachment: Click to enter text.

d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

☐ Yes ☐ No

If **yes**, **Worksheet 6.0** of this application **is required**.

11. RADIOACTIVE MATERIALS (Instructions, Pages 46)

a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material	Concentration (pCi/L)
N/A	N/A

b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

Radioactive Materials Present in the Discharge

Radioactive Material	Concentration (pCi/L)
N/A	N/A

12. COOLING WATER (Instructions, Pages 46-47)

a. Does the facility use or propose to use water for cooling purposes?

☒ Yes ☐ No

If **no**, stop here. If **yes**, complete Items 12.b thru 12.f.

b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

☐ Yes ☒ No

If **yes**, stop here. If **no**, continue.

c. Cooling Water Supplier

i. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

Cooling Water Intake Structure(s) Owner(s) and Operator(s)

CWIS ID	LUBBOCK PUBLIC WATER SYSTEM			
Owner	City of Lubbock			
Operator	City of Lubbock			

ii. Cooling water is/will be obtained from a Public Water Supplier (PWS)

☒ Yes ☐ No

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here: PWS No. 1520002

iii. Cooling water is/will be obtained from a reclaimed water source?

☐ Yes ☐ No

If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here: N/A

iv. Cooling water is/will be obtained from an Independent Supplier

☐ Yes ☐ No

If **yes**, provide the actual intake flow of the Independent Supplier's CWIS that is/will be used to provide water for cooling purposes to the facility and proceed: N/A

If **no**, proceed to Item 12.d.

d. 316(b) General Criteria

i. The CWIS(s) used to provide water for cooling purposes to the facility has or will have a cumulative design intake flow of 2 MGD or greater.

☐ Yes ☐ No

ii. At least 25% of the total water withdrawn by the CWIS is/will be used at the facility exclusively for cooling purposes on an annual average basis.

☐ Yes ☐ No

iii. The CWIS(s) withdraw(s)/propose(s) to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

☐ Yes ☐ No

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*: Click to enter text.

If **yes** to all three questions in Item 12.d, the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to **Item 12.f**.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however, a determination is required based upon BPJ. Proceed to **Item 12.e**.

e. The facility does not meet the minimum requirements to be subject to the fill requirements of Section 316(b) **and uses/proposes to use cooling towers**.

☐ Yes ☐ No

If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ.

f. Oil and Gas Exploration and Production

i. The facility is subject to requirements at 40 CFR Part 435, Subparts A or D.

☐ Yes ☐ No

If **yes**, continue. If **no**, skip to Item 12.g.

ii. The facility is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u).

☐ Yes ☐ No

If **yes**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ. If **no**, skip to Item 12.g.iii.

g. Compliance Phase and Track Selection

i. Phase I – New facility subject to 40 CFR Part 125, Subpart I

☐ Yes ☐ No

If **yes**, check the box next to the facility's compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – AIF greater than 2 MGD, but less than 10 MGD

- Attach information required by *40 CFR §§ 125.86(b)(2)-(4)*.

☐ Track I – AIF greater than 10 MGD

- Attach information required by *40 CFR § 125.86(b)*.

☐ Track II

- Attach information required by *40 CFR § 125.86(c)*.

Attachment: Click to enter text.

ii. Phase II – Existing facility subject to 40 CFR Part 125, Subpart J

☐ Yes ☐ No

If **yes**, complete Worksheets 11.0 through 11.3, as applicable.

iii. Phase III – New facility subject to 40 CFR Part 125, Subpart N

☐ Yes ☐ No

If **yes**, check the box next to the facility's compliance track selection and provide the requested information.

☐ Track I – Fixed facility

- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – Not a fixed facility

- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except the CWIS latitude and longitude under Item 2.a).

☐ Track II – Fixed facility

- Attach information required by 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

Attachment: Click to enter text.

NOTE: Item 13 is required only for existing permitted facilities.

13. PERMIT CHANGE REQUESTS (Instructions, Pages 49-50)

a. Is the facility requesting a **major amendment** of an existing permit?

☐ Yes ☒ No

If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

N/A

b. Is the facility requesting any **minor amendments** to the permit?

☐ Yes ☒ No

If **yes**, list and discuss the requested changes.

N/A

c. Is the facility requesting any **minor modifications** to the permit?

☐ Yes ☒ No

If **yes**, list and discuss the requested changes.

N/A

6. WORKSHEET 1.0 EPA EFFLUENT GUIDELINES

WORKSHEET 1.0
EPA CATEGORICAL EFFLUENT GUIDELINES

This worksheet **is required** for all applications for TPDES permits for discharges of wastewaters subject to EPA categorical effluent limitation guidelines (ELGs).

1. CATEGORICAL INDUSTRIES (Instructions, Pages 50-52)

Is this facility subject to any of the 40 CFR categorical ELGs outlined on page 53 of the instructions?

☒ Yes ☐ No

If **no**, this worksheet is not required. If **yes**, provide the appropriate information in the table below.

40 CFR Effluent Guidelines

Industry	40 CFR Part
Dairy Products Processing	405

2. PRODUCTION/PROCESS DATA (Instructions, Page 54)

NOTE: For all TPDES permit applications requesting individual permit coverage for discharges of oil and gas exploration and production wastewater (discharges into or adjacent to water in the state, falling under the Oil and Gas Extraction Effluent Guidelines – 40 CFR Part 435), see Worksheet 12.0, Item 2 instead.

a. **Production Data**

Provide the appropriate data for effluent guidelines with production-based effluent limitations.

Production Data

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units
405.65 Subpart F	Please refer to Attachment O – Categorical Effluent Limits Analysis	Please refer to Attachment O – Categorical Effluent Limits Analysis	Pounds per 100 lb of BOD5 input

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units

b. **Organic Chemicals, Plastics, and Synthetic Fibers Manufacturing Data (40 CFR Part 414)**

Provide each applicable subpart and the percent of total production. Provide data for metal-bearing and cyanide-bearing wastestreams, as required by *40 CFR Part 414, Appendices A and B*.

Percentages of Total Production

Subcategory	Percent of Total Production	Appendix A and B - Metal	Appendix A – Cyanide
N/A			

c. **Refineries (40 CFR Part 419)**

Provide the applicable subcategory and a brief justification.

N/A

3. PROCESS/NON-PROCESS WASTEWATER FLOWS (Instructions, Page 54)

Provide a breakdown of wastewater flow(s) generated by the facility, including both process and non-process wastewater flow(s). Specify which wastewater flows are to be authorized for discharge under this permit and the disposal practices for wastewater flows, excluding domestic, which are not to be authorized for discharge under this permit.

Raw fluid milk is brought into the facility as the main ingredient to the cheesemake process. The milk is reacted to coagulate the proteins and form cheese curds and liquid whey. The liquid whey is separated from the cheese and processed into nutrition products through separation and drying processes which removes the associated water. The associated water (COW water) and potable water used for daily sanitation is discharged to the onsite wastewater treatment plant and then discharged to Outfall 001. The brine used to cool and add salt to the cheese is managed in a separate evaporation system. Cooling water discharges, boiler water, and reverse osmosis reject water will also be sent to the wastewater treatment facility and then discharged to Outfall 001. See Attachment I for more details.

4. NEW SOURCE DETERMINATION (Instructions, Page 54)

Provide a list of all wastewater-generating processes subject to EPA categorical ELGs, identify the appropriate guideline Part and Subpart, and provide the date the process/construction commenced.

Wastewater-generating Processes Subject to Effluent Guidelines

Process	EPA Guideline: Part	EPA Guideline: Subpart	Date Process/ Construction Commenced
Manufacture of Mozzarella Cheese	405	F	10-01-2024/9-01-2022

7. WORKSHEET 2.0 POLLUTANT ANALYSIS REQUIREMENTS

WORKSHEET 2.0
POLLUTANT ANALYSES REQUIREMENTS

Worksheet 2.0 **is required** for all applications submitted for a TPDES permit. Worksheet 2.0 is not required for applications for a permit to dispose of all wastewater by land disposal or for discharges solely of stormwater associated with industrial activities.

1. LABORATORY ACCREDITATION (Instructions, Page 56)

Effective July 1, 2008, all laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification* with the following general exemptions:

a. The laboratory is an in-house laboratory and is:

i. periodically inspected by the TCEQ; or

ii. located in another state and is accredited or inspected by that state; or

iii. performing work for another company with a unit located in the same site; or

iv. performing pro bono work for a governmental agency or charitable organization.

b. The laboratory is accredited under federal law.

c. The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.

d. The laboratory supplies data for which the TCEQ does not offer accreditation.

Review *30 TAC Chapter 25* for specific requirements. The following certification statement shall be signed and submitted with every application. See Instructions, Page 34, for a list of approved signatories.

I, Click to enter text., certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

____

(Signature)

2. GENERAL TESTING REQUIREMENTS (Instructions, Pages 56-58)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): Click to enter text.

b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment:** Click to enter text.

3. SPECIFIC TESTING REQUIREMENTS (Instructions, Pages 58-69)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** Click to enter text.

TABLE 1 and TABLE 2 (Instructions, Page 58)

Completion of Tables 1 and 2 **is required** for **all external outfalls** for all TPDES permit applications.

Table 1 for Outfall No.: 001 – Proxy Data Sourced From Process Engineering

Samples are (check one): ☐ **Composite** ☐ **Grab**

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	< 5 mg/L	No Data	No Data	No Data
CBOD (5-day)	<5 mg/L	No Data	No Data	No Data
Chemical oxygen demand	< 50 mg/L	No Data	No Data	No Data
Total organic carbon	<100 mg/L	No Data	No Data	No Data
Dissolved oxygen	6 mg/L	No Data	No Data	No Data
Ammonia nitrogen	< 1 mg/L	No Data	No Data	No Data
Total suspended solids	< 10 mg/L	No Data	No Data	No Data
Nitrate nitrogen	< 100 mg/L	No Data	No Data	No Data
Total organic nitrogen	< 10 mg/L	No Data	No Data	No Data
Total phosphorus	< 1.5 mg/L	No Data	No Data	No Data
Oil and grease	< 10 mg/L	No Data	No Data	No Data
Total residual chlorine	< 0.1 mg/L	No Data	No Data	No Data
Total dissolved solids	< 2,500 mg/L	No Data	No Data	No Data
Sulfate	No Data	No Data	No Data	No Data
Chloride	< 500 mg/L	No Data	No Data	No Data
Fluoride	No Data	No Data	No Data	No Data
Total alkalinity (mg/L as $CaCO_3$)	< 2,000 mg/L	No Data	No Data	No Data
Temperature (°F)	<85 deg F	No Data	No Data	No Data
pH (standard units)	6.8 to 7.8 s.u	No Data	No Data	No Data

Table 2 for Outfall No.: 001 – Proxy Data Sourced From Process Engineering

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	No Data	No Data	No Data	No Data	2.5
Antimony, total	No Data	No Data	No Data	No Data	5
Arsenic, total	No Data	No Data	No Data	No Data	0.5
Barium, total	No Data	No Data	No Data	No Data	3
Beryllium, total	No Data	No Data	No Data	No Data	0.5
Cadmium, total	No Data	No Data	No Data	No Data	1
Chromium, total	No Data	No Data	No Data	No Data	3
Chromium, hexavalent	No Data	No Data	No Data	No Data	3
Chromium, trivalent	No Data	No Data	No Data	No Data	N/A
Copper, total	<20	No Data	No Data	No Data	2
Cyanide, available	No Data	No Data	No Data	No Data	2/10
Lead, total	No Data	No Data	No Data	No Data	0.5
Mercury, total	No Data	No Data	No Data	No Data	0.005/0.0005
Nickel, total	No Data	No Data	No Data	No Data	2
Selenium, total	No Data	No Data	No Data	No Data	5
Silver, total	No Data	No Data	No Data	No Data	0.5
Thallium, total	No Data	No Data	No Data	No Data	0.5
Zinc, total	No Data	No Data	No Data	No Data	5.0

TABLE 3 (Instructions, Page 58)

Completion of Table 3 **is required** for all **external outfalls** which discharge process wastewater.

Partial completion of Table 3 **is required** for all **external outfalls** which discharge non-process wastewater and stormwater associated with industrial activities commingled with other wastestreams (see instructions for additional guidance).

Table 3 for Outfall No.: 001 – Proxy Data Sourced From Process Engineering

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Acrylonitrile	No Data	No Data	No Data	No Data	50
Anthracene	No Data	No Data	No Data	No Data	10
Benzene	No Data	No Data	No Data	No Data	10
Benzidine	No Data	No Data	No Data	No Data	50
Benzo(a)anthracene	No Data	No Data	No Data	No Data	5
Benzo(a)pyrene	No Data	No Data	No Data	No Data	5
Bis(2-chloroethyl)ether	No Data	No Data	No Data	No Data	10
Bis(2-ethylhexyl)phthalate	No Data	No Data	No Data	No Data	10
Bromodichloromethane [Dichlorobromomethane]	No Data	No Data	No Data	No Data	10
Bromoform	No Data	No Data	No Data	No Data	10
Carbon tetrachloride	No Data	No Data	No Data	No Data	2
Chlorobenzene	No Data	No Data	No Data	No Data	10
Chlorodibromomethane [Dibromochloromethane]	No Data	No Data	No Data	No Data	10
Chloroform	No Data	No Data	No Data	No Data	10
Chrysene	No Data	No Data	No Data	No Data	5
m-Cresol [3-Methylphenol]	No Data	No Data	No Data	No Data	10
o-Cresol [2-Methylphenol]	No Data	No Data	No Data	No Data	10
p-Cresol [4-Methylphenol]	No Data	No Data	No Data	No Data	10
1,2-Dibromoethane	No Data	No Data	No Data	No Data	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	No Data	No Data	No Data	No Data	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	No Data	No Data	No Data	No Data	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	No Data	No Data	No Data	No Data	10
3,3'-Dichlorobenzidine	No Data	No Data	No Data	No Data	5
1,2-Dichloroethane	No Data	No Data	No Data	No Data	10
1,1-Dichloroethene [1,1-Dichloroethylene]	No Data	No Data	No Data	No Data	10
Dichloromethane [Methylene chloride]	No Data	No Data	No Data	No Data	20
1,2-Dichloropropane	No Data	No Data	No Data	No Data	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,3-Dichloropropene [1,3-Dichloropropylene]	No Data	No Data	No Data	No Data	10
2,4-Dimethylphenol	No Data	No Data	No Data	No Data	10
Di-n-Butyl phthalate	No Data	No Data	No Data	No Data	10
Ethylbenzene	No Data	No Data	No Data	No Data	10
Fluoride	No Data	No Data	No Data	No Data	500
Hexachlorobenzene	No Data	No Data	No Data	No Data	5
Hexachlorobutadiene	No Data	No Data	No Data	No Data	10
Hexachlorocyclopentadiene	No Data	No Data	No Data	No Data	10
Hexachloroethane	No Data	No Data	No Data	No Data	20
Methyl ethyl ketone	No Data	No Data	No Data	No Data	50
Nitrobenzene	No Data	No Data	No Data	No Data	10
N-Nitrosodiethylamine	No Data	No Data	No Data	No Data	20
N-Nitroso-di-n-butylamine	No Data	No Data	No Data	No Data	20
Nonylphenol	No Data	No Data	No Data	No Data	333
Pentachlorobenzene	No Data	No Data	No Data	No Data	20
Pentachlorophenol	No Data	No Data	No Data	No Data	5
Phenanthrene	No Data	No Data	No Data	No Data	10
Polychlorinated biphenyls (PCBs) (**)	No Data	No Data	No Data	No Data	0.2
Pyridine	No Data	No Data	No Data	No Data	20
1,2,4,5-Tetrachlorobenzene	No Data	No Data	No Data	No Data	20
1,1,2,2-Tetrachloroethane	No Data	No Data	No Data	No Data	10
Tetrachloroethene [Tetrachloroethylene]	No Data	No Data	No Data	No Data	10
Toluene	No Data	No Data	No Data	No Data	10
1,1,1-Trichloroethane	No Data	No Data	No Data	No Data	10
1,1,2-Trichloroethane	No Data	No Data	No Data	No Data	10
Trichloroethene [Trichloroethylene]	No Data	No Data	No Data	No Data	10
2,4,5-Trichlorophenol	No Data	No Data	No Data	No Data	50
TTHM (Total trihalomethanes)	No Data	No Data	No Data	No Data	10
Vinyl chloride	No Data	No Data	No Data	No Data	10

(*) Indicate units if different from µg/L.
(**) Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB-1016. If all non-detects, enter the highest non-detect preceded by a “<”.

TABLE 4 (Instructions, Pages 58-59)

Partial completion of Table 4 **is required** for each **external outfall** based on the conditions below.

a. *Tributyltin*

Is this facility an industrial/commercial facility which currently or proposes to directly dispose of wastewater from the types of operations listed below or a domestic facility which currently or proposes to receive wastewater from the types of industrial/commercial operations listed below?

☐ Yes ☒ No

If **yes**, check the box next to each of the following criteria which apply and provide the appropriate testing results in Table 4 below (check all that apply).

☐ Manufacturers and formulators of tributyltin or related compounds.
☐ Painting of ships, boats and marine structures.
☐ Ship and boat building and repairing.
☐ Ship and boat cleaning, salvage, wrecking and scaling.
☐ Operation and maintenance of marine cargo handling facilities and marinas.
☐ Facilities engaged in wood preserving.
☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. *Enterococci (discharge to saltwater)*

i. This facility discharges/proposes to discharge directly into saltwater receiving waters **and** Enterococci bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

ii. Domestic wastewater is/will be discharged.

☐ Yes ☒ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

c. *E. coli (discharge to freshwater)*

i. This facility discharges/proposes to discharge directly into freshwater receiving waters **and** *E. coli* bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

ii. Domestic wastewater is/will be discharged.

☐ Yes ☒ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

Table 4 for Outfall No.: **N/A**
Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1	Sample 2	Sample 3	Sample 4	MAL
Tributyltin (µg/L)	N/A	N/A	N/A	N/A	0.010
Enterococci (cfu or MPN/100 mL)	N/A	N/A	N/A	N/A	N/A
E. coli (cfu or MPN/100 mL)	N/A	N/A	N/A	N/A	N/A

TABLE 5 (Instructions, Page 59)

Completion of Table 5 **is required** for all **external outfalls** which discharge process wastewater from a facility which manufactures or formulates pesticides or herbicides or other wastewaters which may contain pesticides or herbicides.

If this facility does not/will not manufacture or formulate pesticides or herbicides and does not/will not discharge other wastewaters which may contain pesticides or herbicides, check N/A.

☒ N/A

Table 5 for Outfall No.: N/A

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin	N/A	N/A	N/A	N/A	0.01
Carbaryl	N/A	N/A	N/A	N/A	5
Chlordane	N/A	N/A	N/A	N/A	0.2
Chlorpyrifos	N/A	N/A	N/A	N/A	0.05
4,4'-DDD	N/A	N/A	N/A	N/A	0.1
4,4'-DDE	N/A	N/A	N/A	N/A	0.1
4,4'-DDT	N/A	N/A	N/A	N/A	0.02
2,4-D	N/A	N/A	N/A	N/A	0.7
Danitol [Fenpropathrin]	N/A	N/A	N/A	N/A	—
Demeton	N/A	N/A	N/A	N/A	0.20
Diazinon	N/A	N/A	N/A	N/A	0.5/0.1
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	1
Dieldrin	N/A	N/A	N/A	N/A	0.02
Diuron	N/A	N/A	N/A	N/A	0.090
Endosulfan I (*alpha*)	N/A	N/A	N/A	N/A	0.01
Endosulfan II (*beta*)	N/A	N/A	N/A	N/A	0.02
Endosulfan sulfate	N/A	N/A	N/A	N/A	0.1
Endrin	N/A	N/A	N/A	N/A	0.02
Guthion [Azinphos methyl]	N/A	N/A	N/A	N/A	0.1
Heptachlor	N/A	N/A	N/A	N/A	0.01
Heptachlor epoxide	N/A	N/A	N/A	N/A	0.01
Hexachlorocyclohexane (*alpha*)	N/A	N/A	N/A	N/A	0.05
Hexachlorocyclohexane (*beta*)	N/A	N/A	N/A	N/A	0.05
Hexachlorocyclohexane (*gamma*) [Lindane]	N/A	N/A	N/A	N/A	0.05
Hexachlorophene	N/A	N/A	N/A	N/A	10
Malathion	N/A	N/A	N/A	N/A	0.1
Methoxychlor	N/A	N/A	N/A	N/A	2.0
Mirex	N/A	N/A	N/A	N/A	0.02
Parathion (ethyl)	N/A	N/A	N/A	N/A	0.1
Toxaphene	N/A	N/A	N/A	N/A	0.3
2,4,5-TP [Silvex]	N/A	N/A	N/A	N/A	0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 **is required** for all **external outfalls**.

Table 6 for Outfall No.: 001

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutants	Believed Present	Believed Absent	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	MAL (µg/L)*
Bromide	☐	☒					400
Color (PCU)	☐	☒					—
Nitrate-Nitrite (as N)	☒	☐					—
Sulfide (as S)	☐	☒					—
Sulfite (as SO3)	☐	☒					—
Surfactants	☒	☐					—
Boron, total	☐	☒					20
Cobalt, total	☐	☒					0.3
Iron, total	☐	☒					7
Magnesium, total	☐	☒					20
Manganese, total	☐	☒					0.5
Molybdenum, total	☐	☒					1
Tin, total	☐	☒					5
Titanium, total	☐	☒					30

* Indicate units if different from µg/L.

TABLE 7 (Instructions, Page 60)

Check the box next to any of the industrial categories applicable to this facility. If no categories are applicable, check N/A. If GC/MS testing is required, check the box provided to confirm the testing results for the appropriate parameters are provided with the application.

☒ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/Neutrals Table 10	Pesticides Table 11
☐ Adhesives and Sealants		☐ Yes	☐ Yes	☐ Yes	No
☐ Aluminum Forming	467	☐ Yes	☐ Yes	☐ Yes	No
☐ Auto and Other Laundries		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Battery Manufacturing	461	☐ Yes	No	☐ Yes	No
☐ Coal Mining	434	No	No	No	No
☐ Coil Coating	465	☐ Yes	☐ Yes	☐ Yes	No
☐ Copper Forming	468	☐ Yes	☐ Yes	☐ Yes	No
☐ Electric and Electronic Components	469	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Electroplating	413	☐ Yes	☐ Yes	☐ Yes	No
☐ Explosives Manufacturing	457	No	☐ Yes	☐ Yes	No
☐ Foundries		☐ Yes	☐ Yes	☐ Yes	No
☐ Gum and Wood Chemicals - Subparts A,B,C,E	454	☐ Yes	☐ Yes	No	No
☐ Gum and Wood Chemicals - Subparts D,F	454	☐ Yes	☐ Yes	☐ Yes	No
☐ Inorganic Chemicals Manufacturing	415	☐ Yes	☐ Yes	☐ Yes	No
☐ Iron and Steel Manufacturing	420	☐ Yes	☐ Yes	☐ Yes	No
☐ Leather Tanning and Finishing	425	☐ Yes	☐ Yes	☐ Yes	No
☐ Mechanical Products Manufacturing		☐ Yes	☐ Yes	☐ Yes	No
☐ Nonferrous Metals Manufacturing	421,471	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	☐ Yes	☐ Yes	☐ Yes	No
☐ Ore Mining - Subpart B	440	No	☐ Yes	No	No
☐ Organic Chemicals Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Paint and Ink Formulation	446,447	☐ Yes	☐ Yes	☐ Yes	No
☐ Pesticides	455	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Petroleum Refining	419	☐ Yes	No	No	No
☐ Pharmaceutical Preparations	439	☐ Yes	☐ Yes	☐ Yes	No
☐ Photographic Equipment and Supplies	459	☐ Yes	☐ Yes	☐ Yes	No
☐ Plastic and Synthetic Materials Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Plastic Processing	463	☐ Yes	No	No	No
☐ Porcelain Enameling	466	No	No	No	No
☐ Printing and Publishing		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Pulp and Paperboard Mills - Subpart C	430	☐ *	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subparts F, K	430	☐ *	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	☐ Yes	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts I, J, L	430	☐ Yes	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subpart E	430	☐ Yes	☐ Yes	☐ Yes	☐ *
☐ Rubber Processing	428	☐ Yes	☐ Yes	☐ Yes	No
☐ Soap and Detergent Manufacturing	417	☐ Yes	☐ Yes	☐ Yes	No
☐ Steam Electric Power Plants	423	☐ Yes	☐ Yes	No	No
☐ Textile Mills (Not Subpart C)	410	☐ Yes	☐ Yes	☐ Yes	No
☐ Timber Products Processing	429	☐ Yes	☐ Yes	☐ Yes	☐ Yes

* Test if believed present.

TABLES 8, 9, 10, and 11 (Instructions, Page 60)

Completion of Tables 8, 9, 10, and 11 **is required** as specified in Table 7 for all **external outfalls** that contain process wastewater.

Completion of Tables 8, 9, 10, and 11 **may be required** for types of industry not specified in Table 7 for specific parameters that are believed to be present in the wastewater.

Table 8 for Outfall No.: N/A : Volatile Compounds

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acrolein	N/A	N/A	N/A	N/A	50
Acrylonitrile	N/A	N/A	N/A	N/A	50
Benzene	N/A	N/A	N/A	N/A	10
Bromoform	N/A	N/A	N/A	N/A	10
Carbon tetrachloride	N/A	N/A	N/A	N/A	2
Chlorobenzene	N/A	N/A	N/A	N/A	10
Chlorodibromomethane	N/A	N/A	N/A	N/A	10
Chloroethane	N/A	N/A	N/A	N/A	50
2-Chloroethylvinyl ether	N/A	N/A	N/A	N/A	10
Chloroform	N/A	N/A	N/A	N/A	10
Dichlorobromomethane [Bromodichloromethane]	N/A	N/A	N/A	N/A	10
1,1-Dichloroethane	N/A	N/A	N/A	N/A	10
1,2-Dichloroethane	N/A	N/A	N/A	N/A	10
1,1-Dichloroethylene [1,1-Dichloroethene]	N/A	N/A	N/A	N/A	10
1,2-Dichloropropane	N/A	N/A	N/A	N/A	10
1,3-Dichloropropylene [1,3-Dichloropropene]	N/A	N/A	N/A	N/A	10
Ethylbenzene	N/A	N/A	N/A	N/A	10
Methyl bromide [Bromomethane]	N/A	N/A	N/A	N/A	50
Methyl chloride [Chloromethane]	N/A	N/A	N/A	N/A	50
Methylene chloride [Dichloromethane]	N/A	N/A	N/A	N/A	20
1,1,2,2-Tetrachloroethane	N/A	N/A	N/A	N/A	10
Tetrachloroethylene [Tetrachloroethene]	N/A	N/A	N/A	N/A	10
Toluene	N/A	N/A	N/A	N/A	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	N/A	N/A	N/A	N/A	10
1,1,1-Trichloroethane	N/A	N/A	N/A	N/A	10
1,1,2-Trichloroethane	N/A	N/A	N/A	N/A	10
Trichloroethylene [Trichloroethene]	N/A	N/A	N/A	N/A	10
Vinyl chloride	N/A	N/A	N/A	N/A	10

* Indicate units if different from µg/L.

Table 9 for Outfall No.: N/A : Acid Compounds

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol	N/A	N/A	N/A	N/A	10
2,4-Dichlorophenol	N/A	N/A	N/A	N/A	10
2,4-Dimethylphenol	N/A	N/A	N/A	N/A	10
4,6-Dinitro-o-cresol	N/A	N/A	N/A	N/A	50
2,4-Dinitrophenol	N/A	N/A	N/A	N/A	50
2-Nitrophenol	N/A	N/A	N/A	N/A	20
4-Nitrophenol	N/A	N/A	N/A	N/A	50
p-Chloro-m-cresol	N/A	N/A	N/A	N/A	10
Pentachlorophenol	N/A	N/A	N/A	N/A	5
Phenol	N/A	N/A	N/A	N/A	10
2,4,6-Trichlorophenol	N/A	N/A	N/A	N/A	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: N/A : Base/Neutral Compounds

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acenaphthene	N/A	N/A	N/A	N/A	10
Acenaphthylene	N/A	N/A	N/A	N/A	10
Anthracene	N/A	N/A	N/A	N/A	10
Benzidine	N/A	N/A	N/A	N/A	50
Benzo(a)anthracene	N/A	N/A	N/A	N/A	5
Benzo(a)pyrene	N/A	N/A	N/A	N/A	5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]	N/A	N/A	N/A	N/A	10
Benzo(ghi)perylene	N/A	N/A	N/A	N/A	20
Benzo(k)fluoranthene	N/A	N/A	N/A	N/A	5
Bis(2-chloroethoxy)methane	N/A	N/A	N/A	N/A	10
Bis(2-chloroethyl)ether	N/A	N/A	N/A	N/A	10
Bis(2-chloroisopropyl)ether	N/A	N/A	N/A	N/A	10
Bis(2-ethylhexyl)phthalate	N/A	N/A	N/A	N/A	10
4-Bromophenyl phenyl ether	N/A	N/A	N/A	N/A	10
Butylbenzyl phthalate	N/A	N/A	N/A	N/A	10
2-Chloronaphthalene	N/A	N/A	N/A	N/A	10
4-Chlorophenyl phenyl ether	N/A	N/A	N/A	N/A	10
Chrysene	N/A	N/A	N/A	N/A	5
Dibenzo(a,h)anthracene	N/A	N/A	N/A	N/A	5
1,2-Dichlorobenzene [o-Dichlorobenzene]	N/A	N/A	N/A	N/A	10
1,3-Dichlorobenzene [m-Dichlorobenzene]	N/A	N/A	N/A	N/A	10
1,4-Dichlorobenzene [p-Dichlorobenzene]	N/A	N/A	N/A	N/A	10
3,3'-Dichlorobenzidine					5

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Diethyl phthalate	N/A	N/A	N/A	N/A	10
Dimethyl phthalate	N/A	N/A	N/A	N/A	10
Di-n-butyl phthalate	N/A	N/A	N/A	N/A	10
2,4-Dinitrotoluene	N/A	N/A	N/A	N/A	10
2,6-Dinitrotoluene	N/A	N/A	N/A	N/A	10
Di-n-octyl phthalate	N/A	N/A	N/A	N/A	10
1,2-Diphenylhydrazine (as Azobenzene)	N/A	N/A	N/A	N/A	20
Fluoranthene	N/A	N/A	N/A	N/A	10
Fluorene	N/A	N/A	N/A	N/A	10
Hexachlorobenzene	N/A	N/A	N/A	N/A	5
Hexachlorobutadiene	N/A	N/A	N/A	N/A	10
Hexachlorocyclopentadiene	N/A	N/A	N/A	N/A	10
Hexachloroethane	N/A	N/A	N/A	N/A	20
Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	N/A	5
Isophorone	N/A	N/A	N/A	N/A	10
Naphthalene	N/A	N/A	N/A	N/A	10
Nitrobenzene	N/A	N/A	N/A	N/A	10
N-Nitrosodimethylamine	N/A	N/A	N/A	N/A	50
N-Nitrosodi-n-propylamine	N/A	N/A	N/A	N/A	20
N-Nitrosodiphenylamine	N/A	N/A	N/A	N/A	20
Phenanthrene	N/A	N/A	N/A	N/A	10
Pyrene	N/A	N/A	N/A	N/A	10
1,2,4-Trichlorobenzene	N/A	N/A	N/A	N/A	10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: N/A : Pesticides

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Aldrin	N/A	N/A	N/A	N/A	0.01
alpha-BHC [alpha-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
beta-BHC [beta-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
gamma-BHC [gamma-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
delta-BHC [delta-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
Chlordane	N/A	N/A	N/A	N/A	0.2
4,4'-DDT	N/A	N/A	N/A	N/A	0.02
4,4'-DDE	N/A	N/A	N/A	N/A	0.1
4,4'-DDD	N/A	N/A	N/A	N/A	0.1
Dieldrin	N/A	N/A	N/A	N/A	0.02
Endosulfan I (alpha)	N/A	N/A	N/A	N/A	0.01
Endosulfan II (beta)	N/A	N/A	N/A	N/A	0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Endosulfan sulfate	N/A	N/A	N/A	N/A	0.1
Endrin	N/A	N/A	N/A	N/A	0.02
Endrin aldehyde	N/A	N/A	N/A	N/A	0.1
Heptachlor	N/A	N/A	N/A	N/A	0.01
Heptachlor epoxide	N/A	N/A	N/A	N/A	0.01
PCB 1242	N/A	N/A	N/A	N/A	0.2
PCB 1254	N/A	N/A	N/A	N/A	0.2
PCB 1221	N/A	N/A	N/A	N/A	0.2
PCB 1232	N/A	N/A	N/A	N/A	0.2
PCB 1248	N/A	N/A	N/A	N/A	0.2
PCB 1260	N/A	N/A	N/A	N/A	0.2
PCB 1016	N/A	N/A	N/A	N/A	0.2
Toxaphene	N/A	N/A	N/A	N/A	0.3

* Indicate units if different from µg/L.

Attachment: N/A

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

Complete of Table 12 **is required** for **external outfalls**, as directed below. (Instructions, Pages 60-61)

a. Indicate which compound(s) are manufactured or used at the facility and provide a brief description of the conditions of its/their presence at the facility (check all that apply).

- ☐ 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5
- ☐ 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1
- ☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4
- ☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

b. Does the applicant or anyone at the facility know or have any reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be present in the effluent proposed for discharge?

☐ Yes ☒ No

Description: N/A

If **yes** to either Items a **or** b, complete Table 12 as instructed.

Table 12 for Outfall No.: N/A
Samples are (check one): ☐ **Composites** ☐ **Grabs**

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
2,3,7,8-TCDD	1	N/A	N/A	N/A	N/A	10
1,2,3,7,8-PeCDD	1.0	N/A	N/A	N/A	N/A	50
2,3,7,8-HxCDDs	0.1	N/A	N/A	N/A	N/A	50
1,2,3,4,6,7,8-HpCDD	0.01	N/A	N/A	N/A	N/A	50
2,3,7,8-TCDF	0.1	N/A	N/A	N/A	N/A	10
1,2,3,7,8-PeCDF	0.03	N/A	N/A	N/A	N/A	50
2,3,4,7,8-PeCDF	0.3	N/A	N/A	N/A	N/A	50
2,3,7,8-HxCDFs	0.1	N/A	N/A	N/A	N/A	50
2,3,4,7,8-HpCDFs	0.01	N/A	N/A	N/A	N/A	50
OCDD	0.0003	N/A	N/A	N/A	N/A	100
OCDF	0.0003	N/A	N/A	N/A	N/A	100
PCB 77	0.0001	N/A	N/A	N/A	N/A	500
PCB 81	0.0003	N/A	N/A	N/A	N/A	500
PCB 126	0.1	N/A	N/A	N/A	N/A	500
PCB 169	0.03	N/A	N/A	N/A	N/A	500
Total		N/A	N/A	N/A	N/A	

TABLE 13 (HAZARDOUS SUBSTANCES)

Complete Table 13 **is required** for all **external outfalls** as directed below. (Instructions, Page 61)

a. Are there any pollutants listed in the instructions (pages 55-62) believed present in the discharge?

☐ Yes ☒ No

b. Are there pollutants listed in Item 1.c. of Technical Report 1.0 which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

☐ Yes ☒ No

If **yes** to either Items a **or** b, complete Table 13 as instructed.

Table 13 for Outfall No.: N/A
Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Pollutant	**CASRN**	**Sample 1 (µg/L)**	**Sample 2 (µg/L)**	**Sample 3 (µg/L)**	**Sample 4 (µg/L)**	**Analytical Method**
N/A	N/A	N/A	N/A	N/A	N/A	N/A

8. WORKSHEET 3.1 SURFACE LAND APPLICATION AND EVAPORATION

WORKSHEET 3.1
SURFACE LAND APPLICATION AND EVAPORATION

This worksheet **is required** for all applications for a permit to dispose of wastewater by surface land application or evaporation.

1. EDWARDS AQUIFER (Instructions, Page 74)

a. Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☒ No

If **no**, proceed to Item 2. If **yes**, complete Items 1.b **and** 1.c.

b. Check the box next to the subchapter applicable to the facility.

☐ *30 TAC Chapter 213, Subchapter A*

☐ *30 TAC Chapter 213, Subchapter B*

c. If *30 TAC Chapter 213, Subchapter A* applies, attach **either**: 1) a Geologic Assessment (if conducted in accordance with *30 TAC § 213.5*) **or** 2) a report that contains the following information:

- A description of the surface geological units within the proposed land application site and wastewater pond area.
- The location and extent of any sensitive recharge features in the land application site and wastewater pond area
- A list of any proposed BMPs to protect the recharge features.

Attachment: N/A

2. SURFACE SPRAY/IRRIGATION (Instructions, Pages 74-75)

a. Provide the following information on the irrigation operations:

Area under irrigation (acres): N/A

Design application rate (acre-ft/acre/yr): **N/A**

Design application frequency (hours/day): **N/A**

Design application frequency (days/week): **N/A**

Design total nitrogen loading rate (lbs nitrogen/acre/year): **N/A**

Average slope of the application area (percent): **N/A**

Maximum slope of the application area (percent): **N/A**

Irrigation efficiency (percent): **N/A**

Effluent conductivity (mmhos/cm): **N/A**

Soil conductivity (mmhos/cm): **N/A**

Curve number: **N/A**

Describe the application method and equipment: **N/A**

b. Attach a detailed engineering report which includes a water balance, storage volume calculations, and a nitrogen balance.

Attachment: N/A

3. EVAPORATION PONDS (Instructions, Page 75)

a. Daily average effluent flow into ponds: 80,000 gallons per day

b. Attach a separate engineering report of evaporation calculations for average long-term and worst-case critical conditions.

Attachment: N

4. EVAPOTRANSPIRATION BEDS (Instructions, Page 75)

a. Provide the following information on the evapotranspiration beds:

Number of beds: N/A

Area of bed(s) (acres): N/A

Depth of bed(s) (feet): N/A

Void ratio of soil in the beds: N/A

Storage volume within the beds (include units): N/A

Description of any lining to protect groundwater: N/A

b. Attach a certification by a licensed Texas professional engineer that the liner meets TCEQ requirements.

Attachment: N/A

c. Attach a separate engineering report with water balance, storage volume calculations, and description of the liner.

Attachment: N/A

5. OVERLAND FLOW (Instructions, Page 75)

a. Provide the following information on the overland flow:

Area used for application (acres): N/A

Slopes for application area (percent): N/A

Design application rate (gpm/foot of slope width): N/A

Slope length (feet): N/A

Design BOD_5 loading rate (lbs BOD_5/acre/day): N/A

Design application frequency (hours/day): N/A

Design application frequency (days/week): N/A

b. Attach a separate engineering report with the method of application and design requirements according to *30 TAC § 217.212*.

Attachment: N/A

9. WORKSHEET 4.0 RECEIVING WATERS

WORKSHEET 4.0
RECEIVING WATERS

This worksheet **is required** for all TPDES permit applications.

1. DOMESTIC DRINKING WATER SUPPLY (Instructions, Page 81)

a. There is a surface water intake for domestic drinking water supply located within 5 (five) miles downstream from the point/proposed point of discharge.

☐ Yes ☒ No

If **no**, stop here and proceed to Item 2. If **yes**, provide the following information:

i. The legal name of the owner of the drinking water supply intake: Click to enter text.

v. The distance and direction from the outfall to the drinking water supply intake: Click to enter text.

b. Locate and identify the intake on the USGS 7.5-minute topographic map provided for Administrative Report 1.0.

☐ Check this box to confirm the above requested information is provided.

2. DISCHARGE INTO TIDALLY INFLUENCED WATERS (Instructions, Page 81)

If the discharge is to tidally influenced waters, complete this section. Otherwise, proceed to Item 3.

a. Width of the receiving water at the outfall: feet

b. Are there oyster reefs in the vicinity of the discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the oyster reefs: Click to enter text.

c. Are there sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the grasses: Click to enter text.

3. CLASSIFIED SEGMENT (Instructions, Page 81)

The discharge is/will be directly into (or within 300 feet of) a classified segment.

☒ Yes ☐ No

If **yes**, stop here. It is not necessary to complete Items 4 and 5 of this worksheet or Worksheet 4.1.

If **no**, complete Items 4 and 5 and Worksheet 4.1 may be required.

4. DESCRIPTION OF IMMEDIATE RECEIVING WATERS (Instructions, Page 82)

a. Name of the immediate receiving waters: Click to enter text.

b. Check the appropriate description of the immediate receiving waters:

☐ Lake or Pond
- Surface area (acres): Click to enter text.
- Average depth of the entire water body (feet): Click to enter text.
- Average depth of water body within a 500-foot radius of the discharge point (feet): Click to enter text.

☐ Man-Made Channel or Ditch
☐ Stream or Creek
☐ Freshwater Swamp or Marsh
☐ Tidal Stream, Bayou, or Marsh
☐ Open Bay
☐ Other, specify: Click to enter text.

If **Man-Made Channel or Ditch** or **Stream or Creek** were selected above, provide responses to Items 4.c – 4.g below:

c. For **existing discharges**, check the description below that best characterizes the area **upstream** of the discharge.

For **new discharges**, check the description below that best characterizes the area **downstream** of the discharge.

☐ Intermittent (dry for at least one week during most years)
☐ Intermittent with Perennial Pools (enduring pools containing habitat to maintain aquatic life uses)
☐ Perennial (normally flowing)

Check the source(s) of the information used to characterize the area upstream (existing discharge) or downstream (new discharge):

☐ USGS flow records
☐ personal observation
☐ historical observation by adjacent landowner(s)
☐ other, specify: Click to enter text.

d. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point: Click to enter text.

e. The receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.).

☐ Yes ☐ No

If **yes**, describe how: Click to enter text.

f. General observations of the water body during normal dry weather conditions: Click to enter text.

Date and time of observation: Click to enter text.

g. The water body was influenced by stormwater runoff during observations.

☐ Yes ☐ No

If **yes**, describe how: Click to enter text.

5. GENERAL CHARACTERISTICS OF WATER BODY (Instructions, Page 82)

a. Is the receiving water upstream of the existing discharge or proposed discharge site influenced by any of the following (check all that apply):

- ☐ oil field activities
- ☐ urban runoff
- ☐ agricultural runoff
- ☐ septic tanks
- ☐ upstream discharges
- ☐ other, specify: Click to enter text.

b. Uses of water body observed or evidence of such uses (check all that apply):

- ☐ livestock watering
- ☐ fishing
- ☐ picnic/park activities
- ☐ non-contact recreation
- ☐ industrial water supply
- ☐ other, specify: Click to enter text.
- ☐ domestic water supply
- ☐ irrigation withdrawal
- ☐ contact recreation
- ☐ navigation

c. Description which best describes the aesthetics of the receiving water and the surrounding area (check only one):

☐ **Wilderness:** outstanding natural beauty; usually wooded or un-pastured area: water clarity exceptional

☐ **Natural Area:** trees or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored

☐ **Common Setting:** not offensive, developed but uncluttered; water may be colored or turbid

☐ **Offensive:** stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

10. WORKSHEET 7.0 STORMWATER DISCHARGES

WORKSHEET 7.0
STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

This worksheet **is required** for all TPDES permit applications requesting individual permit coverage for discharges consisting of **either**: 1) solely of stormwater discharges associated with industrial activities, as defined in *40 CFR § 122.26(b)(14)(i-xi)*, **or** 2) stormwater discharges associated with industrial activities and any of the listed allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6.

Discharges of stormwater as defined in *40 CFR § 122.26 (b)(13)* are not required to obtain authorization under a TPDES permit (see exceptions at *40 CFR §§ 122.26(a)(1)* and *(9)*). Authorization for discharge may be required from a local municipal separate storm sewer system.

1. APPLICABILITY (Instructions, Page 90)

Do discharges from any of the existing/proposed outfalls consist either 1) solely of stormwater discharges associated with industrial activities **or** 2) stormwater discharges associated with industrial activities and any of the allowable non-stormwater discharges?

☒ Yes ☐ No

If **no**, stop here. If **yes**, proceed as directed.

2. STORMWATER OUTFALL COVERAGE (Instructions, Page 91)

List each existing/proposed stormwater outfall at the facility and indicate which type of authorization covers or is proposed to cover discharges.

Authorization coverage

Outfall	Authorized Under MSGP	Authorized Under Individual Permit
TBD	☒	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

If **all** existing/proposed outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) are **authorized under the MSGP**, **stop** here.

If **seeking authorization** for any outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) **under an individual permit**, **proceed**.

NOTE: The following information is required for each existing/proposed stormwater outfall for which the facility is seeking individual permit authorization under this application.

3. SITE MAP (Instructions, Page 91)

Attach a site map or maps (drawn to scale) of the entire facility with the following information.

- the location of each stormwater outfall to be covered by the permit
- an outline of the drainage area that is within the facility's boundary and that contributes stormwater to each outfall to be covered by the permit
- connections or discharge points to municipal separate storm sewer systems
- locations of all structures (e.g. buildings, garages, storage tanks)
- structural control devices that are designed to reduce pollution in discharges of stormwater associated with industrial activities
- process wastewater treatment units (including ponds)
- bag house and other air treatment units exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)
- landfills; scrapyards; surface water bodies (including wetlands)
- vehicle and equipment maintenance areas
- physical features of the site that may influence discharges of stormwater associated with industrial activities or contribute a dry weather flow
- locations where spills or leaks of reportable quality (as defined in *30 TAC § 327.4*) have occurred during the three years before this application was submitted to obtain coverage under an individual permit
- processing areas, storage areas, material loading/unloading areas, and other locations where significant materials are exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)

☐ Check the box to confirm all the above information was provided on the facility site map(s).

Attachment: FACILITY/SITE INFORMATION (Instructions, Pages 91-92)

a. Provide the area of impervious surface and the total area drained by each stormwater outfall requested for authorization by this permit application.

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)
N/A		

b. Provide the following local area rainfall information and the source of the information.

Wettest month: Click to enter text.

Average rainfall for wettest month (total inches): Click to enter text.

25-year, 24-hour rainfall (inches): Click to enter text.

Source: Click to enter text.

c. Attach an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. **Attachment:** Click to enter text.

d. Attach narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff (see instructions for guidance). **Attachment:** Click to enter text.

e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: Click to enter text.

4. LABORATORY ACCREDITATION CERTIFICATION (Instructions, Page 92)

Effective July 1, 2008, all laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification* with the following general exemptions:

a. The laboratory is an in-house laboratory and is:

  i. periodically inspected by the TCEQ; or

  ii. located in another state and is accredited or inspected by that state; or

  iii. performing work for another company with a unit located in the same site; or

vi. performing pro bono work for a governmental agency or charitable organization.

b. The laboratory is accredited under federal law.

c. The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.

d. The laboratory supplies data for which the TCEQ does not offer accreditation.

Review *30 TAC Chapter 25* for specific requirements. The following certification statement shall be signed and submitted with every application. See Instructions, Page 32, for a list of approved signatories.

I, Click to enter text., certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

____

(Signature)

5. POLLUTANT ANALYSIS (Instructions, Pages 92-93)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): Click to enter text.

b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Complete Table 17 as directed on page 92 of the Instructions.

Table 17 Pollutant Analysis for Outfall No.: N/A

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002
Lead, total						0.0005
Mercury, total						0.000005
Nickel, total						0.002
Selenium, total						0.005
Silver, total						0.0005
Zinc, total						0.005

* Taken during first 30 minutes of storm event
** Flow-weighted composite sample

d. Complete Table 18 as directed on pages 92-94 of the Instructions.

Table 18 Pollutant Analysis for Outfall No.: N/A

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled

* Taken during first 30 minutes of storm event
** Flow-weighted composite sample

Attachment: Click to enter text.

6. STORM EVENT DATA (Instructions, Page 94)

Provide the following data for the storm event(s) which resulted in the maximum values for the analytical data submitted:

Date of storm event: N/A

Duration of storm event (minutes): N/A

Total rainfall during storm event (inches): N/A

Number of hours the between beginning of the storm measured and the end of the previous measurable storm event (hours): N/A

Maximum flow rate during rain event (gallons/minute): N/A

Total stormwater flow from rain event (gallons): N/A

Provide a description of the method of flow measurement or estimate: N/A

ATTACHMENT A. COPY OF FEE SUBMITTAL

Admin Report 1.0 Pg. 2, 1.e.

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if mailing the payment. (Instructions, Page 37)

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- Do not mail this form with the application form.
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP **Permit No:** WQ000New Permit

1. Check or Money Order Number: Click to enter text.
2. Check or Money Order Amount: Click to enter text.
3. Date of Check or Money Order: Click to enter text.
4. Name on Check or Money Order: Click to enter text.
5. APPLICATION INFORMATION

   Name of Project or Site: Click to enter text.

   Physical Address of Project or Site: Click to enter text.

   If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application. Attachment: Click to enter text.

Staple Check or Money Order in This Space

ATTACHMENT B. CORE DATA FORM

Admin Report 1.0 Pg. 3, 2.c

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number *(if issued)***
CN 605980739		RN 111422333

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	1/31/2022

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

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

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
Leprino Foods Company	

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0804053405	32079092204	84-0500292	00-707-6664

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

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:	1830 W 38th Ave						
	City	Denver	**State**	CO	**ZIP**	80211	**ZIP + 4**

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*
(970) 347-5115		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Leprino Foods Lubbock Manufacturing Facility

23. Street Address of the Regulated Entity: *(No PO Boxes)*	4301 East 19th Street						
	City	Lubbock	**State**	TX	**ZIP**	79403	**ZIP + 4**
24. County							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:			
26. Nearest City		**State**	**Nearest ZIP Code**

27. Latitude (N) In Decimal:	33.580192°		**28. Longitude (W) In Decimal:**	-101.777402°	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
33	34	48.69	101	46	38.65

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
2022	2023	311513	311514

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

Cheese (except cottage cheese) manufacturing

34. Mailing Address:	1830 W 38th Ave						
	City	Denver	**State**	CO	**ZIP**	80211	**ZIP + 4**
35. E-Mail Address:	hbradish@leprinofoods.com						

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(303) 548-8718		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Hannah Bradish	**41. Title:**	Environmental Compliance Engineer
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(303) 548-8718		( ) -	hbradish@leprinofoods.com

SECTION V: Authorized Signature

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

Company:	Leprino Foods Company	**Job Title:**	Senior Director of Environmental Engineering
Name *(In Print)*:	Joseph Herrud	**Phone:**	(303) 480- **2894**
Signature:		**Date:**	

ATTACHMENT C. PROPERTY OWNERSHIP

Admin Report 1.0 Pg. 6, 8.f

LUBBOCK CENTRAL APPRAISAL DISTRICT

Property	Owner	Property Address	Tax Year	2022 Assessed Value
R318755	LEPRINO FOODS COMPANY	E 4TH ST, LUBBOCK, TX 79403	2022	CERTIFIED $252,105

2022 GENERAL INFORMATION

Property Status	Active
Property Type	Commercial and Industrial Vacant Land
Legal Description	BLK O SEC 6 AB 1407 TR 1C & RR1C AC: 157.311
Neighborhood	0504 - City Of Lubbock
Account	AC56006-91407-30000-000
Related Properties	R136696, R343830
Map Number	596

2022 OWNER INFORMATION

Owner Name	LEPRINO FOODS COMPANY
Owner ID	
Exemptions	
Percent Ownership	100%
Mailing Address	1830 W 38TH AVE DENVER, CO 80211-2225
Agent	-

2022 VALUE INFORMATION

Improvement Homesite Value	$0
Improvement Non-Homesite Value	$0
Total Improvement Market Value	$0
Land Homesite Value	$0
Land Non-Homesite Value	$252,105
Land Agricultural Market Value	$0
Total Land Market Value	$252,105
Total Market Value	$252,105
Agricultural Use	$0
Timber Use	$0
Total Appraised Value	$252,105
Homestead Cap Loss	-$0
Total Assessed Value	$252,105

2022 ENTITIES & EXEMPTIONS

TAXING ENTITY	EXEMPTIONS	EXEMPTIONS AMOUNT	TAXABLE VALUE	TAX RATE PER 100	TAX CEILING
CLB- City Of Lubbock		$0	$176,819	0.52323	0
GLB- Lubbock County		$0	$176,819	0.35999	0
HSP- Lubb Cnty Hospital		$0	$176,819	0.103164	0
SRS- Roosevelt ISD		$0	$176,819	1.2679	0
WHP- Hi Plains Water		$0	$176,819	0.0051	0
TOTALS				**2.259384**	

2022 LAND SEGMENTS

LAND SEGMENT TYPE	STATE CODE	HOMESITE	MARKET VALUE	AG USE	TIM USE	LAND SIZE
1 - Irr Crop	C1 - Real Property: Vacant Lots and Tracts	No	$230,000	$0	$0	115.000000 acres
2 - Irr Crop	C1 - Real Property: Vacant Lots and Tracts	No	$0	$0	$0	4.970000 acres
3 - Dry Crop	C1 - Real Property: Vacant Lots and Tracts	No	$20,881	$0	$0	25.341000 acres
4 - Dry Crop	C1 - Real Property: Vacant Lots and Tracts	No	$1,224	$0	$0	12.000000 acres
TOTALS						**6,852,467 Sq. ft / 157.311000 acres**

VALUE HISTORY

YEAR	IMPROVEMENT	LAND	MARKET	AG MARKET	AG USE	APPRAISED	HS CAP LOSS	ASSESSED
2021	$0	$346,509	$346,509	$0	$0	$346,509	$0	$346,509
2020	$0	$500	$500	$199,473	$72,111	$72,611	$0	$72,611
2019	$0	$500	$500	$199,473	$83,687	$84,187	$0	$84,187
2018	$0	$500	$500	$199,473	$90,766	$91,266	$0	$91,266
2017	$0	$500	$500	$199,473	$53,346	$53,846	$0	$53,846

SALES HISTORY

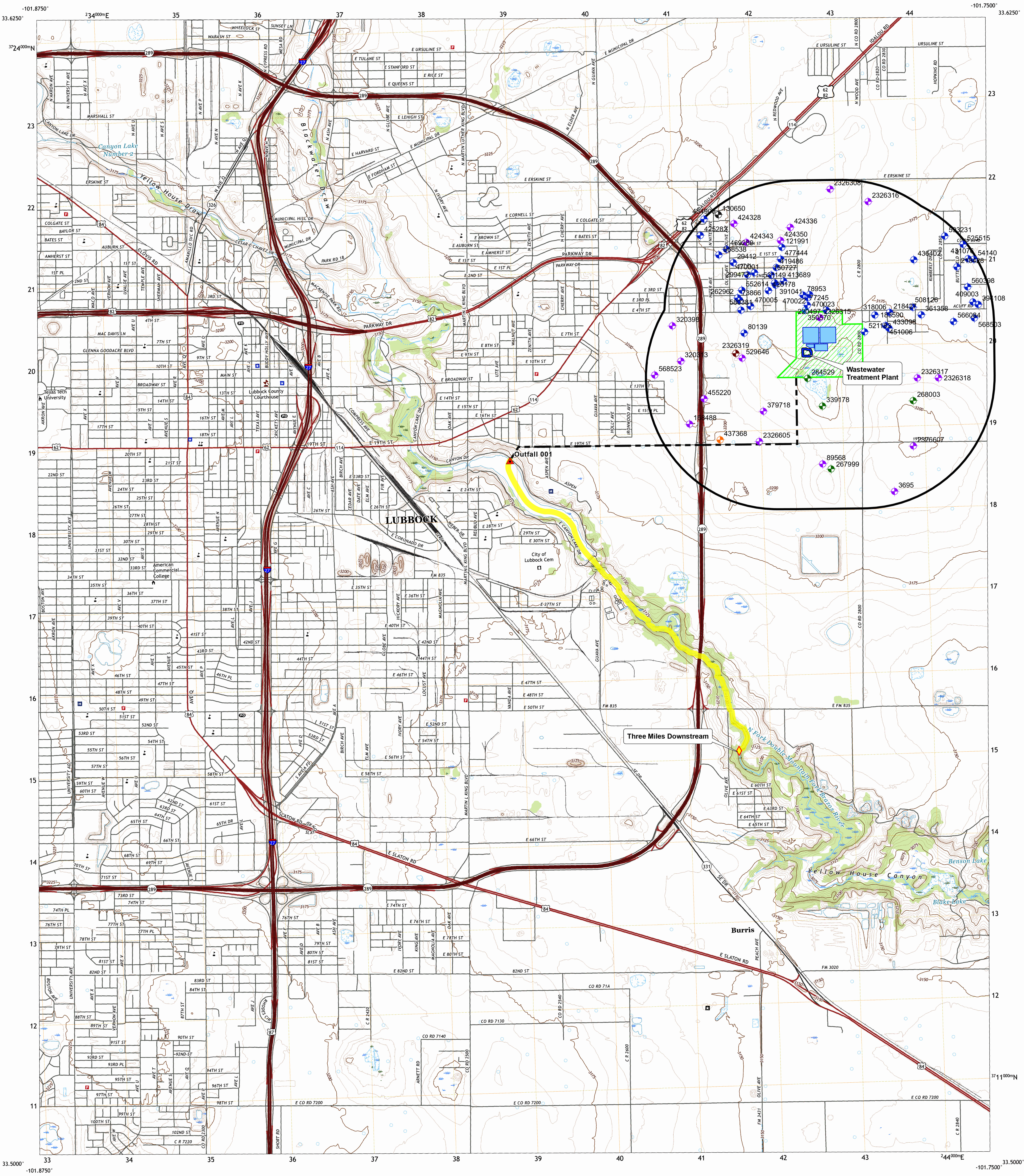
DEED DATE	SELLER	BUYER	INSTR #	VOLUME/PAGE
4/19/2022	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	LEPRINO FOODS COMPANY	2022-18637	
12/29/2020	CARLTON, WILLIAM H, Jr	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	2020-59091	
1/25/2010	MR W FIREWORKS INC	CARLTON, WILLIAM H, Jr	2010-2205	

Admin Report 1.0 Pg. 7, 9b

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

The National Map US Topo

LUBBOCK EAST QUADRANGLE
TEXAS - LUBBOCK COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14S

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

Imagery........NAIP, September 2016 - November 2016
Roads........U.S. Census Bureau, 2015 - 2018
Names........GNIS, 1979 - 2021
Hydrography........National Hydrography Dataset, 2004 - 2018
Contours........National Elevation Dataset, 2020
Boundaries........Multiple sources; see metadata file 2019 - 2021

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

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
KC
Grid Zone Designation 14S

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

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

QUADRANGLE LOCATION

1 Shallowater
2 New Deal
3 Idalou
4 Lubbock West
5 Buffalo Springs Lake
6 Slide
7 Woodrow
8 Slaton

ADJOINING QUADRANGLES

LUBBOCK EAST, TX
2022

Legend

- Property Boundary
- Wastewater Treatment Plant
- Impoundments
- Proposed 14" HDPE Discharge Pipe
- Outfall Location
- Discharge Route
- Downstream Marker
- One Mile Radius

Wells

- Domestic
- Environmental Soil Boring
- Industrial
- Irrigation
- Monitor
- Public Supply
- Test Well

ATTACHMENT E. DISCHARGE ROUTE DESCRIPTION

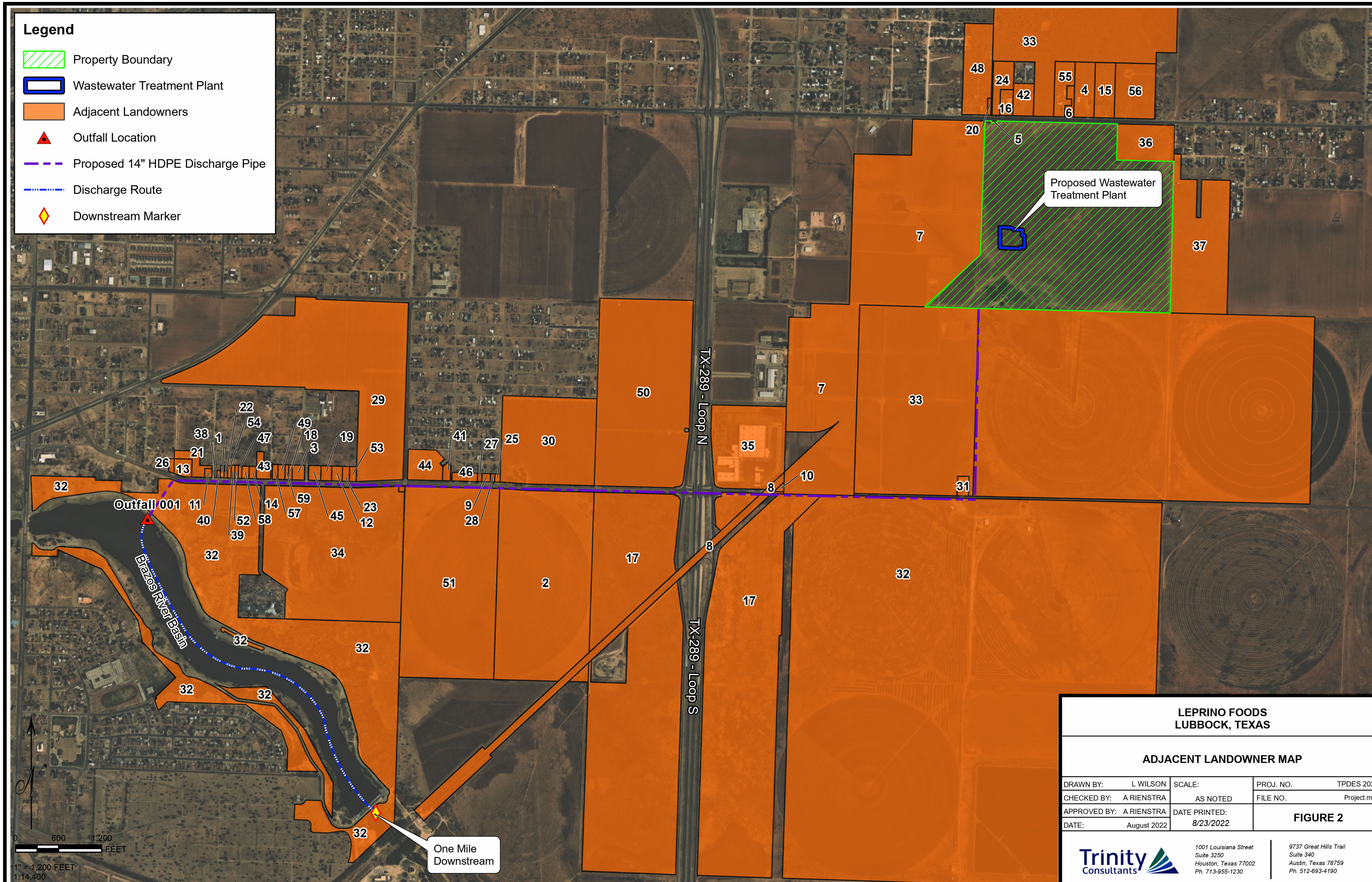
Admin Report 1.0 Pg. 7, 9.d

The proposed discharge route is as follows:

Treated effluent will pumped from the facility through a 14" force main approximately 2.7 miles to an energy dissipation structure thence to a 24" HDPE line to a subsurface outfall structure located in Canyon Lake #6 – classified segment 1241A.

ATTACHMENT F. ADJACENT LANDOWNER INFORMATION

Admin Report 1.1 Pg. 10, 1a, & c



LEPRINO FOODS
LUBBOCK, TEXAS

ADJACENT LANDOWNER MAP

DRAWN BY: L WILSON	SCALE:	PROJ. NO.	TPDES 2022
CHECKED BY: A RIENSTRA	AS NOTED	FILE NO.	Project.mxd
APPROVED BY: A RIENSTRA	DATE PRINTED:	FIGURE 2	
DATE: August 2022	8/23/2022		

Trinity Consultants

1001 Louisiana Street
Suite 3250
Houston, Texas 77002
Ph. 713-955-1230

9737 Great Hills Trail
Suite 340
Austin, Texas 78759
Ph. 512-693-4190

J:\Prj\Leprino Foods\TPDES 2022\Project.aprx

LEPRINO_000101

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
1	606 HAROLD LLC	PO BOX 573036	HOUSTON	TX	77257
2	ADAMS C POWELL & CAROL	7317 E FM 40	LUBBOCK	TX	79403
3	ADEBANJO ADESOJI & JEROME ADEBANJO	924 E EMORY ST APT 3104	LUBBOCK	TX	79403
4	ALONSO ANDRES C & MACRUZ A	1107 46TH ST	LUBBOCK	TX	79412
5	ATMOS ENERGY CORPORATION	PO BOX 650205	DALLAS	TX	75265-0205
6	BAIGEN, MICHELLE	325 PRIVATE ROAD 2760	LUBBOCK	TX	79403-8244
7	BASF CORPORATION	100 PARK AVE	FLORHAM PARK	NJ	07932-1089
8	BNSF RAILWAY COMPANY	PO BOX 961089	FORT WORTH	TX	76161-0089
9	BRAXTON, OLA JEAN R	12083 APPLEBURY CT	RNCHO CORDOVA	CA	95742-8112
10	BROWN, BILL W	ADDRESS UNKNOWN			
11	BUTLER, REGINA	4013 47TH ST	LUBBOCK	TX	79413
12	CARRIZALES STEVEN GABRIEL	1523 E MAIN ST	LUBBOCK	TX	79403-5207
13	CARTER, BRYCE CYRLOYD	4013 47TH ST	LUBBOCK	TX	79413
14	CERDA JOSE L & GUADALUPE REYES & ZETA RODRIGUEZ	2902 2ND PL	LUBBOCK	TX	79415
15	CHAVEZ JOANN O & JOEL JR & MARIA O RHODES	4703 E 4TH ST	LUBBOCK	TX	79403-5007
16	COLE DG LUBBOCK FM 40 TX LLC	PO BOX 460369	HOUSTON	TX	77056
17	CRBBB PARTNERSHIP LP	5201 19TH ST	LUBBOCK	TX	79407
18	DAVIS, WILLIAM E	HC 2 BOX 1170	CAMP WOOD	TX	78833-9602
19	FULL ARMOR MINISTRIES	PO BOX 1574	LUBBOCK	TX	79408
20	GAONA ABEL & EVA	4435 E FM 40	LUBBOCK	TX	79403
21	GARCIA ANGEL & EMERY	2506 58TH ST	LUBBOCK	TX	79413-5632
22	GIL, LUIS JESUS	PO BOX 348	SMYER	TX	79367-0348
23	GREEN, TINA	3406 E BROADWAY	LUBBOCK	TX	79403
24	GUTIERREZ RAYMOND Z & RACHAEL GARCIA	808 E 76TH ST	LUBBOCK	TX	79404-6417
25	HARTFIELD, ROBERT	3605 N COUNTY ROAD 2775	LUBBOCK	TX	79403
26	HERRERA, RAMONA (TOD)	2211 E 19TH ST	LUBBOCK	TX	79403
27	JOHNSON JOSEPH ESTATE OF & ESTATE OF RUBY JOHNSON	3413 E 19TH ST	LUBBOCK	TX	79403
28	JOHNSON, TREVA S	3413 E 19TH ST	LUBBOCK	TX	79403
29	KASTMAN INTERESTS LTD	PO BOX 5930	LUBBOCK	TX	79408-5930
30	KEYS CINDY KIM HOLEMAN	108 HELTON	GRANBURY	TX	76049-1335
31	LOS CARNALES MC	4022 WOODROW RD	LUBBOCK	TX	79423
32	LUBBOCK CITY OF	PO BOX 2000	LUBBOCK	TX	79457-0001
33	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	1500 BROADWAY STE 600	LUBBOCK	TX	79401-3167
34	LUBBOCK REGIONAL MENTAL HEALTH & MENTAL RETARDATIO	PO BOX 2828	LUBBOCK	TX	79408-2828
35	MC LANE FOOD SERVICE	PO BOX 5550	LUBBOCK	TX	79408-5550
36	MR W FIREWORKS INC	PO BOX 114	SOMERSET	TX	78069-0114
37	NUNEZ ANTONIO & REYNA	6210 E COUNTY ROAD 6450	LUBBOCK	TX	79403
38	ODDIE FREDDRICK II & DARAVION J BONNER JR	904 W LAUREL ST	COMPTON	CA	90220-2907
39	PITTS, ELAINE	140 CR 3051	DECATUR	TX	76234-4610
40	PUCKETT, WILEY ESTATE	ADDRESS UNKNOWN			
41	QUIGLEY, CEDRIC	2636 E CORNELL	LUBBOCK	TX	79403
42	RAMOS, OLGA H	4517 E 4TH ST	LUBBOCK	TX	79403-4829
43	REYES RAMIRO & DEBRA	15916 N COUNTY ROAD 2500	ABERNATHY	TX	79311-5333
44	RICHARDSON LACARL & BERNARD & DALE A & LAFRANCES R A	2939 E COLGATE ST	LUBBOCK	TX	79403
45	RIOS, PEDRO ALFONSO ROJO	1301 FM 40	RALLS	TX	79357
46	RODRIGUEZ AMBER L & JOROMEO J MADDOX	3405 E 19TH ST	LUBBOCK	TX	79403
47	RODRIGUEZ ROGER & MARIA ELENA	8710 GOLDEN PT	SAN ANTONIO	TX	78239
48	RRW LEASING INC	303 30TH ST	LUBBOCK	TX	79404
49	SAMUDIO, CARLOS	4414 82ND ST STE 212	LUBBOCK	TX	79424-3359
50	SCHILLING WAYNE & MARY	16912 COUNTY ROAD 3000	SLATON	TX	79364-7750
51	SIEBER TRUST, E HAYES Attn: PROSPERITY BANK TRUST	1401 AVE Q	LUBBOCK	TX	79401-3819
52	SUMODA REAL ESTATE INVESTMENTS LLC	3604 RAVENHILL LN	ARLINGTON	TX	76016-4831
53	TAYLOR, EDWINA GETAY	3021 E 19TH ST	LUBBOCK	TX	79403-6040
54	THOMPSON JAMES E ET AL	2609 E 19TH ST	LUBBOCK	TX	79403-5829
55	TREVINO, GUADALUPE TIRSO	320 PRIVATE ROAD 2760	LUBBOCK	TX	79403
56	TRIGGS BOYD & ELIZABETH BRAZIEL	4711 E 4TH ST	LUBBOCK	TX	79401
57	VASQUEZ MARK & MERCEDES	10602 DETROIT AVE	LUBBOCK	TX	79423
58	WALTON BONNIE & 'TESSIE ESTATE	ADDRESS UNKNOWN			
59	WYNNE, WILLIE	ADDRESS UNKNOWN			

LUBBOCK CENTRAL APPRAISAL DISTRICT

Property	Owner	Property Address	Tax Year	2022 A
R58691	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	4003 19TH ST, LUBBOCK, TX 79410	2022 CERTIFIED	$3

2022 GENERAL INFORMATION

Property Status	Active
Property Type	Commercial and Industrial Vacant Land
Legal Description	BLK O SEC 5 AB 21 TR G2 AC: .396
Neighborhood	0504 - City Of Lubbock
Account	AC56005-90021-00175-000
Map Number	594

2022 OWNER INFORMATION

Owner Name	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC
Owner ID	
Exemptions	Prorated Full Exemption
Percent Ownership	100%
Mailing Address	1500 BROADWAY #STE 600 LUBBOCK, TX 79401-3167
Agent	-

2022 VALUE INFORMATION

Improvement Homesite Value
Improvement Non-Homesite Value
Total Improvement Market Value

Land Homesite Value
Land Non-Homesite Value
Land Agricultural Market Value
Total Land Market Value

Total Market Value
Agricultural Use
Timber Use
Total Appraised Value
Homestead Cap Loss
Total Assessed Value

2022 ENTITIES & EXEMPTIONS

Special Exemptions **PRO - Prorated Full Exemption**

TAXING ENTITY	EXEMPTIONS	EXEMPTIONS AMOUNT	TAXABLE VALUE	TAX RATE PER 100	TAX CEILIN
CLB- City Of Lubbock		$0	$1,619	0.52323	0
GLB- Lubbock County		$0	$1,619	0.35999	0
HSP- Lubb Cnty Hospital		$0	$1,619	0.103164	0
SLB- Lubbock ISD		$0	$1,619	1.1355	0
WHP- Hi Plains Water		$0	$1,619	0.0051	0
TOTALS				**2.126984**	

2022 LAND SEGMENTS

LAND SEGMENT TYPE	STATE CODE	HOMESITE	MARKET VALUE	AG USE	TIM USE	LAND SIZE
1 - Commercial	C1 - Real Property: Vacant Lots and Tracts	No	$3,456	$0	$0	17,280 Sq. ft
TOTALS						**17,280 Sq. ft / 0.396694 acres**

VALUE HISTORY

YEAR	IMPROVEMENT	LAND	MARKET	AG MARKET	AG USE	APPRAISED	HS CAP LOSS	ASSESSED
2021	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2020	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2019	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2018	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2017	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3

SALES HISTORY

DEED DATE	SELLER	BUYER	INSTR #	VOLUME/P
7/12/2022	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	-	2022-33840	
6/21/2022	BROWN, BILL W	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	2022-30337	

DISCLAIMER

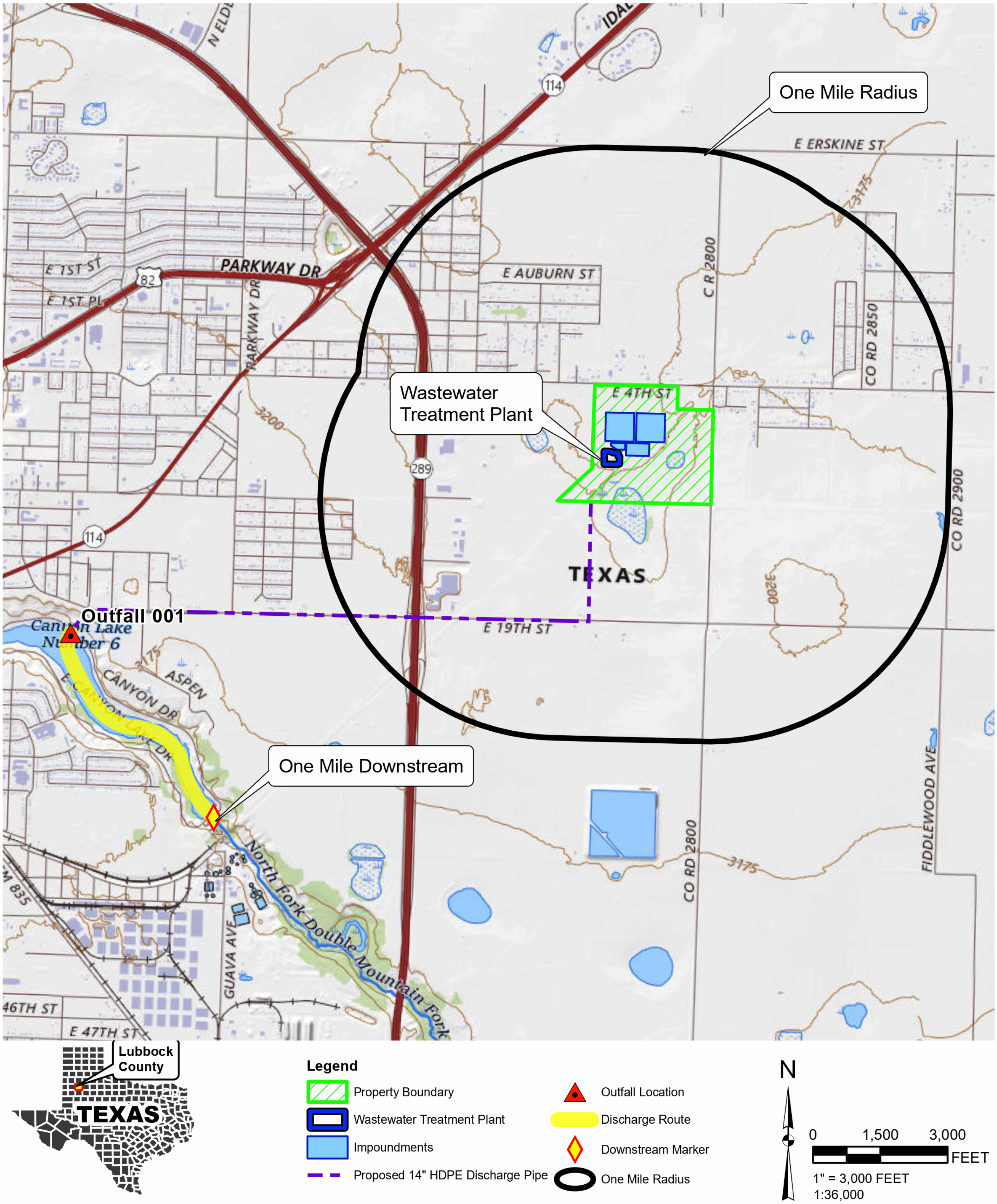
Every effort has been made to offer the most current and correct information possible on these pages. The information included on these pages has compiled by District staff from a variety of sources, and is subject to change without notice. The Lubbock Central Appraisal District makes no warrant representations whatsoever regarding the quality, content, completeness, accuracy or adequacy of such information and data. The Lubbock C Appraisal District reserves the right to make changes at any time without notice. Original records may differ from the information on these Verification of information on source documents is recommended. By using this application, you assume all risks arising out of or associated with acc these pages, including but not limited to risks of damage to your computer, peripherals, software and data from any virus, software, file or other associated with access to this application. The Lubbock Central Appraisal District shall not be liable for any damages whatsoever arising out of any relating to use of this application, including but not limited to mistakes, omissions, deletions, errors, or defects in any information contained in pages, or any failure to receive or delay in receiving information said or implied.

ATTACHMENT G. ORIGINAL PHOTOGRAPHS AND MAPS OF PHOTO LOCATIONS

Admin Report 1.1 Pg. 11, 2.

Photos will be provided upon access to discharge point. As soon as they become available, they will be submitted.

SPIF Pg. 13, 8.



Trinity Consultants

LEPRINO FOODS
LUBBOCK, TEXAS

SPIF MAP

DRAWN BY:	L WILSON
APPROVED BY:	A RIENSTRA
PROJECT NO:	TPDES 2022
FILE NO.	Project.mxd
DATE:	AUGUST 2022

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LEPRINO_000107

ATTACHMENT I. FACILITY DESCRIPTION

Tech Report 1.0 Pg. 1, 1.a &b
Tech Report 1.0 Pg. 3, 2.a
Tech Report 1.0 Pg. 8, 6.

Leprino Foods Company proposes to construct a new mozzarella cheese and nutrition manufacturing facility in Lubbock, Texas. The facility is located on undeveloped farmland located in Lubbock, Lubbock County, Texas. The facility is located just east of East Loop 289 and is bordered on the north by E. 4th Street, and by E. 19th Street to the south.

The manufactured dairy-based cheese will be for commercial food operators for public consumption. The Facility will be operating under the Primary Standard Industry Code: 2022 (Natural, Processed, and Imitation Cheese) and NAICS Code: 311513. The facility will receive raw potable water supplied by connection to a Lubbock Public Water System owned and operated by the City of Lubbock. The primary use of the water will be for the manufacturing process and make up for the cooling water.

Raw fluid milk is brought into the facility as the main ingredient to the cheesemake process. The milk is reacted to coagulate the proteins and form cheese curds and liquid whey. The liquid whey is separated from the cheese and processed into nutrition products through separation and drying processes which removes the associated water. The associated water (COW water) and potable water used for daily sanitation is discharged to the onsite wastewater treatment plant and then discharged to Outfall 001. The brine used to cool and add salt to the cheese is managed in a separate evaporation system. Cooling water discharges, boiler water, and reverse osmosis reject water will also be sent to the wastewater treatment facility and then discharged to Outfall 001. See Appendix J for more details.

Domestic sewage will be routed via connection to the Southeast Water Reclamation Plant Wastewater Treatment Facility in Lubbock Texas. Domestic sewage will be disposed of by an on-site septic tank and serviced by a registered hauler.

The discharge via pipe to Outfall 001 will consist primarily of process wastewater from the manufacturing process and cooling water blowdown. All waste streams discharged from the facility will be from the wastewater treatment plant located onsite.

Wastewater treatment will use a combination of anaerobic and aerobic activated sludge systems to treat all high strength wastewater (HSW) and low strength wastewater (LSW) generated in production. A divert flow system has been designed to mitigate potential non-compliance waste streams that will allow a high degree of control over wastewater divert to Outfall 001.

Brine water will be kept separate from the LSW and HSW streams and have a dedicated lift station to send brine to two onsite evaporation lagoons. Wastewater will be allowed to evaporate while dissolved solids are deposited on the bottom of the lagoons. Removal of solids from the lagoons is anticipated every two years and will be transported by a certified waste hauler. To assist with evaporation, the lagoons will be equipped with splashers.

At the south end of the property there will be a valve manhole that can control whether effluent goes to direct discharge into Lake #6 or if it goes to the City of Lubbock. In the event of an upset in the system, water could be temporarily sent to a 10.5-million-gallon non-compliant lagoon. This volume allows for non-compliant effluent to be contained for seven days operating at full capacity. The plant will also be equipped with an aerated 1.5-million-gallon calamity lagoon to serve as storage should any process units need to be taken out of service.

RO reject water will be treated at the wastewater treatment facility, located onsite, and discharged to Outfall 001.

Process wastewater and cooling water discharge will be continuous. All flows will be pumped from the facility through a 14" force main to an energy dissipation structure thence to a 24" HDPE line to the outfall structure (001) located in Canyon Lake #6 – classified segment 1241A.

Tech Report 1.0 Pg. 2, 1.c

Raw Materials	Intermediates	Products
Milk	Permeate	Mozzarella Cheese
Nonfat dry milk	Liquid Whey	Whey Protein Powder
Salt	Cream	Sweet Whey Powder
Cellulose	Skim Milk	Permeate Powder
		Cream

ATTACHMENT K. FACILITY SITE DRAWINGS

Tech Report 1.0 Pg. 2, 1.d

SITE LEGEND:

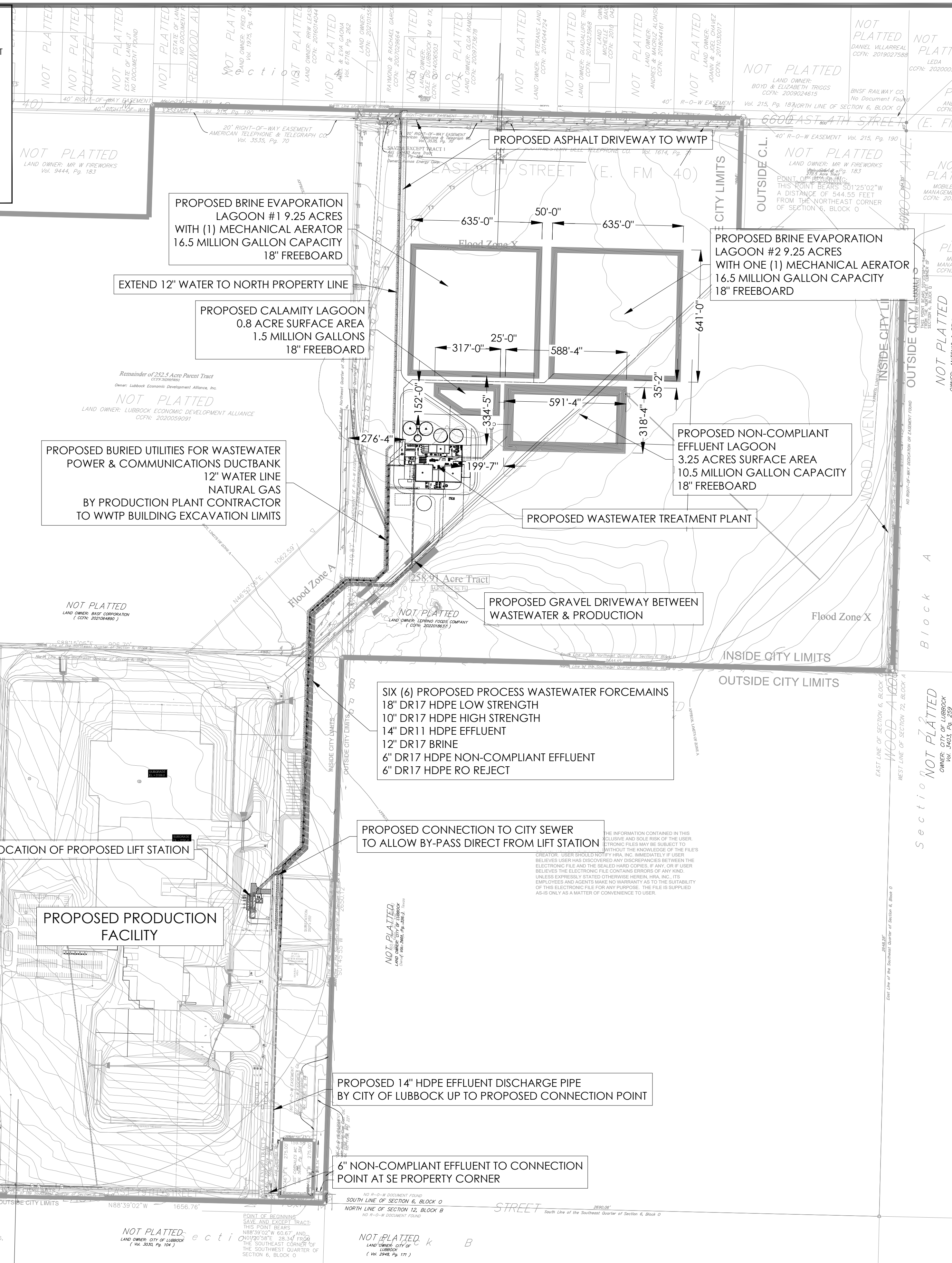
SUBJECT PROPERTY LINE	FOUND 1" DIAMETER IRON PIPE
ROAD RIGHT-OF-WAY	FOUND 3/4" RE-BAR
SECTION LINE	STORM SEWER MANHOLE
EASEMENT LINE	CURB INLET CATCH BASIN
TRAVELED ROAD CENTERLINE	SANITARY SEWER MANHOLE
STORM SEWER	HYDRANT
SANITARY SEWER	WATER VALVE
WATER MAIN	GAS POST / MARKER
UNDERGROUND GAS	TELEPHONE PEDESTAL
UNDERGROUND COMMUNICATIONS	CABLE PEDESTAL
UNDERGROUND TELEPHONE	LIGHT POLE
UNDERGROUND ELECTRIC	ELECTRIC PEDESTAL / BOX
OVERHEAD ELECTRIC LINE	ELECTRIC MANHOLE
CHAIN LINK FENCE	TRAFFIC SIGNAL
EDGE OF GRAVEL	POST
CURB AND GUTTER	SIGN
5' CONTOUR	DECIDUOUS TREE
1' CONTOUR	CONIFEROUS TREE
TREE LINE	BUSH/SHRUB

COVERAGE LEGEND:

= ASPHALT PAVEMENT
= CONCRETE
= GRASS AREA
= CRUSHED GRAVEL

SPECIFICATION NOTES:

1.) ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH TEN STATES STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION
2.) ALL UNDERGROUND UTILITIES SHALL INCLUDE INSTALLATION OF MARKING TAPE AND TRACER WIRE.
3.) RESTORE ALL DISTURBED AREAS UTILIZING TXDOT APPROVED SEED MIX UNLESS OTHERWISE REQUESTED BY OWNER.
4.) ALL WORK IN PUBLIC RIGHT OF WAY SHALL BE COORDINATED WITH THE LOCAL REGULATORY AUTHORITY AND PERFORMED ACCORDING AUTHORITIES STANDARD SPECIFICATIONS.
5.) ALL HDPE PIPE SHALL CONFORM TO ASTM D3350 and PLASTIC PIPE INSTITUTE (PPI) TR4 STANDARDS AND THE FOLLOWING PRESSURE CLASSIFICATIONS: 250 PSI (DR11), 125 PSI (DR17), 100 PSI (DR21). ALL JOINTS SHALL BE FUSION WELDED. PRODUCT SHALL BE PE4710 BY JM EAGLE OR APPROVED EQUAL.
6.) ALL PVC PRESSURE PIPE SHALL BE INSTALLED USING OPEN TRENCH METHODS UNLESS SPECIFIED ELSEWHERE. PVC PRESSURE PIPE SHALL CONFORM TO AWWA PRESSURE CLASSES OF 165 PSI (DR25), 235 PSI (DR18), 305 PSI (DR14), 200 PSI (DR21). SHALL BE ANSI/NSF STANDARD 61 APPROVED. PRODUCT SHALL BE BLUE BRUTE BY JM EAGLE OR APPROVED EQAUAL.
7.) CHLORINATED POLYVINYLE CHLORIDE (CPVC) PIPE SHALL CONFORM TO ASTM D-1784 FOR SCHEDULE 80 PIPES. CPVC SHALL MEET CLASS 23447 AS REFERENCED IN ASTM D 1784.
8.) ALL PIPING SHALL BE BEDDED USING MATERIAL IN ACCORDANCE WITH LOCAL PUBLIC WORKS STANDARD SPECIFICATIONS.
9.) EXCAVATOR SHALL BE SOLEY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL" SYSTEM NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWINGS.
10.) EXCAVATOR IS RESPONSIBLE FOR LOCATING PRIVATE UTILITIES PRIOR TO DIGGING.
11.) EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND DISCREPANCIES REPORTED TO ENGINEER PRIOR TO STARTING WORK. FAILURE TO DO SO DOES RESULTS IN CONTRACTOR BEING SOLEY RESPONSIBLE FOR ANY REWORK OF FIELD MODIFICATIONS REQUIRED.
12.) CONTRACTOR IS RESPONSIBLE FOR SECURING THE JOB SITE TO PROTECT THE PUBLIC AND SITE OWNER THROUGHOUT CONSTRUCTION.
13.) CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH LOCAL ORDINANCES FOR NOISE, WORK HOURS AND DUST CONTROL.



OVERALL PROPOSED SITE PLAN

300 0 300 600
1" = 300'
SCALE (11 x 17): 1" = 600'-0"

Texas811 Know what's below. Call before you dig.

The Probst Group
17035 W. WISCONSIN AVE.
SUITE 120
BROOKFIELD, WIS. 53005
TEL: (262) 264-5665
FAX: (262) 436-1359

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

LEPRINO FOODS
ARMADILLO, TEXAS
WASTEWATER TREATMENT PLANT
OVERALL PROPOSED SITE PLAN

REVISIONS

NO.	DATE
A	3-24-22
B	4-15-22
C	6-24-22
D	07-29-22
-	-
-	-
-	-
-	-
-	-
-	-

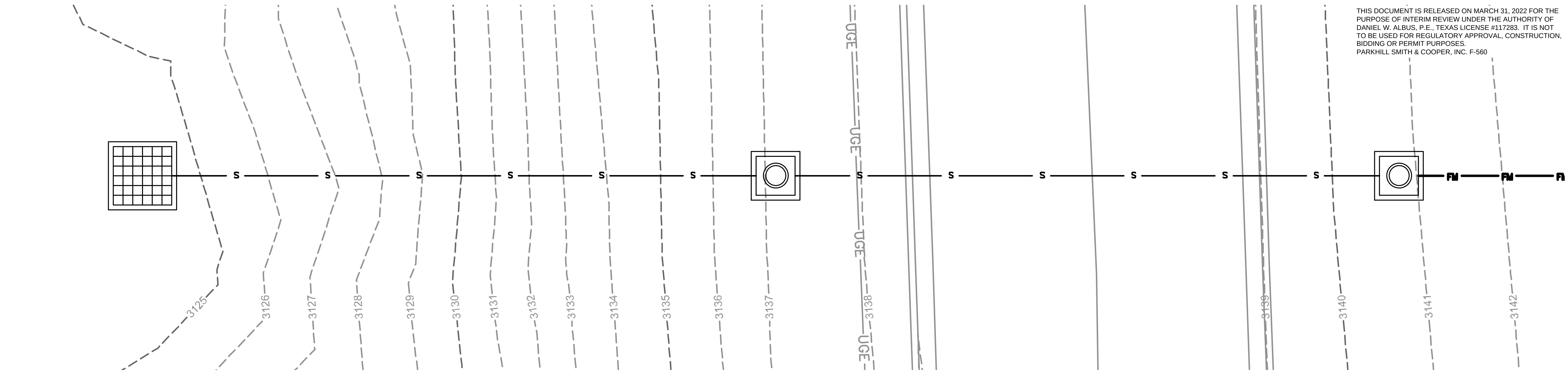
DRAWN BY: CJL
PROJ. ENG: CJL
PROJECT NUMBER: 6210.01
SHEET
C200

30% REVIEW SET

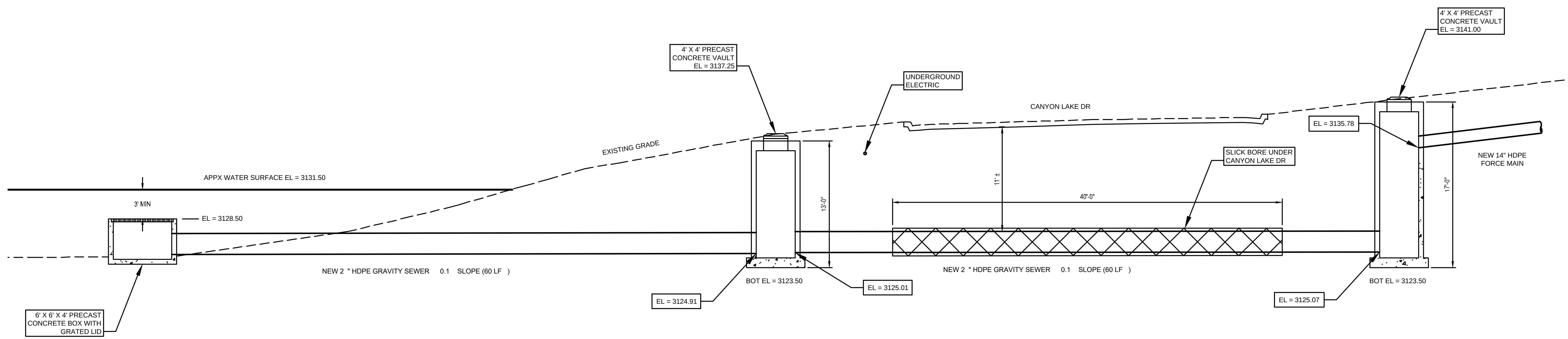
W:\Clients\Leprino Foods\Armadillo - TX\6210_New WWTP\Drawings\Revisions\Leprino\Related Files\C100.dwg

9-14-2022

THIS DOCUMENT IS RELEASED ON MARCH 31, 2022 FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL W. ALBUS, P.E., TEXAS LICENSE #117283. IT IS NOT TO BE USED FOR REGULATORY APPROVAL, CONSTRUCTION, BIDDING OR PERMIT PURPOSES.
PARKHILL SMITH & COOPER, INC. F-560



A1 LAKE SURVEY PLAN VIEW
1" = 10'-0"



A2 DISCHARGE STRUCTURE SECTION
1" = 10'-0"

Leprino Treated Effluent Line

Lubbock Economic Development Alliance
1500 Broadway, Suite 600
Lubbock, TX 79401

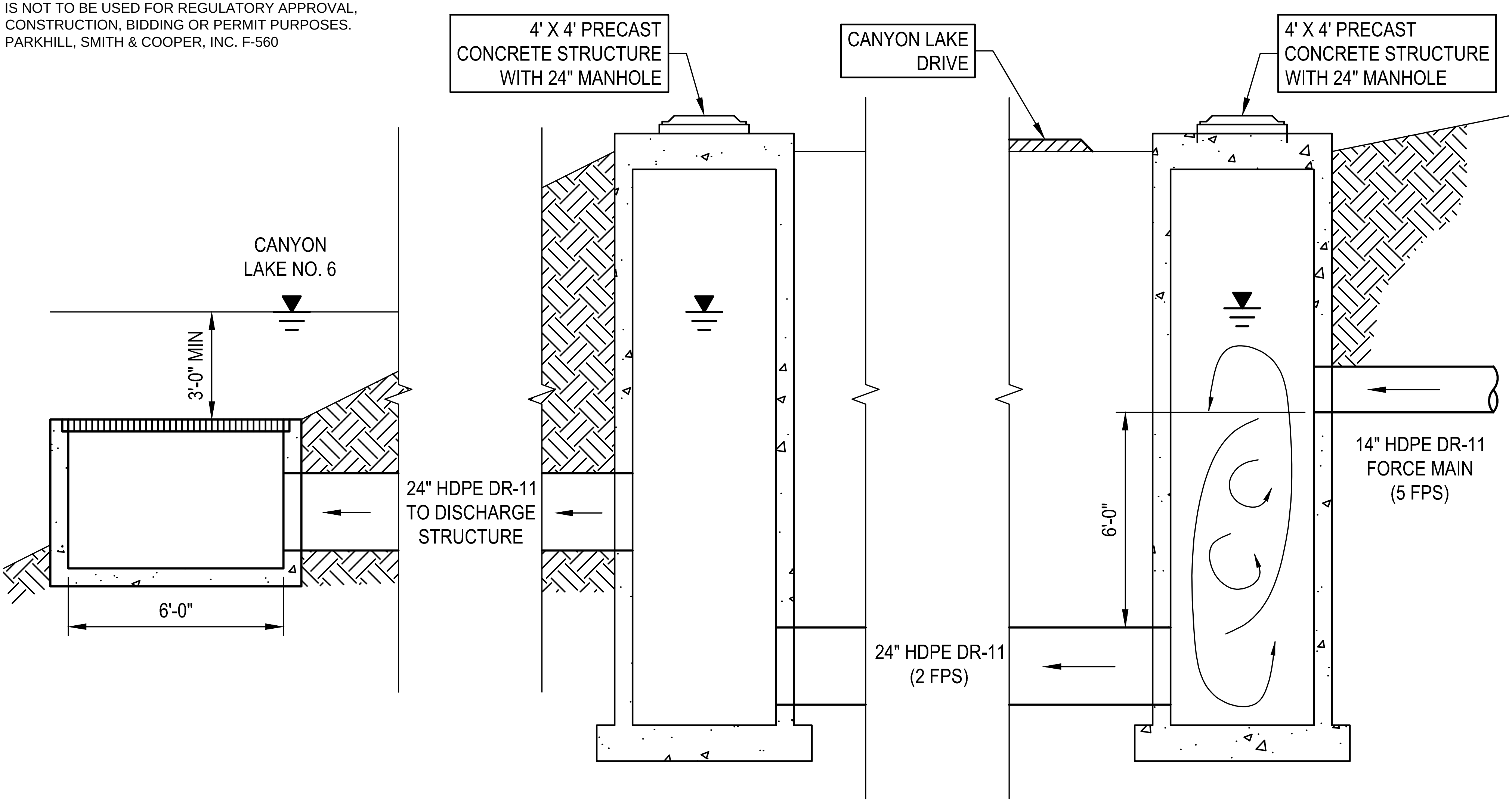
Parkhill
Parkhill.com

Lake Survey

Issue: Review
Date: March 2022
Project No: 01.5609.21
Sheet: 1 of 1

LEPRINO_000113

THIS DOCUMENT IS RELEASED ON 12/01/2021 FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF BRIAN M. STEPHENS, P.E., TEXAS LICENSE #92015 IT IS NOT TO BE USED FOR REGULATORY APPROVAL, CONSTRUCTION, BIDDING OR PERMIT PURPOSES. PARKHILL, SMITH & COOPER, INC. F-560



Parkhill

Parkhill.com

Leprino New Effluent Outfall Line

Lubbock Economical Development Alliance
1500 Broadway Street, Suite #6
Lubbock, Texas 79401

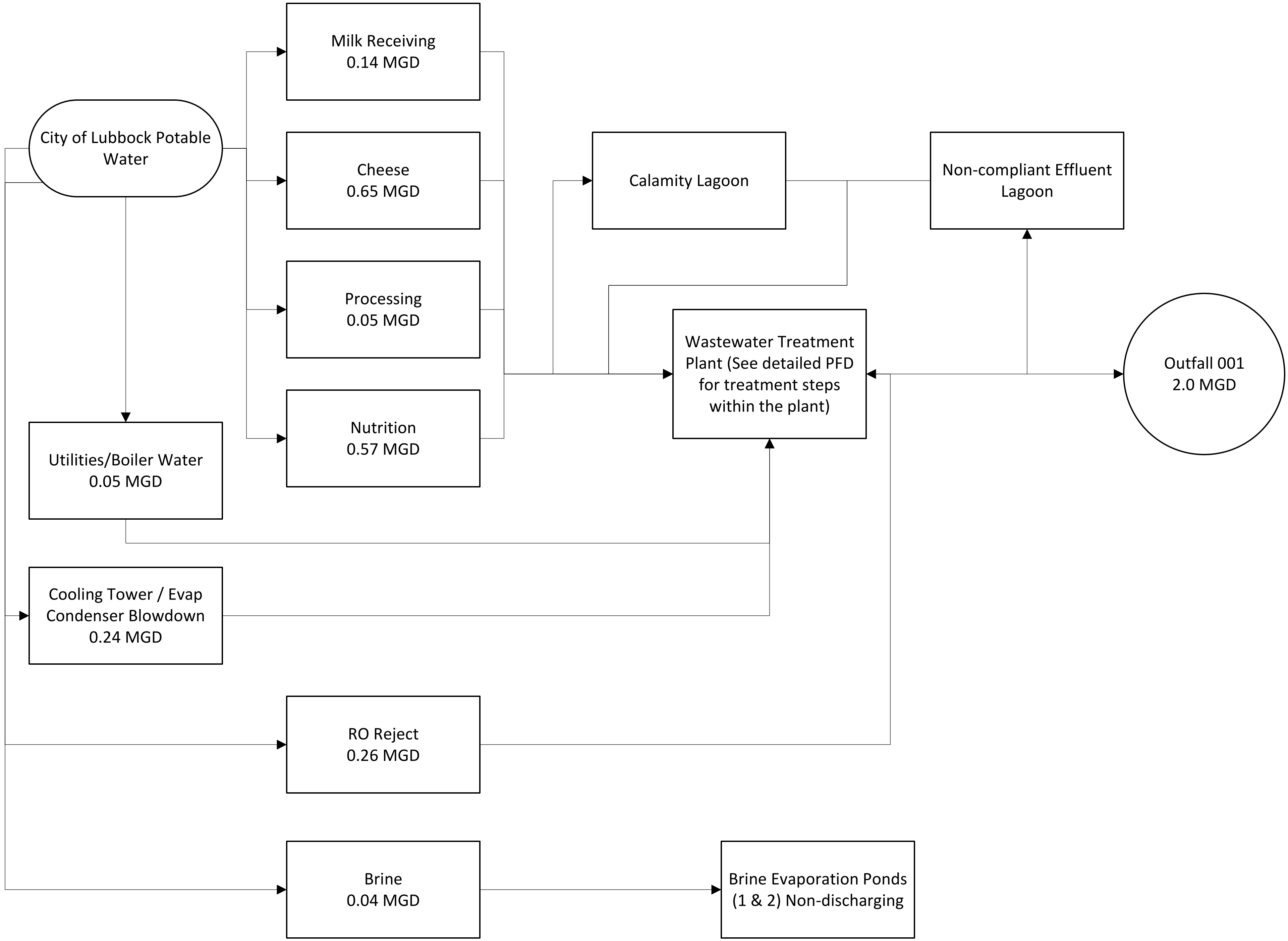
Energy Dissipation Detail - Option No. 1

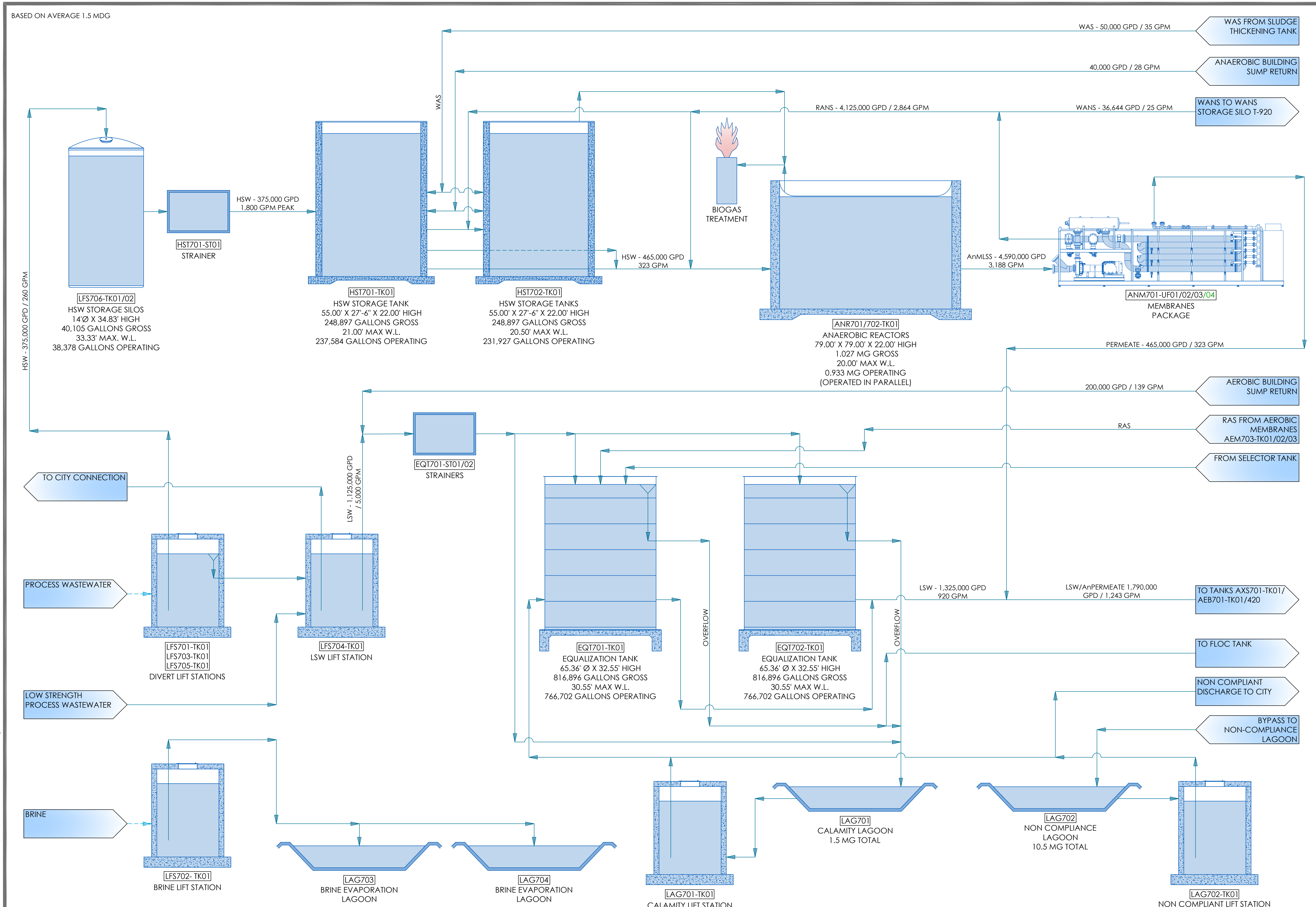
Issue: TECHNICAL MEMO
Date: DEC 2021
Project No: PENDING
Sheet: 3 OF 9

LEPRINO_000114

ATTACHMENT L. FLOW SCHEMATIC DIAGRAM

Tech Report 1.0 Pg. 3, 2.b


City of Lubbock Potable Water
Milk Receiving 0.14 MGD
Cheese 0.65 MGD
Processing 0.05 MGD
Nutrition 0.57 MGD
Calamity Lagoon
Non-compliant Effluent Lagoon
Wastewater Treatment Plant (See detailed PFD for treatment steps within the plant)
Outfall 001 2.0 MGD
Utilities/Boiler Water 0.05 MGD
Cooling Tower / Evap Condenser Blowdown 0.24 MGD
RO Reject 0.26 MGD
Brine 0.04 MGD
Brine Evaporation Ponds (1 & 2) Non-discharging



The Probst Group
17035 W. WISCONSIN AVE.
SUITE 120
BROOKFIELD, WIS. 53005
TEL: (262) 264-5665
FAX: (262) 436-1359

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

LEPRINO FOODS
ARMADILLO, TEXAS
WASTEWATER TREATMENT PLANT
PROCESS FLOW DIAGRAM - ANAEROBIC OPTION

REVISIONS

NO.	DATE
A	3-24-22
B	4-15-22
C	6-24-22
D	7-29-22
E	8-19-22
-	-
-	-
-	-
-	-
-	-
-	-

DRAWN BY: BTR
PROJ. ENG: CJL
PROJECT NUMBER:
6210.01
SHEET
PFD001

LS 90% REVIEW SET

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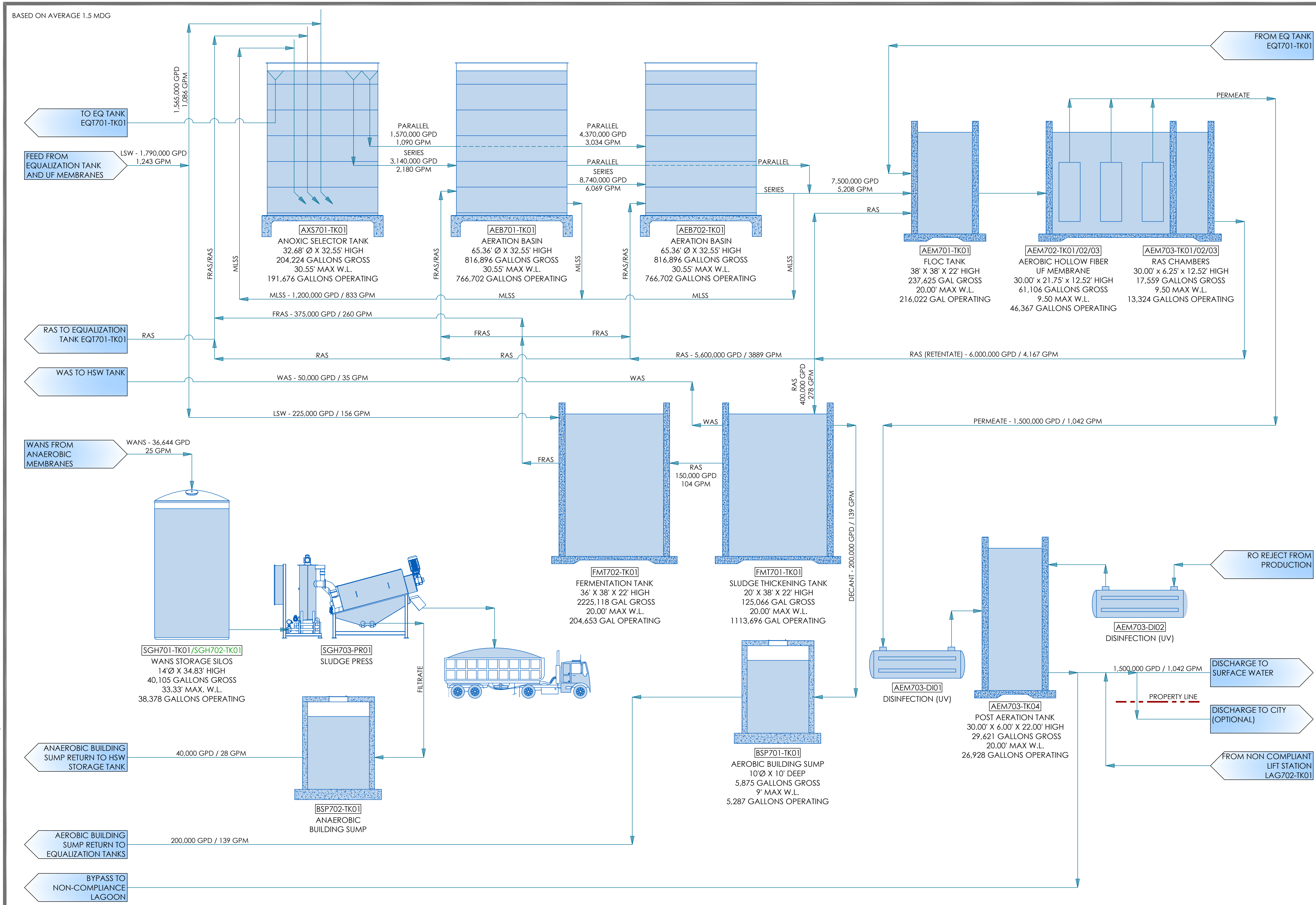
9-15-2022



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17035 W. WISCONSIN AVE.
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BROOKFIELD, WIS. 53005
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FAX: (262) 436-1359

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

LEPRINO FOODS
ARMADILLO, TEXAS
WASTEWATER TREATMENT PLANT
PROCESS FLOW DIAGRAM - ANAEROBIC OPTION

REVISIONS

NO.	DATE
A	3-24-22
B	4-15-22
C	6-24-22
D	7-29-22
E	8-19-22
-	-
-	-
-	-
-	-
-	-

DRAWN BY: BTR
PROJ. ENG: CJL
PROJECT NUMBER:
6210.01
SHEET
PFD002

LS 90% REVIEW SET

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9-15-2022

Tech Report 1.0 Pg. 8, 5.d

Cooling tower additives have not yet been selected. Once the additives are known, SDS for those products will be submitted.

ATTACHMENT N. IMPOUNDMENTS

Tech Report 1.0 Pg. 5, b.i – b.iii, 3.c – 3.e

- Impoundment Data
- USGS Map - Water Supply and Monitor Wells
- State Water Wells and Geotechnical Report
- Waste Migration Assessment
- Evaporation Calculations

Impoundments Data

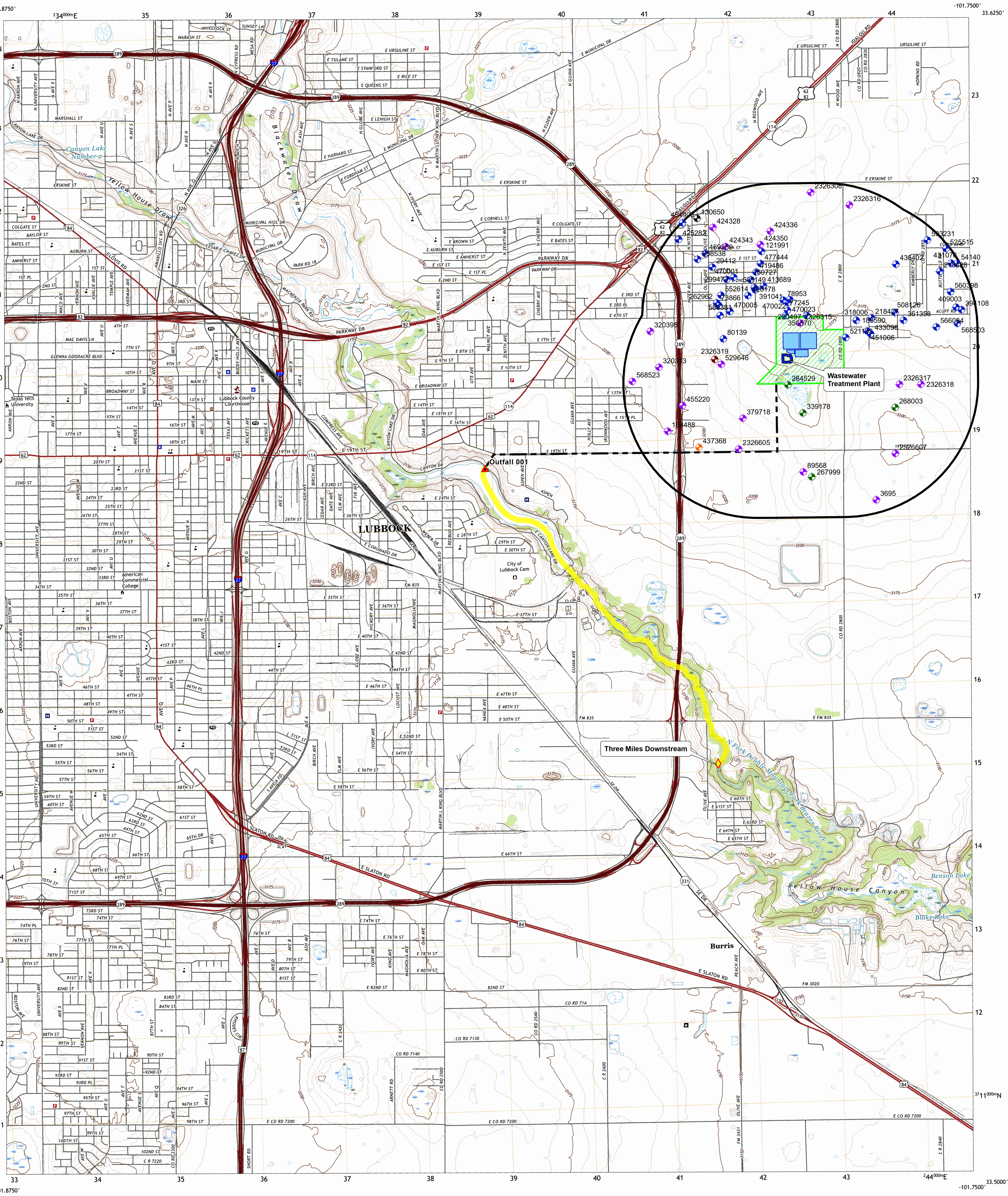
Not yet designed. Engineering data will be submitted when available.

USGS Map – Water Supply and Monitor Wells

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

The National Map US Topo

LUBBOCK EAST QUADRANGLE
TEXAS - LUBBOCK COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14S

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

Imagery....NAIP, September 2016 - November 2016
Roads.... U.S. Census Bureau, 2015 - 2018
Names....GNIS, 1979 - 2021
Hydrography....National Hydrography Dataset, 2004 - 2018
Contours....National Elevation Dataset, 2020
Boundaries....Multiple sources; see metadata file 2019 - 2021

Wetlands....FWS National Wetlands Inventory Not Available

UTM GRID AND 2018 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

QUADRANGLE LOCATION

ADJOINING QUADRANGLES
1 Shallowater
2 New Deal
3 Idalou
4 Lubbock West
5 Buffalo Springs Lake
6 Slide
7 Woodrow
8 Slaton

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

LUBBOCK EAST, TX
2022

Legend
- Property Boundary
- Wastewater Treatment Plant
- Impoundments
- Proposed 14" HDPE Discharge Pipe
- Outfall Location
- Discharge Route
- Downstream Marker
- One Mile Radius

Wells
- Domestic
- Environmental Soil Boring
- Industrial
- Irrigation
- Monitor
- Public Supply
- Test Well

State Water Well and Geotechnical Reports

STATE OF TEXAS WELL REPORT for Tracking #220497

Owner:	**One Builder for Life**	Owner Well #:	**No Data**
Address:	**PO Box 53493 Lubbock, TX 79453**	Grid #:	**23-26-3**
		Latitude:	**33° 35' 34" N**
Well Location:	**4615 E. 4th St. Lubbock, TX 79403**	Longitude:	**101° 46' 16" W**
Well County:	**Lubbock**	Elevation:	**No Data**

Type of Work: **New Well**   Proposed Use: **Domestic**

Drilling Start Date: **6/23/2010**   Drilling End Date: **6/23/2010**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**148**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
95	**148**	**Gravel**	**8/16**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
2	**4**	**cement**
4	**95**	**bentonite**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **15**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Tape**

Surface Completion: **Pitless Adapter Used**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
118-130	**Fresh**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Estill Drilling**

PO Box 64491
Lubbock, TX 79464

Driller Name: **Geoffrey S. Spencer** License Number: **58601**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**4**	**Top Soil**
4	**25**	**Brown Sandy Clay**
25	**90**	**Silty Tan Clay/ light layers of Sandstone**
90	**112**	**Sand and Gravel**
112	**118**	**Tan Clay**
118	**130**	**Sand and Gravel**
130	**141**	**Silty Sandy Clay/ Sand**
141	**148**	**Blue Limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
5 New PVC surface to 108
5 New PVC Screen 108-148 .035

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #284529

Owner:	**City Of Lubbock**	Owner Well #:	**SBL-01**
Address:	**402 Municipal Drive Lubbock, TX**	Grid #:	**23-26-3**
Well Location:	**City Of Lubbock Land Application Site Lubbock, TX**	Latitude:	**33° 35' 07" N**
		Longitude:	**101° 46' 25" W**
Well County:	**Lubbock**	Elevation:	**No Data**

Plugged Within 48 Hours

This well has been plugged **Plugging Report Tracking #135655**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **3/28/2012** Drilling End Date: **3/28/2012**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**7.875**	**0**	**55**

Drilling Method: **Air Rotary**

Borehole Completion: **Unknown**

Annular Seal Data: **No Data**

Seal Method: **Not Applicable**

Sealed By: **Unknown**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Unknown**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
55-6 Bent HP 22		
6-2 Cement 1		
2-0 Fill		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Straub Corporation**

P O Box 192
Stanton, TX 79782

Driller Name: **Raymond Straub Jr**

License Number: **4456**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**3.5**	**Dark Brown Clayey Silt**
3.5	**8**	**Dark Brown Silty Clay**
8	**17**	**Gray/Green Clay**
17	**30.5**	**Calcareous Silty Sand**
30.5	**39**	**Tan Silicious Sandstone**
39	**45**	**Red Silty Sandy Clay**
45	**55**	**Red/Brown Clayey Sand**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #379718

Owner:	**BAYER CROP SCIENCE**	Owner Well #:	**9680**
Address:	**1301 EAST 50TH STREET LUBBOCK, TX 79404**	Grid #:	**23-26-6**
Well Location:	**No Data**	Latitude:	**33° 34' 54" N**
		Longitude:	**101° 46' 46" W**
Well County:	**Lubbock**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Irrigation**

Drilling Start Date: **10/1/2014** Drilling End Date: **10/2/2014**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
18	**0**	**160**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**160**	**Gravel**	**3/8"**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
-1	**10**	**CEMENT**

Seal Method: **Unknown**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

	Strata Depth (ft.)	Water Type
Water Quality:	**No Data**	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **HI PLAINS DRILLING, INC.**

P. O. BOX 730
ABERNATHY, TX 79311

Driller Name: **LEEROY TREVINO** License Number: **54667**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**4**	**TOP SOIL**
4	**17**	**CALICHE AND CLAY**
17	**40**	**SANDY CLAY, SAND, SNDSTONE**
40	**45**	**HARD CAPROCK**
45	**80**	**SANDY CLAY, SAND, SANDSTONE**
80	**144**	**COARSE SAND, GRVL**
144	**155**	**HARD LIMEROCK**
155	**160**	**RED**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
12 3/4 N BLANK STEEL +1 - 100 .188
12 3/4 N MILLSLOT PERF 48 SPF 100 - 160 .188

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Draft Geotechnical Engineering Report

Armadillo Food Manufacturing Facility
Lubbock, Texas
February 24, 2022
Terracon Project No. AR215097

Prepared for:
E.A. Bonelli + Associates, Inc.
Oakland, CA

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

February 24, 2022

E.A. Bonelli + Associates, Inc.
8450 Edes Avenue
Oakland, CA 94621

Attn: Ms. Lesley S. Marshall, P.E., Vice President
P: (415) 760.0360
E: Lesley.marshall@eabonelli.com

Re: Draft Geotechnical Engineering Report
Armadillo Food Manufacturing Facility
E County Road 6700
Lubbock, Texas
Terracon Project No. AR215097

Dear Ms. Marshall:

We are pleased to submit this Geotechnical Engineering report for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PAR215097 dated December 8, 2021 and E.A. Bonelli's CQC No. 21053-TRCN-001. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and pavements for the proposed project.

We appreciate the opportunity to work with you on this project and look forward to contributing to the ongoing success of this project by providing Materials Testing services during construction. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.
(Firm Registration No. F3272)

Maverick Rubin
Geotechnical Field Engineer

Jerry T. Sayson, P.E.
Geotechnical Department Manager

Reviewed by:

Greg J. Klein, P.E.
Principal

REPORT TOPICS

INTRODUCTION 1

SITE CONDITIONS 1

PROJECT DESCRIPTION 2

GEOTECHNICAL OVERVIEW 2

CORROSIVITY 4

EARTHWORK 5

SHALLOW FOUNDATIONS 9

DEEP FOUNDATIONS 12

FLOOR SLABS 15

LATERAL EARTH PRESSURE 16

SEISMIC CONSIDERATIONS 18

PAVEMENTS 18

GENERAL COMMENTS 22

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the ***GeoReport*** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Draft Geotechnical Engineering Report

Armadillo Food Manufacturing Facility
E County Road 6700
Lubbock, Texas
Terracon Project No. AR215097
February 24, 2022

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the Armadillo Food Manufacturing Facility to be located approximately one-half mile west of CR 2800, north of and E County Road 6700 in Lubbock, Texas. The purposes of these services are to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Site preparation and earthwork
- Floor slab design and construction
- Pavement design and construction
- Groundwater conditions
- Foundation design and construction
- Seismic site classification per IBC

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plans** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The main building is located 0.45 miles east and 0.25 miles north of the intersection of Loop 289 and E County Road 6700. The water treatment plant is located at the southwest corner of E County Road 6600 and Wood avenue. The coordinates of the approximate center of the proposed building area are 33.5818N, 101.7794W. The coordinates of the approximate center of the proposed water treatment plant and detention pond are 33.5889N, 101.7708W. See **Site Location.**

Item	Description
Existing Improvements	The project site has been predominately developed as agricultural fields with small portions of the southwest corner of the northeast parcel uncultivated. Structures include small equipment sheds and tanks associated near the center of each parcel associated with the field irrigation systems. Travelled roads through the site are unsurfaced dirt paths.
Current Ground Cover	Exposed soils and vegetation.

PROJECT DESCRIPTION

Our understanding of the project conditions are as follows:

Item	Description
Project Description	The proposed project is a food manufacturing facility.: ■ Main processing building will be single story precast building approximately 40 feet high with anticipated column loads of 350 to 500 kip, wall loads of 12 to 15 kip/ft and floor loads of 800 psf ■ Warehouse area and office building with anticipated column loads of 50 to 100 kip and wall loads of 5 to 10 kip/ft ■ Dryer equipment area is anticipated to be precast structure about 140 feet to 150 feet high from finish grade. The anticipated column loads are 1500 to 1800 kip and wall load of 18 kip/ft ■ Silo area is anticipated to have capacities of 20,000 to 75,000 gallons ■ Loading docks ■ Associated pavement areas. ■ Water treatment plant will be a single-story building with detention ponds
Site Topography	Gently sloping from the southwest to the northeast.
Pavements	Pavement will consist of hot mix asphaltic concrete for pavement subject to regular passenger car traffic and portland cement concrete pavement will be used for pavement subject to heavy-duty traffic. Heavy duty traffic loads were provided by the Client as 200 tractor-trailers per day, 6 days operation per week and 20-year design life.
Finished Floor Elevation	Elevation information is not available at the time of this report.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	**Upper Sandy Lean Clay**	Medium stiff to hard
2	**Upper Clayey Sand**	Loose to very dense
3	**Lower Sandy Lean Clay**	Medium stiff to hard
4	**Fat Clay**	Hard
5	**Lower Clayey Sand**	Dense to very dense

The borings were advanced in the dry using an air rotary drilling technique that allow short term groundwater observations to be made while drilling. Groundwater seepage was not encountered within the maximum drilling depth at the time of our field exploration. Groundwater conditions may be different at the time of construction. Groundwater conditions may change because of seasonal variations in rainfall, runoff and other conditions not apparent at the time of drilling.

GEOTECHNICAL OVERVIEW

The near surface clay soils could become unstable with typical earthwork and construction traffic, especially after precipitation events. Effective drainage should be completed early in the construction sequence and maintained after construction to avoid potential issues. If possible, the grading should be performed during the warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist.

The warehouse building, office building, silos and the wastewater treatment plant building may be supported by shallow foundations provided the foundation areas are prepared in accordance with the requirements in the **Earthwork** section. Refer to **Shallow Foundations** section for detailed recommendations. Shallow foundations for the dryer equipment area and the main processing building will require ground improvement in order to improve load-settlement relationships for the higher structure loadings associated with these features.

Alternatively, drilled pier foundations can be considered for the processing and dryer equipment area or other features where bearing capacity concerns lead to oversized foundations. Refer to **Deep Foundations** section for detailed recommendations.

The **Floor Slabs** section includes recommendations for subgrade preparation associated with performance expectations of our assumed slab loads.

Hot mix asphaltic concrete (HMAC) or portland cement concrete (PCC) pavement sections are provided herein for light-duty and heavy-duty roadways, respectively. The **Pavements** section provides additional recommendations for the design of new pavement systems.

CORROSIVITY

Tests for pH, chloride content, sulfate content, sulfide content, total salts, red-ox potential, and laboratory electrical resistivity were performed on two samples from the borings to provide an indication of the corrosion potential of the on-site materials. This limited testing program should not be interpreted as a comprehensive assessment of the site, but only provides an indication of conditions at the sampled location.

Laboratory resisitivity test results were performed using a Miller Box. The results of the resistivity tests and pH tests are summarized in the following table:

pH and Electrical Resistivity Test Results			
Boring Number	**Sample Depth[1] (feet)**	**Electrical Resistivity (Ω-cm)**	**pH**
BP6	2.5	1,859	7.70
BP7	5	1,239	7.38

1. Approximate depth below existing grade at the time of our field program.

Mapping by the Natural Resources Conservation Service (NRCS) indicates that the potential for corrosion of steel predominantly varies from “moderate” to “high” at the site. Borings BP6 and BP7 from which the samples were selected for resistivity are mapped in an area of “moderate” corrosion potential. Numerous publications exist that assess corrosion potential with varying qualitative descriptions for the measured results. Values of electrical resistivity less than 2000 ohm-cm are commonly noted as having increased corrosion potential.

Additional chemical analyses testing results are tabulated in the following table.

Chemical Test Results						
Boring Number	**Sample Depth[1] (feet)**	**Chlorides (mg/kg)**	**Water-Soluble Sulfate (SO_4) in Soil (%)**	**Water Soluble Sulfides**	**Total Salts (mg/kg)**	**Red-Ox (mV)**
BP6	2.5	50	0.005	Nil	410	+447
BP7	5	50	0.025	Nil	603	+441

1. Approximate depth below existing grade at the time of our field program.

The NRCS mapping indicates "low" concrete corrosion for the entire site. ACI 318-14 assigns Exposure Class S0 where water soluble sulfates in soil are less than 0.2 percent.

EARTHWORK

Site Preparation

Remove existing vegetation, brush, and other deleterious materials from proposed building/structure and pavement areas. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction. The stripped materials consisting of vegetation and organic materials should be wasted from the site or used to revegetate landscaped areas or exposed slopes after completion of grading operations. Building pad preparation should be conducted as described in the section below. In the remaining areas, excessively wet or dry material should either be removed, or moisture conditioned and recompacted. After removal of deleterious materials and performing required cuts, the subgrade should be proof-rolled where possible to aid in locating loose or soft areas. Proof-rolling can be performed with a 20-ton roller or fully loaded dump truck. Soils that are observed to rut or deflect excessively (typically greater than 1-inch) under the moving load should be undercut and replaced with properly compacted on-site soils. The proof-rolling and undercutting activities should be witnessed by a representative of the geotechnical engineer and should be performed during a period of dry weather.

Demolition Considerations

The project site is partially developed with an existing irrigation system. As a result, these irrigation systems may be present within the footprint area of the building area and planned pavements. The irrigation system and associated backfill and granular bedding material (if used) can provide avenues for groundwater to enter under the pavement subgrade. We recommend that all irrigation lines be completely removed from the proposed structure areas. Abandoned pipes which remain underground should be grouted.

Structures removed during demolition can create subsurface voids. It is important that all subsurface voids formed from the removal of the foundation system be backfilled completely with moisture conditioned, compacted, on-site soils/structural fill as described in this report. It is our experience that improperly backfilled excavations can cause significant differential settlement under and around the proposed structure. As an alternative to compact soil backfill, a flowable fill material may be considered. Flowable fill, or slurry, when properly designed provides a competent subgrade and can still be readily excavated if the utilities require repair or maintenance. In addition, flowable fill does not need to be placed in lifts, compacted, or tested for as-placed density.

Anticipated Borrow Areas

Borings SB25, P1 and P2 were explored in the areas where excavations are anticipated to evaluate the on-site materials as structural fill. The materials encountered in these borings are clayey sand to sandy lean with liquid limit in the range of 23 to 34 and plasticity index in the range of 10 to 18. It is our opinion that these materials are acceptable as structural fill material.

Fill Material Types

Structural fill is material used below, within 5 feet of structures, or for constructed slopes. Earthen materials used as structural fill material and on-site soils should meet the following material property requirements:

Soil Type [1]	**USCS Classification**	**Required Parameters (for Structural Fill)**
Structural Fill	CL, SC	Structural Building Pads and Pavement Locations: Clean soil (free of deleterious material and debris) without rock greater than 4 inches in maximum dimension and with liquid limits (LL) less than 35, plasticity index (PI) less than 20. Site materials encountered in the borings generally meet these requirements.

1. Soils should consist of approved materials free of organic matter, debris and rocks greater than 4 inches in maximum dimensions. Frozen material should not be used, and fill should not be placed on a frozen subgrade. The sample of structural fill type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

Fill Compaction Requirements

The recommended compaction criteria are presented in the following table. We recommend that all fills be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.

Item	Compaction Criteria
Subgrade preparation to receive fill	Surface scarified to a minimum depth of 6 inches and compacted to criteria below
Lift thickness	Loose lift thickness of 9-inch or less
Building and Pavement Areas: On-site soils or Structural Fill	A minimum of 95% of the maximum standard Proctor dry density (ASTM D 698) and within 2 percent of optimum moisture content.
Asphaltic Concrete Pavement Locations: Aggregate Base	A minimum of 95% of the maximum standard Proctor dry density (ASTM D 698) and within 2 percent of optimum moisture content.

Building Pad Area Subgrade Preparation

We recommend that onsite soils or approved structural fill materials are utilized and processed in accordance with **Fill Compaction Requirements** section. The following subgrade preparation recommendations should be performed for the proposed structures prior to foundation construction:

- After completing stripping operations, excavate at least 1 foot of the on-site soil below existing grades within the building areas. Organic and inorganic soils should be stockpiled separately for potential reuse. The building area is defined as the area that extends at least 5 feet (horizontal) beyond the perimeter of the foundation.
- After removing 1 foot of on-site soil, the exposed subgrade should be proof-rolled with a minimum 20-ton roller to evidence any weak yielding zones. A Terracon geotechnical engineer or their representative should be present to observe proof-rolling operations.
- Over-excavate any confirmed weak yielding zones, both vertically and horizontally, to expose competent soil. The upper 12 inches of the exposed competent soil should be moisture conditioned within 2 percentage points of the optimum moisture content and then compacted to at least 95 percent of the maximum dry density determined in accordance with ASTM D 698.
- Moisture condition and compact the on-site soils or structural fill material to achieve design grade within building pad areas.

Grading and Drainage

All grades must provide effective drainage away from the structures during and after construction and should be maintained throughout the life of the structure. The roof should have gutters/drains with downspouts that discharge into stormwater collection system or onto splash blocks at a distance of at least 10 feet from the structures.

Exposed ground should be sloped and maintained at a minimum 5% away from the structures for at least 10 feet beyond the perimeter of the structures. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After structures construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Planters located adjacent to the structure should preferably be self-contained, or at least designed to drain away from the building. Sprinkler mains should be located a minimum of 5 feet away from the building lines. If heads must be located adjacent to the structure, then service lines off the main should be provided. Roof drains should discharge on pavement or be extended away from the structure.

Care should be taken that utility trenches are not left open for extended periods and they are properly backfilled. Backfilling should be accomplished with properly compacted on-site soils, rather than granular materials. A positive cut-off at the building line is recommended to help prevent water from migrating in the utility trench backfill.

Earthwork Construction Considerations

It is anticipated that excavations in the overburden soils for the proposed construction can be accomplished with conventional earthmoving equipment. Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively stable. However, the stability of the subgrade may be affected by precipitation, repetitive construction traffic, closeness to the groundwater seepage or other factors. If unstable conditions develop, workability may be improved by scarifying and drying.

As a minimum, all temporary excavations should be sloped or braced as required by Occupational Health and Safety Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will probably be required during grading operations. The grading contractor, by his contract, is responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction of floor slabs and pavements. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed, or these materials should be scarified, moisture conditioned, and compacted again prior to floor slab and pavement construction.

The geotechnical engineer or a representative should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proof-rolling; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction of building floor slabs.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proof-rolling, and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements specified in **Earthwork**, section, the following design parameters are applicable for the proposed project.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing pressure [1, 2]	2,000 psf
Minimum Foundation Dimensions	Columns: 30 inches Continuous: 18 inches
Ultimate Coefficient of Sliding Friction	0.35
Minimum Embedment Below Finished Grade [3]	24 inches
Estimated Total Movements from Structural Loads [2]	1 inch or less
Ultimate Passive Pressure [4]	275 psf/ft (triangular distribution)

Item	Description

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Values provided are for maximum 100-kips column load or 10 kip per linear foot continuous footing load.
3. Unsuitable or soft soils should be over-excavated and replaced per the recommendations presented in the **Earthwork**.
4. The sides of the excavation for the spread footings must be nearly vertical and the concrete should be placed neat against these vertical faces for the passive earth pressure values to be valid. If the loaded side is sloped or benched, and then backfilled, the allowable passive pressure will be reduced. Passive resistance in the upper 2 feet of the soil profile should be neglected.

Ground Improvement

In order to mobilize higher bearing capacity and maintain settlement to acceptable levels, use of ground improvement methods may be considered. Design of ground improvement system is typically proprietary to a specialty design-build contractor to provide a cost-effective foundation solution to support settlement sensitive structures while providing increased allowable bearing. Design of the RAP system should be performed by the specialty contractor using the soils information collected during the course of this investigation. The use of ground improvement systems can commonly increase bearing capacity to above 5,000 psf.

Uplift Considerations

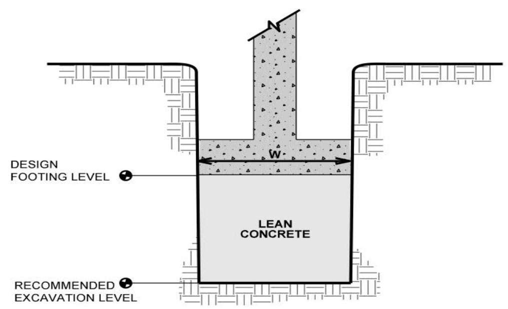
Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils. The effective weight of the soil prism defined by diagonal planes extending up from the top of the perimeter of the foundation to the ground surface at an angle of 20 degrees from the vertical can be included in uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety. A maximum total unit weight of 120 pcf could be used for compacted granular backfill at this site, respectively. This unit weight should be reduced to 55 pcf for portions of the backfill or natural soils below the design groundwater elevation (although not anticipated for this project).

Foundations subjected to overturning loads should be proportioned such that the resultant eccentricity is maintained in the center-third of the foundation (e.g., $e < b/6$). This requirement is intended to keep the entire foundation area in compression during the extreme lateral/overturning load event. Foundation oversizing could be necessary to satisfy this requirement.

Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations represent unsuitable conditions and should be corrected before foundation concrete is placed.

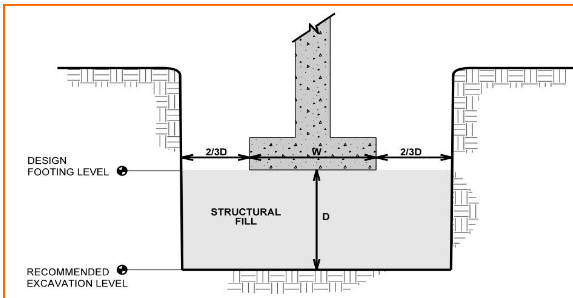
If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below. Lean concrete used as excavation replacement material should not be included as part of the foundation mass to estimate eccentricity/overturning resistance.



LEAN CONCRETE BACKFILL

NOTE: EXCAVATIONS ARE SHOWN VERTICAL; HOWEVER, THE SIDEWALLS SHOULD BE SLOPED AS NECESSARY FOR SAFETY

Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation, with approved on-site soils or imported fill, as recommended in the **Earthwork** section.



OVER-EXCAVATION / BACKFILL ZONE

NOTE: EXCAVATIONS ARE SHOWN VERTICAL; HOWEVER, THE SIDEWALLS SHOULD BE SLOPED AS NECESSARY FOR SAFETY

DEEP FOUNDATIONS

Drilled Shaft Design Parameters

As an alternative to shallow foundations bearing on rammed aggregate piers, the main processing and dryer building structures can be supported by drilled straight shafts. The drilled, straight-shaft foundation system should be designed to resist both horizontal and vertical forces. Vertical downward forces can be resisted by the allowable end bearing pressure of the soils at the bottom of the drilled straight shaft. Vertical uplift forces can be resisted by the skin resistance, dead weight of the structure and its foundation. When foundation concrete is cast in direct contact with excavation sides, an allowable side friction value can also be used to resist vertical loads.

The allowable design criteria for utilization of a drilled straight-shaft foundation system for the proposed structure is presented in the tables below. The tables include the effective soil unit weights, the shear strength parameters, allowable end bearing pressure, and side friction values. Care should be exercised to utilize an appropriate loading condition in the analyses. The design parameters presented in the table below are applicable for the natural undisturbed soils. The capacities within the upper 4 feet of the on-site soils should be disregarded to account for surface effects and anticipated disturbance during foundation installation. Drilled straight-shaft foundations should extend at least 2 feet or one-half the shaft diameter, whichever is greater, into the desired bearing stratum in order to use the recommended allowable end bearing pressures. Drilled shafts should extend a minimum 10 feet.

Long-term settlement of the drilled straight-shaft foundation system, designed and constructed in accordance with the recommendations presented in this report, should be about one-half inch or less.

Table 1. Drilled Shaft Axial Design Summary for Dryer Building [1]

Depth Below Existing Grade, ft	Allowable Side Friction, psf [2]	Net Allowable End Bearing, ksf [3]
0-4	Ignore	Ignore
4-15	560	5
15-30	720	13
30-55	1,500	20
55-75	1,500	25
75-100	1,500	30

1. Design capacities are dependent upon the method of installation, and quality control parameters. The values provided are estimates and should be verified when installation protocols have been finalized.
2. Applicable for compressive loading only. Reduce to 2/3 of values shown for uplift loading. Effective weight of shaft can be added to uplift load capacity. The allowable skin friction values contain a safety factor of 2.
3. Shafts should extend at least one diameter into the bearing stratum for end bearing to be considered. The allowable end bearing pressure values contain a safety factor of 3.

Table 2. Drilled Shaft Axial Design Summary for Main Processing Building [1]		
Depth Below Existing Grade, ft	**Allowable Side Friction, psf [2]**	**Net Allowable End Bearing, ksf [3]**
0-4	Ignore	Ignore
4-10	520	4.4
10-20	680	8
20-35	1,300	20

1. Design capacities are dependent upon the method of installation, and quality control parameters. The values provided are estimates and should be verified when installation protocols have been finalized.
2. Applicable for compressive loading only. Reduce to 2/3 of values shown for uplift loading. Effective weight of shaft can be added to uplift load capacity. The allowable skin friction values contain a safety factor of 2.
3. Shafts should extend at least one diameter into the bearing stratum for end bearing to be considered. The allowable end bearing pressure values contain a safety factor of 3.

Drilled Shaft Lateral Loading

L-Pile parameters for lateral load analysis are shown in the following table. Default values of Strain Factor E50 and modulus, k can be used; our Geotechnical Engineer can provide these inputs if older versions of the analysis program are used by the design team.

Table 3. Drilled Shaft Lateral Design Summary for Dryer Building					
Depth Below Existing Grade, ft	**Layer Description [1]**	**L-Pile Soil Model**	**Effective Unit Weight, pcf [2]**	**Cohesion, psf**	**Angle of Internal Friction, degrees**
0-4	Lean Clay	Stiff Clay w/o free water	120	2,000	-
4-15	Lean Clay	Stiff Clay w/o free water	125	2,400	-
15-30	Lean Clay	Stiff Clay w/o free water	130	4,000	-
30-55	Clayey Sand	Sand	130	-	36
55-75	Clayey Sand	Sand	130	-	38
75-100	Clayey Sand	Sand	130	-	38

1. See **Subsurface Profile** in **Geotechnical Characterization** for more details on Layer Description.
2. Groundwater was not observed during our exploration and the effective unit weights provided are equal to the total unit weight.

Table 4. Drilled Shaft Lateral Design Summary for Main Processing Building

Depth Below Existing Grade, ft	Layer Description[1]	L-Pile Soil Model	Effective Unit Weight, pcf[2]	Cohesion, psf	Angle of Internal Friction, degrees
0-4	Lean Clay	Stiff Clay w/o free water	120	2,000	-
4-10	Lean Clay	Stiff Clay w/o free water	120	2,400	-
10-20	Lean Clay	Stiff Clay w/o free water	130	4,000	-
20-35	Clayey Sand	Sand	130	-	38

1. See **Subsurface Profile** in **Geotechnical Characterization** for more details on Layer Description.
2. Groundwater was not observed during our exploration and the effective unit weights provided are equal to the total unit weight.

Drilled Shaft Construction Considerations

The drilling contractor should be experienced in the subsurface conditions observed at the site, and the excavations should be performed with equipment capable of providing a clean bearing surface. The drilled straight-shaft foundation system should be installed in general accordance with the procedures presented in "Drilled Shafts: Construction Procedures and Design Methods," by Reese, L. C. and O'Neill, M. W., FHA Publication No. FHWA-IF-99-025, 1999 and "Standard Specification for the Construction of Drilled Piers", ACI Publication No. 336.1-01, 2001.

Drilling to design depths should be possible with a conventional heavy-duty single flight power auger. Temporary steel casing or drilling slurry may be required to properly drill and clean piers due to the granular nature of the subsurface soils. Drilled shaft concrete should be placed soon after completion of drilling and cleaning. Due to potential sloughing and raveling, foundation concrete quantities may exceed calculated geometric volumes. If casing is used for shaft construction, it should be withdrawn in a slow continuous manner maintaining a sufficient head of concrete to prevent the creation of voids in shaft concrete.

The successful completion of the drilled straight shafts will depend to a large extent on the suitability of the equipment and the operator's skills. The operation sequence should be scheduled so that the shaft excavation can be completed, reinforcing steel placed, and the concrete poured in a continuous, rapid, and orderly manner to minimize the time the excavation is open. Concrete should be placed as soon as practical and in all instances should be placed within the same day in order to use the side friction values recommended in this report.

The drilled shaft installation process should be performed under the direction of the Geotechnical Engineer. The Geotechnical Engineer should document the shaft installation process including soil and groundwater conditions encountered, consistency with expected conditions, and details of the installed shaft.

FLOOR SLABS

For the light slab loads assumed, the slab performance will largely be a function of the onsite soils or fill materials quality, and the modulus of subgrade reaction is provided in the table below for materials selected and compacted as noted in **Earthwork** section. Slab deflection can be estimated based on the load. If anticipated loads result in excess settlement that are not tolerable, our Engineer can provide recommendations for improvement to the uppermost portion of the site subgrade or more strict control of site grading fill materials and compaction requirements.

Floor Slab Design Parameters

Floor Slab Support [1]	Estimated Modulus of Subgrade Reaction [2]
Pad prepared with a minimum of 12 inch of approved on-site or imported soils placed and compacted in accordance with **Earthwork** section.	100 pounds per square inch per inch (psi/in) for point loads
Pad Prepared with a minimum of 3 feet of properly compacted structural fill and 8 inches of aggregate base	150 pounds per square inch per inch (psi/in) for point loads

1. Floor slabs should be structurally independent of building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation.
2. Modulus of subgrade reaction is an estimated value based upon our experience with the subgrade condition, the requirements noted in **Earthwork** section and the floor slab support as noted in this table. It is provided for point loads. For distributed slab loads on the clay soils at this site, the modulus of subgrade reaction can be estimates as:

   k=150/b with units of psi/in, where b is the width of the loaded area measured in feet. Our engineer can provide refined estimates of k if provided the dimensions of the loaded area to calculate settlement.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, when the project has humidity controlled areas, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels. The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

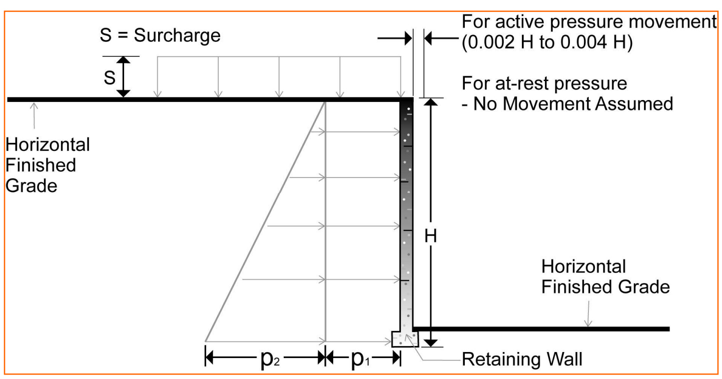
Floor Slab Construction Considerations

Finished subgrade, within and at least 5 feet beyond the floor slab, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed, and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should approve the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

LATERAL EARTH PRESSURE

Structures with unbalanced backfill levels on opposite sides should be designed for earth pressures at least equal to values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Two wall restraint conditions are shown. Active earth pressure is commonly used for design of free-standing cantilever retaining walls and assumes wall movement. The "at-rest" condition assumes no wall movement and is commonly used for basement walls, loading dock walls, or other walls restrained at the top. The recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls (unless stated).



Lateral Earth Pressure Design Parameters				
Earth Pressure Condition [1]	**Coefficient for Backfill Type** [2]	**Surcharge Pressure** [3, 4, 5] **p_1 (psf)**	**Effective Fluid Pressures (psf)** [2, 4, 5]	
			Unsaturated [6]	**Submerged** [6]
Active (Ka)	Granular - 0.31 Fine Grained - 0.42	(0.31)S (0.42)S	(40)H (50)H	(80)H (85)H
At-Rest (Ko)	Granular - 0.47 Fine Grained - 0.58	(0.47)S (0.58)S	(55)H (70)H	(90)H (95)H

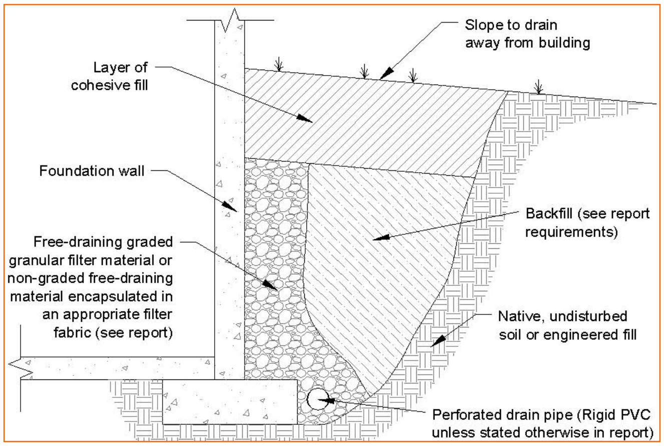
Lateral Earth Pressure Design Parameters				
Earth Pressure Condition [1]	**Coefficient for Backfill Type**[2]	**Surcharge Pressure** [3, 4, 5] **p_1 (psf)**	**Effective Fluid Pressures (psf)** [2, 4, 5]	
			Unsaturated [6]	**Submerged** [6]
Passive (Kp)	Granular - 3.25	---	(390)H	(250)H
	Fine Grained - 2.29	---	(275)H	(205)H

1. For active earth pressure, wall must rotate about base, with top lateral movements 0.002 H to 0.004 H, where H is wall height. For passive earth pressure, wall must move horizontally to mobilize resistance.
2. Uniform, horizontal backfill, compacted to at least 95 percent of the ASTM D 698 maximum dry density, rendering a maximum unit weight of 120 pcf.
3. Uniform surcharge, where S is surcharge pressure.
4. Loading from heavy compaction equipment is not included.
5. No safety factor is included in these values.
6. In order to achieve “Unsaturated” conditions, follow guidelines in **Subsurface Drainage for Below Grade Walls** below. “Submerged” conditions are recommended when drainage behind walls is not incorporated into the design.

Backfill placed against structures should consist of granular soils or low plasticity cohesive soils. For the granular values to be valid, the granular backfill must extend out and up from the base of the wall at an angle of at least 45 and 60 degrees from vertical for the active and passive cases, respectively.

Subsurface Drainage for Below Grade Walls

A perforated rigid plastic drain line installed behind the base of walls and extends below adjacent grade is recommended to prevent hydrostatic loading on the walls. The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining granular material having less than 5 percent passing the No. 200 sieve, such as No. 57 aggregate (ASTM C33). The free-draining aggregate should be encapsulated in a filter fabric. The granular fill should extend to within 2 feet of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system.



As an alternative to free-draining granular fill, a pre-fabricated drainage structure may be used. A pre-fabricated drainage structure is a plastic drainage core or mesh which is covered with filter fabric to prevent soil intrusion and is fastened to the wall prior to placing backfill.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties encountered at the site and as described on the exploration logs and results, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 100 feet.

PAVEMENTS

Both concrete and asphalt pavement design sections are anticipated to be required for the proposed project. Pavement thickness design is dependent upon:

- the anticipated traffic conditions during the life of the pavement
- subgrade and paving material characteristics

Pavement Subgrades

Pavement subgrade should be prepared in accordance with the requirements in the **Earthwork** section. A soil sample from boring BP15 was collected from 0.5 to 1.5 feet below ground surface and tested for the CBR-Value. Results indicated that the CBR-Value of the tested sample is 3.1.

This value corresponds to a subgrade Resilient Modulus (Mr) of about 5,275 psi (pounds per square inch) for use for flexible pavement design and k value of 110 pci for use in the rigid pavement design.

Site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, or rainfall. As a result, the pavement subgrade may not be suitable for pavement construction and corrective action will be required. The subgrade should be carefully evaluated at the time of pavement construction for signs of disturbance or excessive rutting. If disturbance has occurred, pavement subgrade areas should be reworked, moisture conditioned, and properly compacted to the recommendations in this report immediately prior to paving.

If actual subgrade conditions differ from the soil conditions and characteristics described herein, we should be contacted to assess the construction conditions and review the pavement design recommendations.

Design Traffic

The “Light-Duty” pavement section noted below is intended for passenger car parking area. The section labeled “Pavements Subjected to Occasional Truck Traffic” should be used in fire lanes.

Traffic levels provided by the client were converted into flexible AASHTO pavement 18-kip equivalent single axle loads (ESALs) for use in Portland Cement Concrete (PCC) design using AASHTO procedures. Traffic estimates were not provided for lower volume roadways; our analysis has assumed traffic levels associated with passenger vehicles and limited truck traffic. These traffic assumptions should be verified by the design team.

Pavement Section Thicknesses

The following tables provide options for HMAC and PCC Sections:

Hot Mix Asphaltic Concrete Design		
Layer	Minimum Thickness (inches)	
	Light Duty (30,000 ESALs)	Pavements Subjected to Occasional Truck Traffic (50,000 ESALs)
Hot Mix Asphaltic Concrete [1,2]	3	4
Aggregate Base Course [1,3]	8	6
Subgrade or Structural Fill [3]	12	12

1. All materials should meet the TxDOT 2014 Standard Specifications for Highway Construction. Aggregate base should meet Grade 1, 2 or 3, Type A, B or C Item 247 specifications.
2. A minimum 2-inch surface course should be used on HMAC pavements.

Hot Mix Asphaltic Concrete Design		
Layer	Minimum Thickness (inches)	
	Light Duty (30,000 ESALs)	Pavements Subjected to Occasional Truck Traffic (50,000 ESALs)

3. Aggregate base, subgrade and structural fill should be prepared in accordance with the requirements in the **Earthwork** section.

Portland Cement Concrete Design	
Layer	Minimum Thickness (inches)
	Heavy Duty (5.3 Million ESALs)
Portland Cement Concrete [1]	10
Subgrade or Structural Fill [2]	12

1. All materials should meet the TxDOT 2014 Standard Specifications for Highway Construction.
2. Subgrade or structural fill should be prepared in accordance with the requirements in the **Earthwork** section.

Edge restraints (i.e. concrete curbs or aggregate shoulders) should be planned along curves and areas of maneuvering vehicles. A maintenance program including surface sealing, joint cleaning and sealing, and timely repair of cracks and deteriorated areas will increase the pavement's service life. As an option, thicker sections could be constructed to decrease future maintenance.

Openings in pavements, such as decorative landscaped areas, are sources for water infiltration into surrounding pavement systems. Water can collect in the islands and migrate into the surrounding subgrade soils thereby degrading support of the pavement. This is especially applicable for islands with raised concrete curbs, irrigated foliage, and low permeability near-surface soils. The civil design for the pavements with these conditions should include features to restrict or collect and discharge excess water from the islands. Examples of features are edge drains connected to the storm water collection system, longitudinal subdrains, or other suitable outlets and impermeable barriers preventing lateral migration of water such as a cutoff wall installed to a depth below the pavement structure.

Dishing in parking lots surfaced with HMAC is usually observed in frequently-used parking stalls (such as near the front of buildings) and occurs under the wheel footprint in these stalls. The use of higher-grade asphaltic cement, or surfacing these areas with PCC, should be considered. The dishing is exacerbated by factors such as irrigated islands or planter areas, sheet surface drainage to the front of structures, and placing the HMAC directly on a compacted clay subgrade.

PCC pavement details for joint spacing, joint reinforcement, and joint sealing should be prepared in accordance with ACI 330 and ACI 325. PCC pavements should be provided with mechanically reinforced joints in accordance with ACI 330.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Based on the possibility of shallow and/or perched groundwater, we recommend installing a pavement subdrain system to control groundwater, improve stability, and improve long-term pavement performance.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made. Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet) [1]	Location
2	98.5	Proposed Dryer Area
7	34 to 34.5	Proposed Warehouse, Office, and Processing Areas
4	33.5 to 34.5	Proposed Silos Area
4	34 to 35	Proposed Wastewater Treatment Plant Area
1	34	Proposed Lift Station Area
6	10.5 to 11.5	Proposed Pavement areas
3	10 to 11.5	Proposed Detention Pond Area
7	21.5	Proposed Pavement Area

1. Below ground surface.

Boring Layout: Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet).

Subsurface Exploration Procedures: Our soil sampling was conducted in general accordance with the Standard Method for Penetration Test and Split-Barrel Sampling of Soils (ASTM D1586). In the split-barrel sampling procedure, a standard, 2-inch O.D., split-barrel sampling spoon is driven into the boring with a 140-pound automatic SPT (Standard Penetration Test) hammer falling 30 inches. Our field personnel recorded the number of hammer blows required to advance the sampling spoon the last 12 inches of an 18-inch sampling interval as the SPT N-value. The N-values are recorded on the field boring logs. The soil samples obtained from the split-barrel sampler were visually classified and packaged for transportation to our laboratory. A 3-inch O.D. thin-walled tube was also used for sampling in various depth and boring locations as indicated in the boring logs.

The sampling depths and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. The exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

Samples retrieved during the field exploration were taken to the laboratory for further observation by the project geotechnical engineer and were classified in accordance with the Unified Soil Classification System (USCS). At that time, the field descriptions were confirmed or modified as necessary and an applicable laboratory testing program was formulated to determine engineering properties of the subsurface materials.

Laboratory tests were conducted on selected soil samples and the test results are presented in the attachments. The laboratory test results were used for the development of foundation and earthwork recommendations. Laboratory tests were performed in general accordance with the applicable ASTM, local or other accepted standards.

Selected soil samples obtained from the site were tested for the following engineering properties:

- Water content
- Atterberg limits
- Grain size analysis
- Standard Proctor
- California Bearing Value (CBR)
- Corrosivity Analyses

Final boring logs that were prepared represented the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

SITE LOCATION

Armadillo Food Manufacturing Facility ■ Lubbock, Texas
February 24, 2022 ■ Terracon Project No. AR215097

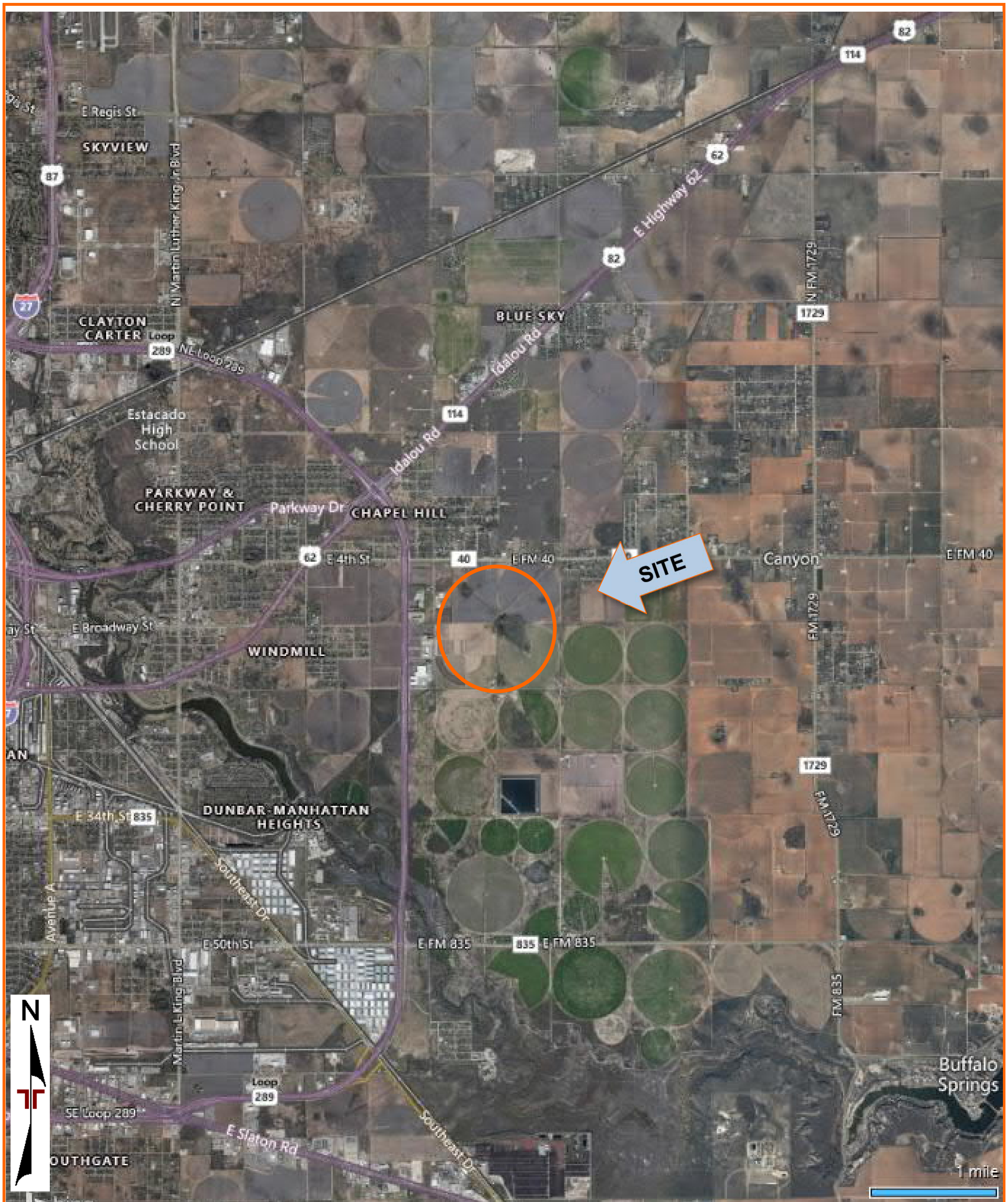


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES   MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

Boring Logs

Note: All attachments are one page unless noted above.

SUPPORTING INFORMATION

Contents:

Unified Soil Classification System
General Notes to Log Terms

Note: All attachments are one page unless noted above.

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]				Soil Classification: Group Symbol	Soil Classification: Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]	GW	Well-graded gravel [F]
			$Cu < 4$ and/or [$Cc<1$ or $Cc>3.0$] [E]	GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH	GM	Silty gravel [F, G, H]
			Fines classify as CL or CH	GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]	SW	Well-graded sand [I]
			$Cu < 6$ and/or [$Cc<1$ or $Cc>3.0$] [E]	SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH	SM	Silty sand [G, H, I]
			Fines classify as CL or CH	SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	$PI > 7$ and plots on or above "A" line [J]	CL	Lean clay [K, L, M]
			$PI < 4$ or plots below "A" line [J]	ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OL	Organic clay [K, L, M, N]
					Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line	CH	Fat clay [K, L, M]
			PI plots below "A" line	MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OH	Organic clay [K, L, M, P]
					Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains $\geq$ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains $\geq$ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains $\geq$ 30% plus No. 200 predominantly sand, add "sandy" to group name.

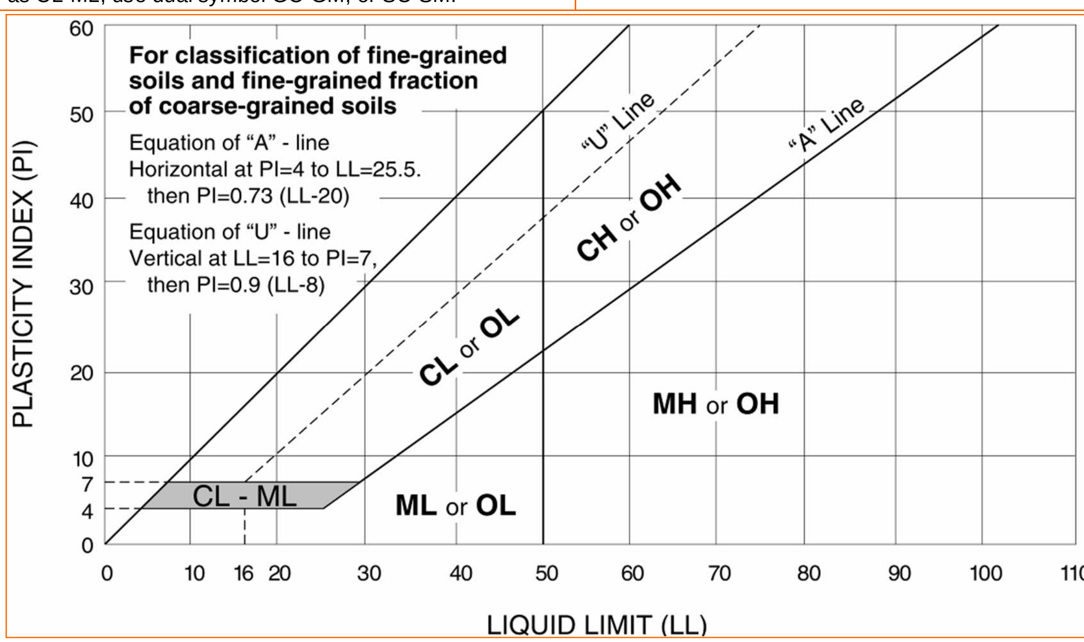
[M] If soil contains $\geq$ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] $PI \geq 4$ and plots on or above "A" line.

[O] $PI < 4$ or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



GENERAL NOTES TO LOG TERMS

Terracon GeoReport

SAMPLING	WATER LEVEL	FIELD TESTS
Auger Cuttings Rock Core Grab Sample Shelby Tube Standard Penetration Test Texas Cone Penetrometer CA Ring Sampler	Water Initially Encountered Water Level After a Specified Period of Time Water Level After a Specified Period of Time Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination for groundwater levels is not possible with short term water level observations.	**N** — **Standard Penetration Test Resistance (Blows/Ft)** **(HP)** — **Hand Penetrometer**

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel, or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-value Blows/Ft.**
Very Loose	0 - 3	Very Soft	Less than 0.25	0 – 1
Loose	4 - 9	Soft	0.25 to 0.5	2 – 4
Medium Dense	10 – 29	Medium Stiff	0.5 to 1.00	4 – 8
Dense	30 – 50	Stiff	1.00 to 2.00	8 – 15
Very Dense	>50	Very Stiff	2.00 to 4.00	15 – 30
		Hard	>4.00	>30

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	**Percent of Dry Weight**	**Descriptive Term(s) of other constituents**	**Percent of Dry Weight**
Trace	<15	Trace	<5
With	15 – 29	With	5 – 12
Modifier	>30	Modifier	>12

GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	**Particle Size**	**Term**	**Plasticity Index**
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300 mm to 75 mm)	Low	1 – 10
Gravel	3 in. to #4 sieve (75mm to 4.75mm)	Medium	11 – 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm)	High	>30
Silt or Clay	Passing #200 sieve (0.075mm)		

Waste Migration Assessment

Geologic Setting
The Leprino Foods processing facility impoundments are in Lubbock, Lubbock County, Texas, in the High Plain's Level III Ecoregion. The climate in these areas is characterized by dry, arid conditions with a mean average temperature of 57 to 63 degrees F and mean annual precipitation of 16 to 21 inches. The project will be developed on an agricultural field composed primarily of Lofton clay loam. The parental material makeup of Lofton is clayey lacustrine deposits profiled with moderately well drained clay loams, clays and silty clays.

Surface elevations are approximately 3175 above sea level and the topographic gradient is to the north, northwest.

Groundwater
A review of the two closest groundwater well drilling logs (#379718 and #220497) provided by the Texas Water Development Board (TWDB, 2022) indicated the uppermost water bearing unit is the Ogallala Formation approximately 80 feet below ground level. Upper lithology indicated approximately 4 feet of topsoil underlaid with caliche and clay 4 to 17 feet, sandy clay-sand-sandstone 17 to 40 feet. Hard caprock was encountered 40 to 45 feet presenting an additional restrictive layer before reaching the water bearing unit.

Migration of Wastes and Contamination Potential

The evaporation lagoons are lined with proposed 60 mil HDPE. A geomembrane is proposed below the liner to protect the liner from underlaying soils and rocks. An earthen berm has been constructed along the perimeter of the lagoons and a leak detection system has been installed. If there is a loss of containment of effluent wastewater and an impact on native soil, the upper 4 feet of topsoil coupled with the caliche and clay layers underneath, would drastically slow downward migration of effluent. Since the nearest surface water body is Canyon Lake #6, approximately 2 miles to the southwest it is unlikely that a release of effluent from the lagoons would reach this area.

Block 23-26-6

Citations

Texas Commission on Environmental Quality. Water Well Report Viewer. Accessed on 08/12/2022 at the following website:
https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=aed10178f0434f2781daff19eb326fe2

Texas Water Development Board. Plotted Water Wells. Accessed on 08/12/2022 at the following website:
https://gisweb.tceq.texas.gov/waterwellpublicAGO/search.html?type=LR&wellGrid=23-26-3#

Evaporation Calculations

Tech Report, Worksheet 3.1, 3a-3b, p. 40

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Leprino Foods Project Armadillo – Evaporation Pond Sizing

Leprino Foods Company (LFC) is planning to construct a dairy products processing plant in Lubbock, TX. As part of the production process, brine process wastewater is anticipated to be generated. Based on the proposed production volume, 80,000 gallons per day (GPD) of brine flow is anticipated on average.

LFC plans to send the brine flow to two (2) evaporation lagoons, where the water will be evaporated off leaving the salts behind as a solid. Two brine lagoons are planned for the site, each with the surface area and volume as shown below.

Table 1.

Lagoon Sizing Information

Brine Evaporation Lagoon (EACH)						
Stage	Elevation	Area (sf)	Volume (cy)	Volume (gal)	Cumulative Volume (CY)	Cumulative Volume (gal)
1	3171	344,568	0	0	0	0
2	3172	354,025	9,431,006	2,577,369	9,431,006	2,577,369
3	3173	363,609	9,688,059	2,648,107	19,119,065	5,225,476
4	3174	373,321	9,948,555	2,719,795	29,067,620	7,945,271
5	3175	383,161	10,212,507	2,792,441	39,280,127	10,737,712
6	3176	393,129	10,479,915	2,866,044	49,760,042	13,603,756
7	3177	403,225	10,750,779	2,978,364	60,510,821	16,582,120

In addition to natural evaporation, each lagoon will be equipped with one downdraft mechanical evaporator. These units can evaporate 13 gallons/minute (GPM) on average. While during parts of the year the evaporation may be more or less, for design purposes it was assumed that the average evaporation was achieved.

Based on these criteria, the lagoons were evaluated for evaporation capacity and storage in an average and critical scenario. Evaporation data was obtained from the Texas Water Development Board database, for section 406 which contains Lubbock.

Table 2.

Critical Sizing Evaluation

CRITICAL EVAPORATION EVALUATION								
Month	# of Days	Average Daily Flow (Gallons)	Monthly Flow (Gallons)	Min Monthly Natural Evaporation (in)	Min Monthly Natural Evaporation (Gallons)	Min Monthly Mechanical Evaporation (Gallons)	Monthly Net Storage Required (Gallons)	Accumulated Storage (Gallons)
JAN	31	80,000	2,480,000	0.00	0	386,880	2,093,120	2,480,000
FEB	28	80,000	2,240,000	0.27	135,726	349,440	1,754,834	4,234,834
MAR	31	80,000	2,480,000	1.24	623,332	386,880	1,469,788	5,704,622
APR	30	80,000	2,400,000	2.04	1,025,482	374,400	1,000,118	6,704,741
MAY	31	80,000	2,480,000	-0.08	-40,215	386,880	2,133,335	8,838,076
JUN	30	80,000	2,400,000	1.61	809,326	374,400	1,216,274	10,054,349
JUL	31	80,000	2,480,000	3.31	1,663,895	386,880	429,225	10,483,575
AUG	31	80,000	2,480,000	2.59	1,301,960	386,880	791,160	11,274,735
SEP	30	80,000	2,400,000	0.07	35,188	374,400	1,990,412	13,265,147
OCT	31	80,000	2,480,000	-0.85	-427,284	386,880	2,520,404	15,785,551
NOV	30	80,000	2,400,000	0.54	271,451	374,400	1,754,149	17,539,700
DEC	31	80,000	2,480,000	0.18	90,484	386,880	2,002,636	19,542,336
TOTAL				10.92			19,155,456	
				Required Storage (gallons)				19,542,336
Mechanical aeration assumes 8 hours per/day operation								
				Storage Provided				33,164,240

The critical calculations show that in the event of a "wet" year, there is adequate storage capacity (13 million gallons) to handle the annual flow.

Table 3.

Average Sizing Evaluation

AVERAGE EVAPORATION EVALUATION							
Month	# of Days	Average Daily Flow (Gallons)	Monthly Flow (Gallons)	Avg Monthly Natural Evaporation (in)	Avg Monthly Natural Evaporation (Gallons)	Avg Monthly Mechanical Evaporation (Gallons)	Monthly Net Storage Required (Gallons)
JAN	31	80,000	2,480,000	1.66	834,461	580,320	1,065,219
FEB	28	80,000	2,240,000	2.11	1,060,670	524,160	655,170
MAR	31	80,000	2,480,000	3.92	1,970,534	580,320	(70,854)
APR	30	80,000	2,400,000	4.9	2,463,167	561,600	(624,767)
MAY	31	80,000	2,480,000	3.83	1,925,292	580,320	(25,612)
JUN	30	80,000	2,400,000	5.26	2,644,134	561,600	(805,734)
JUL	31	80,000	2,480,000	6.49	3,262,440	580,320	(1,362,760)
AUG	31	80,000	2,480,000	5.73	2,880,397	580,320	(980,717)
SEP	30	80,000	2,400,000	3.61	1,814,701	561,600	23,699
OCT	31	80,000	2,480,000	3.39	1,704,109	580,320	195,571
NOV	30	80,000	2,400,000	2.75	1,382,390	561,600	456,010
DEC	31	80,000	2,480,000	1.83	919,918	580,320	979,762
TOTAL			29,200,000	45.48	22,862,212	6,832,800	-495,012
Average annual evaporation is less than zero, meaning there is enough evaporation capacity							
Mechanical aeration assumes 12 hours per/day operation							

The average design calculations show that there is enough surface area and mechanical evaporation capacity to evaporate the yearly average annual flow.

RWI
ENHANCED EVAPORATION

PittBoss™ Composite

Electrical Specifications

7.5 HP Motor
Operational on 60hz or 50Hz
3 Phase and Single Phase Options Available
1160 RPM
Variable Frequency Drive Control
65dB at 8 feet

Material Construction

Down Draft Assembly = 304 Stainless Steel
Inlet bell = Composite
Impeller = Composite and Aluminum
Frame = Composite
Floats = High Density Polyethylene
OSHA Compliant Fan Guards = Stainless Steel

Weight and Dimensions

Evaporator Length = 154 Inches (392 Centimeters)
Evaporator Width = 154 Inches (392 Centimeters)
Evaporator Height = 105 Inches (267 Centimeters)
Evaporator Weight (Dry) = 760lbs (344 Kilograms)

The Composite PittBoss evaporates 13 gallons per minute of water in the environment of 70°F ambient air 25% relative humidity, 50,000 total dissolved solids, and 55°F liquid temperature

No pump or water delivery system needed

	precip_mean	precip_median	precip_min	precip_max	precip_10%	precip_90%	gross_evap_mean	gross_evap_median	gross_evap_min	gross_evap_max	gross_evap_10%	gross_evap_90%	net_evap_mean	net_evap_median	net_evap_min	net_evap_max	net_evap_10%	net_evap_90%
JAN	1.06	1.1	0	5.44	0.07	2.07	2.67	2.47	1.13	5.88	1.63	4.08	1.66	1.32	-2.02	5.87	0	3.74
FEB	1.13	0.94	0.01	4.16	0.19	2.23	3.2	3.19	1.67	5.45	2.04	4.76	2.11	2.1	-0.69	5.36	0.26	4.14
MAR	1.29	1.09	0.05	5.09	0.24	2.56	5.23	5.33	2.11	7.16	3.37	6.58	3.92	4.38	-1.07	6.89	1.2	6.06
APR	1.68	1.45	0	6.4	0.3	3.3	6.53	6.52	3.03	11.31	4.94	8.14	4.9	5.14	-1.47	11.31	1.99	7.79
MAY	3.04	2.89	0.26	10.84	1.02	5.02	6.8	6.62	2.56	10.65	5.14	9.03	3.83	3.98	-4.92	10.38	0.14	7.94
JUN	2.85	2.58	0.29	6.31	1.08	5.25	8.27	8.37	3.25	14.11	6.48	10.41	5.27	5.49	-2.17	13.36	1.59	8.22
JUL	2.45	2.21	0.12	9.97	0.72	4.02	8.93	8.91	4.18	13.98	6.95	10.65	6.5	6.97	-4.34	13.49	3.27	9.3
AUG	2.19	1.9	0.09	6.49	0.8	4.01	7.98	7.77	5.28	13.37	6.53	9.8	5.74	5.88	0.05	13.02	2.59	8.84
SEP	2.67	2.44	0.01	7.59	0.54	5.42	6.29	6.19	3.78	9.72	4.66	8.11	3.61	3.47	-2.29	9.17	-0.03	7.35
OCT	2.06	1.36	0	7.84	0.32	4.9	5.38	5.5	2.54	7.9	3.67	7.04	3.4	4.42	-2.71	6.81	-0.86	6.48
NOV	1.19	0.9	0	6.74	0.17	2.37	3.93	3.99	2.04	6.6	2.84	5.04	2.76	2.58	-3.83	6.49	0.51	4.92
DEC	1.08	0.89	0	3.25	0.18	2.22	2.89	2.89	0	6.2	1.83	4.19	1.83	1.88	-1.02	6.17	0.17	3.75

UNIT FOR ALL NUMBERS SHOWN IS INCHES

Tech Report, Worksheet 1.0, 2(a)

- TEXTOX – Menu 4
- Screening Calculations for TDS, Chloride, and Sulfate
- Categorical Effluent Limits Analysis

TEXTOX MENU #4 - LAKE OR RESERVOIR

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 2, 2018 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	Leprino Foods
TPDES Permit No:	New
Outfall No:	001
Prepared by:	L. Tischler
Date:	5/24/2022

DISCHARGE INFORMATION

Receiving Waterbody:	Canyon Lake - North Double Mountain Fork Brazos River
Segment No.:	1241A
TSS (mg/L):	9.9
pH (Standard Units):	7.7
Hardness (mg/L as $CaCO_3$):	473
Chloride (mg/L):	1400
Effluent Flow for Aquatic Life (MGD):	2
% Effluent for Chronic Aquatic Life (Mixing Zone):	15
% Effluent for Acute Aquatic Life (ZID):	60
Effluent Flow for Human Health (MGD):	2
% Effluent for Human Health:	8
Human Health Criterion (select: PWS, FISH, or INC)	**PWS**

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Lake/Reservoir Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	89781.39	0.529		1.00	Assumed
Cadmium	6.55	-0.92	430542.10	0.190		1.00	Assumed
Chromium (total)	6.34	-0.27	1178090.08	0.079		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1178090.08	0.079		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	358037.34	0.220		1.00	Assumed
Lead	6.31	-0.53	605777.79	0.143		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	383104.50	0.209		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	226201.64	0.309		1.00	Assumed
Zinc	6.52	-0.68	696575.30	0.127		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*FW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	N/A	5.00	N/A	1.60	N/A	2.35	4.97
Aluminum	991	N/A	1652	N/A	529	N/A	776	1643
Arsenic	340	150	1070	1889	343	1152	503	1065
Cadmium	38.79	0.722	340	25.3	109	15.5	22.7	48.0
Carbaryl	2.0	N/A	3.33	N/A	1.07	N/A	1.56	3.31
Chlordane	2.4	0.004	4.00	0.0267	1.28	0.0163	0.0239	0.0505
Chlorpyrifos	0.083	0.041	0.138	0.273	0.0443	0.167	0.0650	0.137
Chromium (trivalent)	2034	264.6	42933	22339	13739	13627	20031	42379
Chromium (hexavalent)	15.7	10.6	26.2	70.7	8.37	43.1	12.3	26.0
Copper	61.40	35.72	465	1082	149	660	218	462
Cyanide (free)	45.8	10.7	76.3	71.3	24.4	43.5	35.9	75.9
4,4'-DDT	1.1	0.001	1.83	0.00667	0.587	0.00407	0.00597	0.0126
Demeton	N/A	0.1	N/A	0.667	N/A	0.407	0.597	1.26
Diazinon	0.17	0.17	0.283	1.13	0.0907	0.691	0.133	0.281
Dicofol [Kelthane]	59.3	19.8	98.8	132	31.6	80.5	46.4	98.3

Dieldrin	0.24	0.002	0.400	0.0133	0.128	0.00813	0.0119	0.0252
Diuron	210	70	350	467	112	285	164	348
Endosulfan I (*alpha*)	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endosulfan II (*beta*)	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endosulfan sulfate	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endrin	0.086	0.002	0.143	0.0133	0.0459	0.00813	0.0119	0.0252
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0667	N/A	0.0407	0.0597	0.126
Heptachlor	0.52	0.004	0.867	0.0267	0.277	0.0163	0.0239	0.0505
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.88	0.533	0.601	0.325	0.478	1.01
Lead	333.2	12.99	3886	606	1244	370	543	1149
Malathion	N/A	0.01	N/A	0.0667	N/A	0.0407	0.0597	0.126
Mercury	2.4	1.3	4.00	8.67	1.28	5.29	1.88	3.98
Methoxychlor	N/A	0.03	N/A	0.200	N/A	0.122	0.179	0.379
Mirex	N/A	0.001	N/A	0.00667	N/A	0.00407	0.00597	0.0126
Nickel	1743	193.6	13926	6187	4456	3774	5547	11737
Nonylphenol	28	6.6	46.7	44.0	14.9	26.8	21.9	46.4
Parathion (ethyl)	0.065	0.013	0.108	0.0867	0.0347	0.0529	0.0509	0.107
Pentachlorophenol	17.6	13.52	29.4	90.2	9.40	55.0	13.8	29.2
Phenanthrene	30	30	50.0	200	16.0	122	23.5	49.7
Polychlorinated Biphenyls [PCBs]	2.0	0.014	3.33	0.0933	1.07	0.0569	0.0836	0.177
Selenium	20	5	33.3	33.3	10.7	20.3	15.6	33.1
Silver	0.8	N/A	48.1	N/A	15.4	N/A	22.6	47.8
Toxaphene	0.78	0.0002	1.30	0.00133	0.416	0.000813	0.00119	0.00252
Tributyltin [TBT]	0.13	0.024	0.217	0.160	0.0693	0.0976	0.101	0.215
2,4,5 Trichlorophenol	136	64	227	427	72.5	260	106	225
Zinc	437.2	440.8	5753	23202	1841	14153	2706	5725

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	***Water and Fish Criterion (µg/L)***	***Fish Only Criterion (µg/L)***	***Incidental Fish Criterion (µg/L)***	***WLAh (µg/L)***	***LTAh (µg/L)***	***Daily Avg. (µg/L)***	***Daily Max. (µg/L)***
Acrylonitrile	1.0	115	1150	12.5	11.6	17.0	36.1
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.000143	0.000133	0.000195	0.000414
Anthracene	1109	1317	13170	13863	12892	18951	40094
Antimony	6	1071	10710	75.0	69.8	102	216
Arsenic	10	N/A	N/A	236	220	322	682
Barium	2000	N/A	N/A	25000	23250	34177	72307
Benzene	5	581	5810	62.5	58.1	85.4	180
Benzidine	0.0015	0.107	1.07	0.0188	0.0174	0.0256	0.0542
Benzo(*a*)anthracene	0.024	0.025	0.25	0.300	0.279	0.410	0.867
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.0313	0.0291	0.0427	0.0903
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.0300	0.0279	0.0410	0.0867
Bis(2-chloroethyl)ether	0.60	42.83	428.3	7.50	6.98	10.2	21.6
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55	75.5	75.0	69.8	102	216
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	128	119	174	368
Bromoform [Tribromomethane]	66.9	1060	10600	836	778	1143	2418
Cadmium	5	N/A	N/A	329	306	449	951
Carbon Tetrachloride	4.5	46	460	56.3	52.3	76.8	162
Chlordane	0.0025	0.0025	0.025	0.0313	0.0291	0.0427	0.0903
Chlorobenzene	100	2737	27370	1250	1163	1708	3615
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	93.8	87.2	128	271
Chloroform [Trichloromethane]	70	7697	76970	875	814	1196	2530
Chromium (hexavalent)	62	502	5020	775	721	1059	2241
Chrysene	2.45	2.52	25.2	30.6	28.5	41.8	88.5
Cresols [Methylphenols]	1041	9301	93010	13013	12102	17789	37636
Cyanide (free)	200	N/A	N/A	2500	2325	3417	7230
4,4'-DDD	0.002	0.002	0.02	0.0250	0.0233	0.0341	0.0723
4,4'-DDE	0.00013	0.00013	0.0013	0.00163	0.00151	0.00222	0.00469
4,4'-DDT	0.0004	0.0004	0.004	0.00500	0.00465	0.00683	0.0144
2,4'-D	70	N/A	N/A	875	814	1196	2530
Danitol [Fenpropathrin]	262	473	4730	3275	3046	4477	9472
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	2.13	1.98	2.90	6.14
m -Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	4025	3743	5502	11641
o -Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	7500	6975	10253	21692
p -Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	938	872	1281	2711

3,3'-Dichlorobenzidine	0.79	2.24	22.4	9.88	9.18	13.5	28.5
1,2-Dichloroethane	5	364	3640	62.5	58.1	85.4	180
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	87.5	81.4	119	253
Dichloromethane [Methylene Chloride]	5	13333	133330	62.5	58.1	85.4	180
1,2-Dichloropropane	5	259	2590	62.5	58.1	85.4	180
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	35.0	32.6	47.8	101
Dicofol [Kelthane]	0.30	0.30	3	3.75	3.49	5.12	10.8
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.000250	0.000233	0.000341	0.000723
2,4-Dimethylphenol	444	8436	84360	5550	5162	7587	16052
Di-*n* -Butyl Phthalate	88.9	92.4	924	1111	1033	1519	3214
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	9.75E-07	9.07E-07	0.0000013	0.0000028
Endrin	0.02	0.02	0.2	0.250	0.233	0.341	0.723
Epichlorohydrin	53.5	2013	20130	669	622	914	1934
Ethylbenzene	700	1867	18670	8750	8138	11962	25307
Ethylene Glycol	46744	1.68E+07	1.68E+08	584300	543399	798796	1689970
Fluoride	4000	N/A	N/A	50000	46500	68355	144615
Heptachlor	8.0E-05	0.0001	0.001	0.00100	0.000930	0.00136	0.00289
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.00363	0.00337	0.00495	0.0104
Hexachlorobenzene	0.00068	0.00068	0.0068	0.00850	0.00791	0.0116	0.0245
Hexachlorobutadiene	0.21	0.22	2.2	2.63	2.44	3.58	7.59
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.0975	0.0907	0.133	0.281
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	1.88	1.74	2.56	5.42
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	2.50	2.33	3.41	7.23
Hexachlorocyclopentadiene	10.7	11.6	116	134	124	182	386
Hexachloroethane	1.84	2.33	23.3	23.0	21.4	31.4	66.5
Hexachlorophene	2.05	2.90	29	25.6	23.8	35.0	74.1
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	13650	12695	18660	39479
Lead	1.15	3.83	38.3	101	93.5	137	290
Mercury	0.0122	0.0122	0.122	0.153	0.142	0.208	0.441
Methoxychlor	2.92	3.0	30	36.5	33.9	49.8	105
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	173313	161181	236935	501271
Methyl *tert* -butyl ether [MTBE]	15	10482	104820	188	174	256	542
Nickel	332	1140	11400	19890	18498	27191	57527
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	125000	116250	170887	361537
Nitrobenzene	45.7	1873	18730	571	531	780	1652
N-Nitrosodiethylamine	0.0037	2.1	21	0.0463	0.0430	0.0632	0.133
N-Nitroso-di-*n* -Butylamine	0.119	4.2	42	1.49	1.38	2.03	4.30
Pentachlorobenzene	0.348	0.355	3.55	4.35	4.05	5.94	12.5
Pentachlorophenol	0.22	0.29	2.9	2.75	2.56	3.75	7.95
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.00800	0.00744	0.0109	0.0231
Pyridine	23	947	9470	288	267	393	831
Selenium	50	N/A	N/A	625	581	854	1807
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	2.88	2.67	3.93	8.31
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	20.5	19.1	28.0	59.2
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	62.5	58.1	85.4	180
Thallium	0.12	0.23	2.3	1.50	1.40	2.05	4.33
Toluene	1000	N/A	N/A	12500	11625	17088	36153
Toxaphene	0.011	0.011	0.11	0.138	0.128	0.187	0.397
2,4,5-TP [Silvex]	50	369	3690	625	581	854	1807
1,1,1-Trichloroethane	200	784354	7843540	2500	2325	3417	7230
1,1,2-Trichloroethane	5	166	1660	62.5	58.1	85.4	180
Trichloroethylene [Trichloroethene]	5	71.9	719	62.5	58.1	85.4	180
2,4,5-Trichlorophenol	1039	1867	18670	12988	12078	17755	37563
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	1000	930	1367	2892
Vinyl Chloride	0.23	16.5	165	2.88	2.67	3.93	8.31

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Aldrin	1.64	1.99
Aluminum	543	660
Arsenic	352	427
Cadmium	15.9	19.3
Carbaryl	1.09	1.33

Chlordane	0.0167	0.0203
Chlorpyrifos	0.0455	0.0553
Chromium (trivalent)	14021	17026
Chromium (hexavalent)	8.61	10.4
Copper	153	185
Cyanide (free)	25.1	30.5
4,4'-DDT	0.00418	0.00508
Demeton	0.418	0.508
Diazinon	0.0932	0.113
Dicofol [Kelthane]	32.5	39.5
Dieldrin	0.00836	0.0101
Diuron	115	139
Endosulfan I (*alpha*)	0.120	0.146
Endosulfan II (*beta*)	0.120	0.146
Endosulfan sulfate	0.120	0.146
Endrin	0.00836	0.0101
Guthion [Azinphos Methyl]	0.0418	0.0508
Heptachlor	0.0167	0.0203
Hexachlorocyclohexane (*gamma*) [Lindane]	0.334	0.406
Lead	380	461
Malathion	0.0418	0.0508
Mercury	1.31	1.59
Methoxychlor	0.125	0.152
Mirex	0.00418	0.00508
Nickel	3883	4715
Nonylphenol	15.3	18.6
Parathion (ethyl)	0.0356	0.0433
Pentachlorophenol	9.67	11.7
Phenanthrene	16.4	19.9
Polychlorinated Biphenyls [PCBs]	0.0585	0.0711
Selenium	10.9	13.3
Silver	15.8	19.2
Toxaphene	0.000836	0.00101
Tributyltin [TBT]	0.0713	0.0866
2,4,5 Trichlorophenol	74.6	90.6
Zinc	1894	2300

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(μg/L)***	***(μg/L)***
Acrylonitrile	11.9	14.5
Aldrin	0.000137	0.000166
Anthracene	13265	16108
Antimony	71.7	87.1
Arsenic	225	274
Barium	23924	29050
Benzene	59.8	72.6
Benzidine	0.0179	0.0217
Benzo(*a*)anthracene	0.287	0.348
Benzo(*a*)pyrene	0.0299	0.0363
Bis(chloromethyl)ether	0.0287	0.0348
Bis(2-chloroethyl)ether	7.17	8.71
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	71.7	87.1
Bromodichloromethane [Dichlorobromomethane]	122	148
Bromoform [Tribromomethane]	800	971
Cadmium	314	382
Carbon Tetrachloride	53.8	65.3
Chlordane	0.0299	0.0363
Chlorobenzene	1196	1452
Chlorodibromomethane [Dibromochloromethane]	89.7	108
Chloroform [Trichloromethane]	837	1016
Chromium (hexavalent)	741	900
Chrysene	29.3	35.5
Cresols [Methylphenols]	12452	15120
Cyanide (free)	2392	2905
4,4'-DDD	0.0239	0.0290

4,4'-DDE	0.00155	0.00188
4,4'-DDT	0.00478	0.00581
2,4'-D	837	1016
Danitol [Fenpropathrin]	3134	3805
1,2-Dibromoethane [Ethylene Dibromide]	2.03	2.46
m -Dichlorobenzene [1,3-Dichlorobenzene]	3851	4677
o -Dichlorobenzene [1,2-Dichlorobenzene]	7177	8715
p -Dichlorobenzene [1,4-Dichlorobenzene]	897	1089
3,3'-Dichlorobenzidine	9.45	11.4
1,2-Dichloroethane	59.8	72.6
1,1-Dichloroethylene [1,1-Dichloroethene]	83.7	101
Dichloromethane [Methylene Chloride]	59.8	72.6
1,2-Dichloropropane	59.8	72.6
1,3-Dichloropropene [1,3-Dichloropropylene]	33.4	40.6
Dicofol [Kelthane]	3.58	4.35
Dieldrin	0.000239	0.000290
2,4-Dimethylphenol	5311	6449
Di-*n* -Butyl Phthalate	1063	1291
Dioxins/Furans [TCDD Equivalents]	9.33E-07	0.0000011
Endrin	0.239	0.290
Epichlorohydrin	639	777
Ethylbenzene	8373	10167
Ethylene Glycol	559157	678977
Fluoride	47848	58101
Heptachlor	0.000956	0.00116
Heptachlor Epoxide	0.00346	0.00421
Hexachlorobenzene	0.00813	0.00987
Hexachlorobutadiene	2.51	3.05
Hexachlorocyclohexane (*alpha*)	0.0933	0.113
Hexachlorocyclohexane (*beta*)	1.79	2.17
Hexachlorocyclohexane (*gamma*) [Lindane]	2.39	2.90
Hexachlorocyclopentadiene	127	155
Hexachloroethane	22.0	26.7
Hexachlorophene	24.5	29.7
4,4'-Isopropylidenediphenol [Bisphenol A]	13062	15861
Lead	96.2	116
Mercury	0.145	0.177
Methoxychlor	34.9	42.4
Methyl Ethyl Ketone	165854	201395
Methyl *tert* -butyl ether [MTBE]	179	217
Nickel	19033	23112
Nitrate-Nitrogen (as Total Nitrogen)	119621	145254
Nitrobenzene	546	663
N-Nitrosodiethylamine	0.0442	0.0537
N-Nitroso-di-*n* -Butylamine	1.42	1.72
Pentachlorobenzene	4.16	5.05
Pentachlorophenol	2.63	3.19
Polychlorinated Biphenyls [PCBs]	0.00765	0.00929
Pyridine	275	334
Selenium	598	726
1,2,4,5-Tetrachlorobenzene	2.75	3.34
1,1,2,2-Tetrachloroethane	19.6	23.8
Tetrachloroethylene [Tetrachloroethylene]	59.8	72.6
Thallium	1.43	1.74
Toluene	11962	14525
Toxaphene	0.131	0.159
2,4,5-TP [Silvex]	598	726
1,1,1-Trichloroethane	2392	2905
1,1,2-Trichloroethane	59.8	72.6
Trichloroethylene [Trichloroethene]	59.8	72.6
2,4,5-Trichlorophenol	12428	15091
TTHM [Sum of Total Trihalomethanes]	956	1162
Vinyl Chloride	2.75	3.34

Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate
Menu 4 - Discharge to a Lake

Applicant Name: Leprino Foods
Permit Number, Outfall: New
Segment Number: 1241A

Enter values needed for screening:			Data Source (edit if different)
EF - Effluent fraction at edge of human health MZ	0.08	decimal fraction	Critical conditions memo
CA - TDS - ambient segment concentration	4325	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	1400	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	1340	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	5500	mg/L	2010 TSWQS, Appendix A
CC - chloride - segment criterion	2630	mg/L	2010 TSWQS, Appendix A
CC - sulfate - segment criterion	2400	mg/L	2010 TSWQS, Appendix A
CE - TDS - average effluent concentration	6000	mg/L	Permit application
CE - chloride - average effluent concentration	4000	mg/L	Permit application
CE - sulfate - average effluent concentration	4000	mg/L	Permit application

Screening Equation

CC ≥ (EF)(CE)+(1-EF)(CA)

Preliminary Calculations Parameter	Effluent Load (EF)(CE)	Load in Lake (1-EF)(CA)	New Concentration Equation 3	% Change in Ambient	% Change in Assim. Capacity
TDS	480	3979	4459.00	3.1	11.4
Chloride	320	1288	1608.00	14.9	16.9
Sulfate	320	1232.8	1552.80	15.9	20.1

Permit Limit Calculations

TDS

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	19012.50
Calculate the LTA	LTA = WLA * 0.93	17681.63
Calculate the daily average	Daily Avg. = LTA * 1.47	**25991.99**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**54989.85**
Calculate 70% of the daily average	70% of Daily Avg. =	18194.39
Calculate 85% of the daily average	85% of Daily Avg. =	22093.19

No permit limitations needed if:	**6000**	≤	**18194.39**		
Reporting needed if:	**6000**	>	**18194.39**	**but ≤**	**22093.19**
Permit limits may be needed if:	**6000**	>	**22093.19**		

No permit limitations needed for TDS

Chloride

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	16775.00
Calculate the LTA	LTA = WLA * 0.93	15600.75
Calculate the daily average	Daily Avg. = LTA * 1.47	**22933.10**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**48518.33**
Calculate 70% of the daily average	70% of Daily Avg. =	16053.17
Calculate 85% of the daily average	85% of Daily Avg. =	19493.14

No permit limitations needed if:	**4000**	≤	**16053.17**		
Reporting needed if:	**4000**	>	**16053.17**	**but ≤**	**19493.14**
Permit limits may be needed if:	**4000**	>	**19493.14**		

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	14590.00
Calculate the LTA	LTA = WLA * 0.93	13568.70
Calculate the daily average	Daily Avg. = LTA * 1.47	**19945.99**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**42198.66**
Calculate 70% of the daily average	70% of Daily Avg. =	13962.19
Calculate 85% of the daily average	85% of Daily Avg. =	16954.09

No permit limitations needed if:	**4000**	≤	**13962.19**		
Reporting needed if:	**4000**	>	**13962.19**	**but ≤**	**16954.09**
Permit limits may be needed if:	**4000**	>	**16954.09**		

No permit limitations needed for sulfate

LEPRINO FOODS COMPANY
LUBBOCK WASTEWATER TREATMENT PLANT
DETAILED PROCESS PRODUCTION ANALYSIS FOR FINAL EFFLUENT LIMITS ESTIMATION - 8.911 MPPD OF MILK

FEDERAL FACTORS USED	
FATS	0.89
PROTEIN	1.031
CARBOHYDRATES	0.691

RAW MATERIAL	BOD OF DAIRY PRODUCT MATERIALS: FAT %	PROTEIN %	CARBOHYDRATES %	RAW MATERIAL QUANTITY PROCESSED (lbs)	PRODUCT PRODUCED	BOD_5 Input Factor (lbs of BOD_5 / 100 lbs of Raw Material Processed	BOD_5 Input (lbs of BOD_5 / day)	Federal Effluent Standards (40 CFR 405.65/405.125) (lbs/100 lbs of BOD_5)				Discharge Limit (lbs/day)			
								Monthly Average		Daily Max		Monthly Average		Daily Max	
								BOD_5	TSS	BOD_5	TSS	BOD_5	TSS	BOD_5	TSS
MILK	4.2	3.25	4.9	8,911,000	SKIM, CREAM	10.47	933,396	0.037	0.046	0.074	0.093	345	429	691	868
P2	6	30	15	95,409	CHEESE	46.64	44,494	0.008	0.01	0.016	0.02	4	4	7	9
GRD	20.5	21	4	79,507	CHEESE	42.66	33,918	0.008	0.01	0.016	0.02	3	3	5	7
SKIM	1	3.25	4.9	6,161,453	CHEESE	7.63	469,912	0.008	0.01	0.016	0.02	38	47	75	94
SKIM	1	3.25	4.9	2,069,803	MILK UF CONCENTRATED SKIM, MILK UF PERMEATE, CHEESE, CHEESE LIQUID WHEY	7.63	157,857	0.037	0.046	0.074	0.093	58	73	117	147
CREAM	42	3.8	2.85	580,102	CHEESE, CHEESE LIQUID WHEY	43.27	250,993	0.008	0.01	0.016	0.02	20	25	40	50
CREAM	42	3.8	2.85	176,145	PRODUCT PRODUCED										
MILK UF CONCENTRATED SKIM	3	9.75	4.9	689,934	CHEESE, CHEESE LIQUID WHEY	16.11	111,136	0.008	0.01	0.016	0.02	9	11	18	22
MILK UF PERMEATE	0	0.013	4.9	1,380,091	UF PERM RO CONC MILK PERMEATE LACTOSE, WASTEWATER	3.40	46,913	0.011	0.014	0.022	0.028	5	7	10	13
CHEESE	22.7	21	4	1,716,741	PRODUCT PRODUCED										
CHEESE LIQUID WHEY	0.35	1.044	5.1	7,721,382	WHEY RETENTATE, PERMEATE	4.91	379,271	0.011	0.014	0.022	0.028	42	53	83	106
WHEY RETENTATE	0.51	8.3	3.94	507,727	WPC, PERMEATE	11.73	59,575	0.011	0.014	0.022	0.028	7	8	13	17
WPC	0.94	15.24	2.63	275,938	WPC POWDER	18.37	50,680	0.011	0.014	0.022	0.028	6	7	11	14
UF PERM RO CONC MILK PERMEATE LACTOSE	0	0.04	15.73	411,911	CONDENSED PERMEATE, WATER	10.91	44,942	0.011	0.014	0.022	0.028	5	6	10	13
PERMEATE	0	2.31	12.1	2,264,881	CONDENSED PERMEATE, WATER	10.74	243,310	0.011	0.014	0.022	0.028	27	34	54	68
CONDENSED PERMEATE	0	2.19	52.86	756,684	PERMEATE POWDER	38.78	293,474	0.011	0.014	0.022	0.028	32	41	65	82
PERMEATE POWDER	0	2.19	8185	488,691	PRODUCT PRODUCED										
WPC POWDER	4.61	82.35	10.53	56,394	PRODUCT PRODUCED										
								Total				600	750	1199	1510

EFFLUENT LIMITS IN CONCENTRATION FOR ULTIMATE BUILDOUT				
	Average Flowrate (MGD)		Max Flow rate (MGD)	
	2.31		2.94	
	Monthly Average	Daily Max	Monthly Average	Daily Max
BOD_5 (mg/L)	31.12	62	24	49
TSS (mg/L)	38.91	78	31	62
pH s.u		6.5-9 s.u		

LEPRINO_000178

ATTACHMENT P. WASTEWATER TREATMENT PLANT DETAILED PROCESS DESCRIPTION

Technology-Driven Wastewater Solutions.
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262.264.5665
Main Line
www.probstgroup.com
info@probstgroup.com
17035 W. Wisconsin Ave., Suite 120
Brookfield, WI 53005

MEMO

To: Hannah Bradish

From: Chris Lewis

cc: Kelly Hawkins, Joseph Herrud, James Frazier, Tim Sprengel, Srinath Devaraj

Date: Monday, July 18, 2022

Re: Detailed Process Description for Project Armadillo

Hannah:

We have prepared the following process description to assist with your wastewater permit application.

To treat the process wastewater from the Leprino production facility for discharge to surface water, the proposed new wastewater treatment plant (WWTP) will use a combination of anaerobic and aerobic activated sludge systems to treat all high strength wastewater (HSW) and low strength wastewater (LSW) generated in production. This technology was selected to reduce energy and sludge handling costs as compared to other treatment options evaluated.

The treatment process utilizes a HSW divert system at the influent lift station. The divert system segregates the flow into HSW stream and low-strength waste stream. Due to this aspect of the process design, not all process wastewater from production travels through the anaerobic unit processes. A feature specific to this application is that each area of production (raw milk, cheese processing, nutrition) will have a dedicated divert lift station. This will allow a higher degree of control over divert because one area might have concentrated loading while another has clean water going down the drain. It will also allow loss tracking and monitoring from each department.

Brine will be kept separate from LSW and HSW streams in production and have a dedicated lift station to send brine to two evaporation lagoons, each with 9.25 acres of surface area. Water will be allowed to evaporate while dissolved solids are deposited on the bottom of the lagoon. Due to their large size, solids collection from the brine lagoon will not be required for several years. The lagoons will also be equipped with splashers to improve evaporation efficiency.

HSW and LSW sent to the WWTP each flow through dedicated influent strainer systems before entering the treatment process. The LSW is strained via two rotary screen drums then allowed to drain directly to the equalization tanks. Diverted HSW flows through an automatic in-line strainer to the HSW equalization tanks. Influent straining is important because it protects downstream process (i.e., slot mix aeration, membranes) from issues with solids such as clogging. It can also remove some particulate organic loading in a relatively simple process.

The design concept for the high-strength equalization tanks is to serve as a place to balance the flow and characteristics of the wastewater prior to sending to downstream treatment processes (in this case the anaerobic reactors). The two equalization tanks can also be operated in a series mode of operation, with second HSW equalization tank acting as a pre-acidification tank. When operating in this mode, the pre-acidification tank will be used to acidify raw high-strength wastewater to make it easier for digestion.

This system is designed with two anaerobic digester tanks. The primary design concept for anaerobic digestion is to send as much load and as little flow to the digesters as possible. The digesters perform best with a concentrated waste stream. By digesting as much COD in the digester as possible, it creates the most biogas and uses much less energy than all aerobic treatment systems. In preliminary design calculations it was estimated that on average 35,000 lbs/day of COD will be sent to the anaerobic treatment system, which is 70% of total influent COD digested by the anaerobic digesters.

The digester covers will be kept at a slight vacuum, as biogas is extracted from the headspace via a pair of hermetically sealed fans. Recovered biogas will travel through a complete biogas handling system consisting of condensate traps, drip traps, manometers, flame traps, pressure regulating valves, isolation valves, flame checks, and an automatic waste gas burner system. To account for potentially toxic fumes, the design includes a gas scrubber and monitoring system for control of H2S. The biogas generated from anaerobic digestion possesses energy value and will be sent to the boiler/heat exchangers to heat the anaerobic reactor recirculation lines. Excess biogas will simply be flared off.

Tubular crossflow ultrafiltration (UF) membranes will be used to perform solid/liquid separation (SLS) on anaerobic mixed liquor suspended solids (MLSS) from the digesters. The UF membranes will serve as a physical barrier to separate the bacteria cell mass from the stream. This will eliminate the risk of sending wastewater with a high suspended solids concentration to aerobic treatment. The final removal of the biosolids from the treated effluent eliminates the nutrients associated with the bacteria cell mass. The effluent from the anaerobic reactor (membrane permeate) will be sent to the aerobic treatment system for further processing.

The low strength process wastewater and anaerobic effluent will be treated through the activated sludge aerobic treatment process. This aerobic treatment system is designed with two equalization tanks, an anoxic selector tank, a sludge thickening tank, a fermentation tank, two aeration basins, and UF membrane solid-liquid separator. Influent LSW and anaerobic permeate combine in the equalization tanks to balance the flow and characteristics of wastewater sent to the aerobic treatment processes. Wastewater from the equalization tanks is pumped into the anoxic selector tank.

The biological anoxic selector is designed to remove nitrate (NO3-N) concentration, aid in promoting floc forming bacteria for better settling and, when operated under anaerobic conditions, promote enhanced biological phosphorus removal. The anoxic selector is sized so that nitrate is completely removed in the anoxic basin and organic substrate is completely uptaken. Oxygen reduction potential (ORP) is controlled in the tank to maintain an anoxic environment. ORP control regulates the amount of RAS (return activated sludge) or MLSS, which have residual dissolve oxygen (DO) to maintain an anoxic environment with the raw wastewater. In normal operation the selector tank overflows via gravity into the aeration basins.

The aerobic MBR treatment technology was selected to provide a high amount of certainty related to effluent quality. The aeration basins are mixed and aerated via a slot aeration mixing system, fed by two dedicated blowers for each basin. Maintaining an adequate DO concentration in the basins allows for the biological destruction of COD in the wastewater. The aeration basins are designed with the ability to operate in either parallel or series modes of operation, providing operational flexibility. The aeration basins will also be provided with two surface aerators per basin, mounted on three-post mooring stands. The surface aerators serve three purposes: temperature control, foam control, and supplemental dissolved oxygen.

Waste activated sludge (WAS) from the aerobic process will be thickened in the sludge thickening tank, then sent to the fermentation tank to improve biological phosphorus removal or wasted to the anaerobic treatment process for digestion. The goal of the fermentation process is to boost the production of volatile fatty acids (VFAs). By introducing VFAs back into the waste stream, it supercharges the phosphorous accumulation of the micro-organisms, significantly increasing the % of TP they will uptake, and therefore reducing the reliance on chemical phosphorous removal. Waste anaerobic sludge (WANS) from the anaerobic MBR will be sent to the sludge storage tank before being mechanically dewatered and hauled off site for disposal.

Hybrid flat sheet / hollow-fiber UF membranes will be used to perform solid/liquid separation (SLS) on aerobic MLSS. The membrane will serve as a physical barrier to separate the bacteria cell mass from the stream. Permeate from the aerobic UF membranes will be sent through final ultraviolet (UV) light disinfection process to a post aeration tank which provides supplemental oxygen to the disinfected effluent. Disinfected effluent is pumped from the post aeration tank to the city's force main connection, which carries water directly to Lake #6 for discharge. An automatic sampler will collect flow proportional samples of effluent to ensure compliance with the permit is being maintained.

At the south end of the property there will be a valve manhole that can control whether effluent goes to direct discharge into Lake #6 or if it goes to the City of Lubbock, which would only happen in an emergency. In the event of an upset condition, rather than going to the City of Lubbock and paying the financial penalty, water could temporarily be sent to the

10.5-million-gallon non-compliant lagoon. This volume allows for non-compliant effluent to be contained for seven days operating at full capacity. The plant will also be equipped with an aerated 1.5-million-gallon calamity lagoon to serve as calamity storage should any process units need to be temporarily taken out of service.

Chemical dosing systems necessary for pH adjustment, phosphorous removal, coagulation, and other process controls are included in the design of the WWTP. The list of chemicals to be used on site include citric acid, sanitizer, nitric acid, membrane soak solution, SBS, ferric, micronutrients, and acid. Ferric, caustic, and SBS will be stored in 5,500-gallon bulk tanks. All other chemicals will be kept in totes or drums, with containment skids acting as secondary containment to prevent any spills from reaching the floor drains. The three bulk tanks will each be equipped with secondary containment, leak detection, level sensors, fill catches, and alarm relays.

October 10, 2022

Abesha H. Michael
Texas Commission of Environmental Quality
Applications Review and Processing Team
Water Quality Division, MC 148
PO Box 13087
Austin, Texas 78711

RE: NOD Response for TPDES Application Proposed Permit No. WQ0005417000 (EPA I.D. No. TX0143600) to be Issued to Leprino Foods Company, Lubbock, Lubbock County, Texas

Dear Ms. Michael:

On behalf of Leprino Foods Company, the following line items were updated in the application as directed by the Notice of Deficiency (NOD) letter dated October 6, 2022. As required, one original and two copies (including cover letter) are included.

NOD Item 1. Section III, item 24 and 26 on page 2 of the Core Data Form (CDF): These items were left blank. However, they are required. Please provide the name of the county and the nearest city and submit a revised and signed page 2 of the CDF.

Response:

- TCEQ CDF / Item 24 and Item 26 were populated with the correct information. The revised CDF was signed and the original with wet signature with two copies are attached.

NOD Item 2. Section 1.A on page 11 of administrative report 1.1: Thank you for providing the affected landowners map. However, the map provided is insufficient. It did not delineate the landowner south of property owner 35 and northeast of property owner 8 and east of TX-W89-Loop South. Please submit a revised landowners map showing all the affected landowners, and update the cross-referenced mailing list and labels accordingly.

Response:

- The Affected landowners map was revised to include the landowner south of property owner 35 and northeast of property owner 8 and east of TX-W89-Loop South. The updated map and cross-referenced mailing list and labels are attached.

NOD Item 3. Section 1.B on page 11 of administrative report 1.1: The application indicates the readable/writable CD is included with the application. However, we are unable to locate the CD. Please email the affected landowners mailing labels in a Microsoft word format.

Response:

- A revised copy of the affected landowners mailing labels in Microsoft word format were emailed to Ms. Abesha Michael at abesha.michael@tceq.texas.gov.

NOD Item 4. The following is a portion of the Notice of Receipt of Application and Intent to Obtain a Water Quality Permit which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

> **APPLICATION.** Leprino Foods Company, 1830 West 38th Avenue, Denver, Colorado, 80211, which owns a mozzarella cheese and nutrition manufacturing facility, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005417000 (EPA I.D. No. TX0143600) to authorize the discharge of treated wastewater and stormwater at a volume not to exceed an annual average flow of 2,000,000 gallons per day. The facility is located at 4301 East 19th Street, Lubbock, in Lubbock County, Texas 79403. The discharge route is from the plant site to via pipe to North Fork Double Mountain Fork Brazos River. TCEQ received this application on September 30, 2022. The permit application is available for viewing and copying at Texas Commission on Environmental Quality-Region 2, 5012 50th Street, Suite 100, Lubbock, Texas. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.
> https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=db5bac44afbc468bbddd360f8168250f&marker=-101.7775%2C33.580277&level=12
>
> Further information may also be obtained from Leprino Foods Company at the address stated above or by calling Ms. Kim DeVigil, Director of Communications, at 303-264-5336.

Response: The above portion of the NORI was reviewed, and no errors or omissions are required.

Plain Language Summary/NORI. The Plain Language Summary (PLS) in English and Spanish and NORI in Spanish were submitted via email to Ms. Abesha Michael at abesha.michael@tceq.texas.gov.

If you have any questions concerning this application, please contact me at (409) 504-6933. We look forward to working with you in processing this application. Thank you for your consideration.
Sincerely,

TRINITY CONSULTANTS

Allen Rienstra
Senior Staff Scientist

Attachments: Core Data Form, Affected Landowners Map

Cc. Hannah Bradish – Environmental Compliance Engineer – Leprino Foods Company
Joe Herrud – Senior Director of Environmental Engineering – Leprino Foods Company
Katie Jeziorski – Managing Consultant – Trinity Consultants

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 6, 2022

Ms. Hanna Bradish
Environmental Compliance Engineer
Leprino Food Company
1830 West 38th Avenue
Denver, Colorado 80211

Re: Application for Proposed Permit No. WQ0005417000 (EPA I.D TX0143600)
To be Issued to Leprino Foods Company
CN605980739, RN111422333

Dear Ms. Bradish:

We have received the application for the above referenced permit, and it is currently under review. Your attention to the following items is requested before we can declare the application administratively complete. Please submit one original and two copies (including a cover letter) of the complete response.

1. Section III, item 24 and 26 on page 2 of the Core Data Form (CDF): These items were left blank. However, they are required. Please provide the name of the county and the nearest city and submit a revised and signed page 2 of the CDF.

2. Section 1.A on page 11 of administrative report 1.1: Thank you for providing the affected landowners map. However, the map provided is insufficient. It did not delineate the landowner south of property owner 35 and northeast of property owner 8 and east of TX-w89-Loop South. Please submit a revised landowners map showing all the affected landowners, and update the cross-referenced mailing list and labels accordingly.

3. Section 1.B on page 11 of administrative report 1.1: The application indicates the readable/writable CD is included with the application. However, we are unable to locate the CD. Please email the affected landowners mailing labels in a Microsoft word format.

4. The following is a portion of the Notice of Receipt of Application and Intent to Obtain a Water Quality Permit which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

   APPLICATION. Leprino Foods Company, 1830 West 38th Avenue, Denver, Colorado, 80211, which owns a mozzarella cheese and nutrition manufacturing facility, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005417000 (EPA I.D. No. TX0143600) to authorize the discharge of treated wastewater and stormwater at a

McElroy, Sullivan, Miller & Weber, L.L.P

500 W. 5th Street, Suite 1375 Austin, TX 78701 | www.msmtx.com

MAILING ADDRESS: P.O. Box 12127, Austin, TX 78711 | **T.** 512.327.8111 **F.** 512.350.2681

September 16, 2024

Via FTP Upload
Ms. Ellie Guerra
Office of the Chief Clerk
Texas Commission on Environmental Quality
12100 Park 35 Circle, Building F
Austin, Texas 78753

RE: Application for Proposed Permit No. WQ0005417000 (EPA I.D. TX 0143600)
To be Issued to Leprino Foods Company
CN605980739, RN111422333

Dear Ms. Guerra,

The TCEQ Commissioners issued an Interim Order in the above-referenced matter on September 6, 2024. Pursuant to 30 Tex. Admin. Code § 80.118(d), Applicant Leprino Foods Company submits the following documents (*See* **LEPRINO_00001-000378**) which are the original application and revisions to the application for inclusion in the Administrative Record:

- Application for a New Individual Permit to Discharge Industrial Wastewater for Leprino Foods Company located in Lubbock, Texas (**September 23, 2022)**;
- TCEQ Notice of Deficiency Letter to Leprino Food Company (**October 6, 2022)**;
- Leprino Foods Company Response to TCEQ's Notice of Deficiency Letter (**October 10, 2022)**; *and*
- Revised Application – Comments to Draft Permit Package (**March 23, 2023)**.

Leprino Foods Company has retained McElroy, Sullivan, Miller & Weber, L.L.P. to represent it in the above-referenced matter. The undersigned respectfully requests addition to the service list and to be provided with any future notices or correspondence.

If you should require any further from the Applicant at this time, please do not hesitate to let us know.

Sincerely,

/s/ Adam Friedman
Adam Friedman
afriedman@msmtx.com
State Bar No. 24059783
McElroy, Sullivan, Miller & Weber, L.L.P.
ATTORNEY FOR LEPRINO FOODS COMPANY

volume not to exceed an annual average flow of 2,000,000 gallons per day. The facility is located at 4301 East 19th Street, Lubbock, in Lubbock County, Texas 79403. The discharge route is from the plant site to via pipe to North Fork Double Mountain Fork Brazos River. TCEQ received this application on September 30, 2022. The permit application is available for viewing and copying at Texas Commission on Environmental Quality-Region 2, 5012 50th Street, Suite 100, Lubbock, Texas. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application. https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=db5bac44afbc468bbddd360f8168250f&marker=-101.7775%2C33.580277&level=12

Further information may also be obtained from Leprino Foods Company at the address stated above or by calling Ms. Kim DeVigil, Director of Communications, at 303-264-5336.

New rule requirements under Title 30 Texas Administrative Code (TAC) Chapter 39 relating to public notices have been implemented. The deficiencies listed below are new items that need to be provided to meet the alternative language requirements.

1. Please use the attached Plain Language Summary (PLS) Template to provide a plain language summary in English. Please provide the PLS in a Microsoft Word document.

2. Section 9, Item E.5 on page 6 of Administrative Report 1.0 indicates that public notices in Spanish are required. Please use the attached PLS Spanish template to translate the plain language summary into Spanish. Please provide the translated Spanish PLS in a Microsoft Word document

3. Section 8, Item E.5 on page 6 of Administrative Report 1.0 indicates that public notices in Spanish are required. After confirming the portion of the English NORI contained in item No. 4 of this letter does not contain any errors or omissions, please use the attached template to translate the NORI into Spanish. Only the first and last paragraphs are unique to this application and require translation. Please provide the translated Spanish NORI in a Microsoft Word document.

Please submit the complete response, addressed to my attention by October 20, 2022 If you should have any questions, please do not hesitate to call me at (512) 239-4912.

Sincerely,

Abesha Michael

Abesha H. Michael
Applications Review and Processing Team (MC148)
Water Quality Division
Texas Commission of Environmental Quality

Enclosure(s)
Attachment 1 – Municipal TPDES and TLAP PLS Form
Attachment 2 – Municipal TPDES and TLAP PLS Form (Spanish)
Attachment 3 – Municipal Disposal New Spanish NORI

cc: Mr. Allen Rienstra, Consultant, Trinity Consultants, 6150 Clifton Street, Beaumont, Texas. 77708

REVISED March 23, 2023

Dr. Sarah A. Johnson
Environmental Permit Specialist
Industrial Wastewater Permitting Section – MC 148
Texas Commission of Environmental Quality
P.O. Box 13087
Austin, Texas 77651
Sarah.Johnson@Tceq.Texas.Gov

RE: Revised Application – Comments to Draft Permit Package
Leprino Foods Company (CN605980739)
TPDES Permit No. WQ0005417000 (EPA ID No. TX0143600)
Leprino Foods Lubbock Manufacturing Facility (RN111422333)

Dear Dr. Johnson,

On behalf of Leprino Foods Company (Leprino), Trinity Consultants (Trinity) is submitting a revised application in response to the discussion held on March 8, 2023, covering the TPDES Draft Permit Package. This application represents the terminology updates for the changes of “brine” to “high TDS water” where appropriate, and “calamity” lagoon to “multipurpose” lagoon. In addition, Leprino suggests the following definition for the bypass clarification language: A “bypass” does not include the routing or re-routing of waters within the wastewater treatment plant.

Per discussion via telephone conference call on March 23, 2023, there are pending items that need to be discussed internally within the Water Quality Division before they are finalized and the application updated, as needed. Leprino is requesting the following Alternative BPJ for an internal sampling point of Oil & Grease:

- Internal sampling of three separate grab samples for each of the three-unit operations; boiler blowdown, cooling tower blowdown, and evaporative condenser blowdown. Sampling will occur separately for each unit operation prior to comingling with other sources.
- Requested sampling frequency reduction of Oil & Grease from 1/week to, alternatively, 1/month or 1/every two weeks, or permit language allowing an automatic reduction in sampling frequency after a certain length of monitoring at the higher monitoring frequency.

We thank you in advance for your consideration of this review. If you have any questions or comments, please feel free to contact me at kjeziorski@trinityconsultants.com or Ms. Hannah Bradish at 303-548-8718; hbradish@leprinofoods.com.

Sincerely,

TRINITY CONSULTANTS

Katie Jeziorski

Katie Jeziorski
Managing Consultant

Attachments

Cc. Hannah Bradish, Leprino Foods Company
Kelly Hawkins, Leprino Foods Company
James Frazier, Leprino Foods Company

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

APPLICATION FOR A NEW INDUSTRIAL WASTEWATER PERMIT

CN605980739
RN111422333

Leprino Foods Company
Lubbock, Texas

Prepared By:

Katie Jeziorski – Managing Consultant
Allen Rienstra – Consultant

TRINITY CONSULTANTS
12700 Park Central Drive, Suite 2100
Dallas, Texas 75251
(972) 661-8100

September 2022

Project 214401.0274

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1. AGENCY COMMUNICATION

From: James Michalk
To: Hannah Bradish; Joseph Herrud
Cc: Kelly Hawkins; Chris Lewis; Katie Jeziorski; James Frazier; Allen Rienstra
Subject: RE: Meeting for Leprino Foods proposed limits
Date: Thursday, September 8, 2022 2:12:33 PM
Attachments: image001.png

Good afternoon all,

I have completed the additional seasonal effluent limit analysis for a discharge flow of 2.0 MGD.

One thing to please note -- in my earlier emails regarding the model results (summer and seasonal) and potential effluent limit combinations, I said that the effluent limits would include CBOD$_5$, ammonia-nitrogen (NH_3-N), and minimum effluent dissolved oxygen (DO), since for *Municipal* permits we typically recommend CBOD$_5$ limits (rather than BOD$_5$ limits) when the permit also includes an NH_3-N limit. However, as an *Industrial* permit, it is my understanding that this permit would need to include a **BOD$_5$ limit** (not a CBOD$_5$ limit), since the 40 CFR categorical limits actually require a BOD$_5$ limit for this type of facility/discharge. My model results and the various potential effluent set combinations are unchanged from what I provided previously (although see below for an additional potential monthly grouping for the 1.5 MGD seasonal limit scenario), but I just wanted to clarify that issue.

You can check with the Permitting Section if it would be possible to *request* that the permit include a CBOD$_5$ limit instead of BOD$_5$ (since the permit would also include an NH_3-N limit), but again it's my understanding that a BOD$_5$ limit is required in this case.

Modeling Results:
Possible combinations of effluent limits predicted to be adequate to ensure that DO levels will be maintained above the criterion applicable to the lake are as follow:

- For 2.0 MGD, the 'summertime' effluent set (from the analysis performed back in May) of **5 mg/L BOD$_5$, 1.0 mg/L NH_3-N, and 6 mg/L minimum effluent DO (5/1.0/6)** would most likely be applied for (at least) the months of **April - September** (depending how you wanted to group the other months, per the additional options described below). The predicted necessary limits for April, May, and September aren't (in my opinion) less stringent enough to be worth including those months in the 'cooler' monthly grouping, since we will only allow two groupings of effluent limits for seasonal limits (i.e. some set of 'warmer' months and some set of 'cooler' months).
- For 2.0 MGD for the 'cooler' monthly grouping, the following options were all predicted to be adequate:
  - **October - March** at any of the following effluent sets (BOD$_5$ / NH_3-N / DO):
    - 8/2/6
    - 7/2/5
    - 6/2/4
    - 5/3/6
  - **November - March** at any of the following effluent sets (BOD$_5$ / NH_3-N / DO):
    - 9/2/6
    - 8/2/5
    - 7/2/4
    - 6/3/6
  - **November - February** at any of the following effluent sets (BOD$_5$ / NH_3-N / DO):
    - 12/2/4
    - 13/2/5
    - 14/2/6
    - 11/3/6
    - 8/4/6
- I don't think I looked specifically at the **Nov - Feb** potential monthly grouping for the earlier **1.5 MGD** seasonal effluent limit analysis. Since predicted necessary effluent limits were considerably less stringent at 2.0 MGD for Nov - Feb than they were for Nov - Mar, I also performed some new modeling specifically for the Nov - Feb period at 1.5 MGD, in case you want to consider that alternative monthly grouping of seasonal effluent limits for a possible additional option.
  - For 1.5 MGD, **November - February** at any of the following effluent sets (BOD$_5$ / NH_3-N / DO):
    - 15/2/4

- 16/2/5
- 17/2/6
- 13/3/4
- 14/3/6
- 12/4/6
- 11/4/5
- 10/4/4

Other monthly groupings and effluent set combinations may also be adequate and can be evaluated upon request.

As we have discussed previously, these are only the effluent limits that are related to potential direct dissolved oxygen impacts. The Standards Implementation Team may recommend other effluent limits including for nutrients (phosphorus and/or forms of nitrogen other than ammonia-nitrogen), TDS/sulfate/chloride, and possibly other constituents. I don't know what all other types of limits or requirements may be included in the permit by the Permitting Section for this specific type of facility or discharge.

Please let me know if you have any questions about the DO modeling results or these potential seasonal effluent limit combinations. Thank you again.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Friday, July 29, 2022 8:16 AM
To: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to check back in with you to see if you have had a chance to run the seasonal limits at the 2.0 MGD flow rate?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Friday, July 8, 2022 12:15 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I can, but it might be a little while. I'm working on several other priority projects and permits right now, with another hearing coming up July 20-22.

But remind me if you don't hear back from me by the end of the month.

Jim Michalk

Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Friday, July 8, 2022 12:26 PM
To: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Would it be possible to run the model for seasonal limits at the flow of 2.0 MGD? I know we had originally just requested the 1.5 MGD seasonal analysis but are hoping to see what the 2.0 MGD seasonal limits would look like.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, June 16, 2022 7:42 AM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Reading back over my emails from yesterday, I somehow neglected to include that those seasonal effluent set options were all for **1.5 MGD** model runs, per Hannah's email, so just wanted to clarify that. Have a good day!

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Wednesday, June 15, 2022 6:46 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

And just to be clear, it would be up to you to choose which of those options worked best for you, not that we'd write a permit that included various/multiple different effluent set combination options.

I don't think there's really a place in the permit application forms for an Industrial permit applicant to request specific $CBOD_5$, ammonia-nitrogen, and minimum effluent DO limits (let alone different seasonal limits of those constituents), so I'd probably recommend including some of the email record of our correspondence on this subject in the application with a written request for specific limits, per our preliminary analysis discussions, especially in case I'm not the DO modeler who ends up getting assigned to the permit application. I have my preliminary analysis modeling review files saved where any of the modelers can access them, if they know to look.

Thanks again,

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Wednesday, June 15, 2022 6:10 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good evening all,

I ran a number of different seasonal effluent limit scenarios.

The City of Lubbock's permit (WQ0010353002), Outfall 007, has a seasonal effluent limit split of April - October for the more stringent warmer-weather effluent limits, with less stringent limits in the cooler months of November - March. For Municipal permits, we have what we refer to as an 'effluent set hierarchy' composed of different specific 'sets' of effluent limit combinations (for $CBOD_5$, ammonia-nitrogen, and minimum effluent DO) that are typically applicable to different types of municipal WWTP treatment systems. Without getting too much into the details of that subject, suffice to say that such an approach is not necessarily applicable to Industrial permits, so Industrial permits can have more combinations of those 3 constituents (as effluent limits) than would typically be considered for a Municipal WWTP permit. Which means potentially lots more model runs for possible effluent limit combinations, in order to allow some flexibility to a permittee depending on which of those three constituents you may want to have a little higher limit on. But here's what I've come up with.

Be aware that we would limit seasonal effluent limits to **two** different monthly groupings. If the same monthly grouping is used for the Leprino Foods permit as is currently applicable to Outfall 007 in the City of Lubbock permit, that would result in seasonal effluent limits of:

- 5 mg/L $CBOD_5$, 1.5 mg/L NH_3-N, and 6 mg/L minimum effluent DO (**5/1.5/6**) for the months of **Apr - Oct**, and
- **either 10/2/4; 9/3/6; or 8/3/4** for **Nov - Mar**;

Or, using a different monthly grouping:

- **5/1.5/6** for **May - Sep**, and
- **either 8/2/5 or 7/2/4** for **Oct - Apr**

Other effluent set combinations or monthly groupings may also be adequate and can be evaluated upon request.

Please let me know if you have any questions or need any additional information.

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Wednesday, June 15, 2022 1:53 PM
To: Hannah Bradish <hbradish@leprinofoods.com>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Ok, will do.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Wednesday, June 15, 2022 1:07 PM
To: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Please only do the analysis for seasonal limits for the flow rate of 1.5 MGD.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Wednesday, June 15, 2022 10:41 AM
To: Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Hannah Bradish <hbradish@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning all,

Do you want me to take a look at seasonal limits just at either 1.5 MGD or 2.0 MGD, or both? Both is no problem if that helps your decision process.

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Tuesday, June 14, 2022 8:42 AM
To: Joseph Herrud <jherrud@leprinofoods.com>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Hannah Bradish <hbradish@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Seasonal limits (CBOD5, ammonia-nitrogen, and/or minimum effluent DO) may be an option but will increase the complexity of this analysis and I will probably not be able to conduct that analysis for you for several weeks as I have depositions, public meetings, prefiled testimony for hearings, and review of judges' decisions for completed hearings starting up again.

Jim Michalk
Water Quality Assessment Team

From: Joseph Herrud <jherrud@leprinofoods.com>
Sent: Monday, June 13, 2022 10:11 AM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>; Hannah Bradish

<hbradish@leprinofoods.com>; Allen Rienstra <allen.rienstra@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Jim, can you give us any indication of seasonal variations for any of the parameters? We've used the City's permits as a guideline and theirs has seasonal limit differences.

Thanks!
Joe

Joe Herrud, P.E.
Senior Director of Environmental Engineering
Technical Services
Leprino Foods Company
jherrud@leprinofoods.com
303-480-2894 Office
303-859-8923 Cell

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Friday, June 10, 2022 12:57 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I completed the updated dissolved oxygen modeling analysis for a reduced flow of 1.5 MGD. I'm afraid that didn't make a whole lot of difference.

Effluent limits of **5 mg/L $CBOD_5$ and 6 mg/L minimum effluent DO** are still predicted to be necessary, just with an **ammonia-nitrogen of 1.5 mg/L** instead of 1.0 mg/L.

Let me know if you have any questions or would like for me to take a look at anything else.

Jim Michalk
Water Quality Assessment Team

From: James Michalk
Sent: Tuesday, June 7, 2022 8:27 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning Hannah,

I will take a look.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, June 2, 2022 4:56 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis

<CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>; James Frazier <jfrazier@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Would it be possible to get updated values if for a maximum flowrate of 1.5 MGD? How would this impact the CBOD, DO and Ammonia limits you provided previously?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Wednesday, May 11, 2022 2:48 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I have completed the dissolved oxygen (DO) preliminary modeling analysis for the proposed Leprino Foods project. For a discharge of **2.0 MGD** directly into Canyon Lake Number 6, an effluent set of **5 mg/L CBOD$_5$, 1.0 mg/L ammonia-nitrogen, and 6 mg/L minimum effluent DO** is predicted to be necessary. These effluent limits are stringent, but are comparable to those recommended for municipal wastewater discharge permits of comparable size discharging directly into small and narrow reservoirs similar to this one. Based on the road encircling the lake, the public parking areas along it, and several docks along the shoreline, this lake appears to have a significant public recreation use, so stringent effluent limits like this may help to moderate potential public concern about a 2 MGD wastewater discharge of any sort going into this lake. But that potential for public concern (including the possibility of a public meeting and a contested case hearing if the permit application is protested) is something to keep in mind regardless of the stringency of these effluent limit recommendations.

Just so you're aware, I needed to do the following for my modeling analysis. Upon closer inspection of the survey schematic provided, I noticed that the distance out into the lake shown on the schematic (from shoreline out to the outfall structure) was only about the same distance as the width of Canyon Lake Drive and the "slick bore under Canyon Lake Drive" that lies beneath the road, as shown on the other side of the survey schematic. In other words, only a distance of about 35 to 40 feet out into the lake, whereas the lake is over 700 feet wide at this point. So I had to use elevation information from the USGS topographic map as well (which predated construction/impoundment of the lake) to develop depth estimates for entire lake cross-sections, which seemed consistent with the steady decrease in elevation shown on the survey schematic for the area near the shoreline. This resulted in significantly deeper maximum (roughly mid-lake) depths, though I estimated the *average cross-sectional depth* (shoreline-to-opposite-shoreline) in the vicinity of the proposed discharge location still at around 6 feet deep (getting gradually a little deeper going downstream toward the dam, but the most critical portion of the model was the initial 10-acre area in the immediate vicinity of the discharge). I think the modeling is protective but not overly conservative.

If you'd like to explore other potential options to help reduce the amount of oxygen-demanding constituents (and other components that may be of concern in the discharge) by the time the discharge enters the lake, such as constructed wetlands or effluent polishing ponds between a revised discharge location and entry into the lake, let us know, but you would need to develop the details of those wetlands or ponds for us to take into consideration for an updated analysis.

Also be aware that the North Fork Double Mountain Fork Brazos River (Segment ID 1241A) is listed as impaired on the current (2020) Clean Water Act Section 303(d) list for elevated bacteria levels in water (recreation use) and that the impaired portion of the river includes the section that has been impounded to create Canyon Lake Number 6. The Double Mountain Fork Brazos River (classified Segment No. 1241) farther downstream is also considered impaired for elevated bacteria levels in water (recreation use). These impairments are unchanged on the Draft 2022 303(d) list, which has not yet been approved. There are no completed or underway Total Maximum Daily Load (TMDL) projects applicable to the proposed discharge route.

Please let me know if you have any additional questions. Thank you, and sorry again for the delay in completing this review.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Monday, May 9, 2022 9:52 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to check back in on this to see if you have some preliminary permit limits?

We have approached the phase of the project where we need to know if our design is adequate to confirm our budget and are in much need of the estimated permit limits to confirm this.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Tuesday, April 26, 2022 8:18 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning Hannah,

No, I've been totally swamped with 5 different hearings (and their pre- and post-hearing procedures), especially throughout March and April, but the Replies to Closing Arguments for one filed last week, and for another one files this week, and Discovery for the last of the 5 also files this week. I should have a little break after this week before the 3 that haven't gone to hearing yet really get going again (hearings scheduled for May, June, and July, but with prefiled testimony, depositions, etc. before those dates). But in the meantime, I have multiple permits I need to finish reviewing this week in order to get them into a quarterly update that goes out for public comment and to EPA for review, if possible.

So I won't be able to get back to this project until at least next week sometime, but I'm also behind on a lot of additional permit reviews and other projects because of all these hearings.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Monday, April 25, 2022 4:01 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Katie Jeziorski <KJeziorski@trinityconsultants.com>

Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to check in with you to see if you have had a chance to evaluate the water body and determine some preliminary expected permit limits for our proposed discharge?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 4:01 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Ok, thank you very much.

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 4:47 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Of course. I did confirm this is the updated version with accurate discharge location. I also confirmed that the average operating depth of the lake is that 3131.5 elevation line.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 3:05 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Perfect, thanks Hannah.

Jim

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 3:49 PM
To: James Michalk <james.michalk@tceq.texas.gov>

Subject: RE: Meeting for Leprino Foods proposed limits

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 2:42 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Just finished. Still time?

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 3:13 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Sounds good. Feel free to call my cell when you are ready.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 1:47 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Probably just 30, it's with my team leader.

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 2:46 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

I have a meeting that starts at 4 central. Is your meeting 30 minutes or an hour?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 1:44 PM

To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hannah,

I have a meeting at 3:00, how about after that?

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 2:36 PM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

Yes, that is where Sarah and I landed on BOD concentration.

It may be easiest to explain what you are looking at on the PDF over the phone. Would you have some time for me to call you?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: James Michalk <james.michalk@tceq.texas.gov>
Sent: Thursday, March 31, 2022 12:37 PM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Good afternoon Hannah,

I believe the last emails between you and Sarah were indicating that I should use a BOD_5 concentration of 31.12 mg/L as the starting point for my dissolved oxygen modeling analysis.

I can't tell what I'm looking at on the pdf you provided. Can you help me out?

Jim Michalk
Water Quality Assessment Team

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 31, 2022 10:28 AM
To: James Michalk <james.michalk@tceq.texas.gov>
Cc: Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis

<CLewis@probstgroup.com>; Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Jim,

I wanted to circle back with you to send you the updated lake survey and check to confirm you have received what you need from the BOD and TSS effluent limits. Please let me know if you need anything else from me in order to start the waterbody DO modeling.

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: Hannah Bradish
Sent: Tuesday, March 22, 2022 9:21 AM
To: Sarah Johnson <Sarah.Johnson@tceq.texas.gov>
Cc: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: Re: Meeting for Leprino Foods proposed limits

Hi Sarah,

I have reviewed the guidance you provided and no revisions are necessary. We have considered all materials.

Thanks!

Hannah Bradish

Sent from my iPhone

> On Mar 17, 2022, at 1:52 PM, Sarah Johnson <Sarah.Johnson@tceq.texas.gov> wrote:
>
> Good afternoon-
>
> Thank you for the information. The spreadsheet appears to apply the federal effluent limit guidelines correctly. I also reviewed the 40 CFR Part 405 development document, which on page 3 (“Method of Application”) states that all other (non-dairy) materials such as sugar must also be considered. Please confirm if any such additional materials/ingredients will be used and update the calculations accordingly if needed (see Table 9, page 41 of the document for common material compositions).
>
> If the spreadsheet is correct as is and no revisions are needed, then the technology-based effluent limit of **31.12 mg/L BOD_5 daily average** will be used as the starting point in the dissolved oxygen model. Jim Michalk and I will confer and we’ll reach out to you if a meeting is needed.
>
> Regards,
>
> Sarah A. Johnson, Ph. D.
>
> Environmental Permit Specialist

Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 2101
Austin, TX 78753
Office Phone: 512-239-4649

Customer Satisfaction Survey

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, March 17, 2022 2:50 PM
To: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Cc: James Michalk <james.michalk@tceq.texas.gov>; Joseph Herrud <jherrud@leprinofoods.com>; Kelly Hawkins <khawkins@leprinofoods.com>; Chris Lewis <CLewis@probstgroup.com>; Lynn Morrison <LMorrison@probstgroup.com>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Sarah,

We have the finalized BOD input and Effluent Limit numbers sorted out. I have attached the calculation spreadsheet along with a process flow diagram that corresponds to the BOD loading calculations. Please note that the information in these spreadsheets is confidential.

With this calculation, we now show the following categorical limits:

EFFLUENT LIMITS IN CONCENTRATION FOR ULTIMATE BUILDOUT				
	Average Flowrate		**Max Flow rate**	
	2.31		***2.94***	
	Monthly Average	***Daily Max***	***Monthly Average***	***Daily Max***
BOD_5 (mg/L)	**31.12**	**62**	**24**	**49**
TSS (mg/L)	**38.91**	**78**	**31**	**62**
pH s.u		**6.5-9 s.u**		

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718 (preferred)
hbradish@leprinofoods.com

From: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Sent: Friday, February 4, 2022 7:41 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Good morning-

That works for me. I look forward to hearing from you.

Sarah A. Johnson, Ph. D.

Environmental Permit Specialist
Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 2101
Austin, TX 78753
Office Phone: 512-239-4649

Customer Satisfaction Survey

From: Hannah Bradish <hbradish@leprinofoods.com>
Sent: Thursday, February 3, 2022 4:34 PM
To: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Cc: James Michalk <james.michalk@tceq.texas.gov>
Subject: RE: Meeting for Leprino Foods proposed limits

Hi Sarah,

We are updating our calculations and preparing a spreadsheet to send to you. Once that is ready to go, I was hoping to review it with you to make sure everything makes sense. I want to have the calculations done next week and then we can set up a meeting time if that works for you?

Thanks!

Hannah Bradish
Environmental Compliance Engineer
Leprino Foods Company
O: (303) 480-7726
C: (303) 548-8718
hbradish@leprinofoods.com

From: Sarah Johnson <Sarah.Johnson@Tceq.Texas.Gov>
Sent: Wednesday, February 2, 2022 8:53 AM
To: Hannah Bradish <hbradish@leprinofoods.com>
Cc: James Michalk <james.michalk@tceq.texas.gov>
Subject: Meeting for Leprino Foods proposed limits

Good morning-

Jim passed along your request to meet regarding calculation of the technology-based effluent limits (TBELs) per the effluent limit guidelines (ELGs) in 40 CFR Part 405. I'm available Friday, but given the winter storm predicted it's probably best not to schedule then in case things shut down. The next earliest I could meet would be Monday morning (Feb. 7), from 8:30-12:00, Tuesday morning from 9:00-12:00, or Wednesday afternoon from 1:30-4:00. Please let me know which time works best and any specific items you wish to discuss so I can prepare accordingly.

Regards,

Sarah A. Johnson, Ph. D.

Environmental Permit Specialist
Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 2101
Austin, TX 78753
Office Phone: 512-239-4649

Customer Satisfaction Survey

[EXTERNAL EMAIL]
WARNING: This email originated outside of Leprino. Even if this looks like an internal Leprino email, it is not.
DO NOT provide your username, password, or any other personal information in response to this or any other email.
LEPRINO WILL NEVER ask you for your username or password via email.
DO NOT CLICK links or attachments unless you are positive the content is safe.
IF IN DOUBT about the safety of this message, use the Report Phishing drop-down.

[EXTERNAL EMAIL]
WARNING: This email originated outside of Leprino. Even if this looks like an internal Leprino email, it is not.
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WARNING: This email originated outside of Leprino. Even if this looks like an internal Leprino email, it is not.
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[EXTERNAL EMAIL]
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[EXTERNAL EMAIL]
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DO NOT provide your username, password, or any other personal information in response to this or any other email.
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DO NOT CLICK links or attachments unless you are positive the content is safe.
IF IN DOUBT about the safety of this message, use the Report Phishing drop-down.

[EXTERNAL EMAIL]
WARNING: This email originated outside of Leprino. Even if this looks like an internal Leprino email, it is not.
DO NOT provide your username, password, or any other personal information in response to this or any other email.
LEPRINO WILL NEVER ask you for your username or password via email.

2. INDUSTRIAL ADMINISTRATIVE REPORT 1.0

INDUSTRIAL ADMINISTRATIVE REPORT 1.0

This report is required for all applications for TPDES permits and TLAPs. Contact the Applications Review and Processing Team at 512-239-4671 with any questions about completing this report

Item 1. Application Information and Fees (Instructions, Page 26)

a. Complete each field with the requested information, if applicable.

Applicant Name: Leprino Foods Company EPA ID No.: TX0 New Permit

Permit No.: WQ000 New Permit Expiration Date: New Permit

b. Check the box next to the appropriate authorization type.

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

c. Check the box next to the appropriate facility status.

☐ Active ☒ Inactive

d. Check the box next to the appropriate permit type.

☒ TPDES Permit ☐ TLAP

e. Check the box next to the appropriate application type.

☒ New

☐ Renewal with changes ☐ Renewal without changes

☐ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal ☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request: N/A

g. Application Fee

EPA Classification	New	Major Amend. (with or without renewal)	Renewal (with or without changes)	Minor Amend. / Minor Mod. (without renewal)
Minor facility not subject to EPA categorical effluent guidelines (*40 CFR Parts 400-471*)	☐ $350	☐ $350	☐ $315	☐ $150
Minor facility subject to EPA categorical effluent guidelines (*40 CFR Parts 400-471*)	☒ $1,250	☐ $1,250	☐ $1,215	☐ $150
Major facility	N/A [1]	☐ $2,050	☐ $2,015	☐ $450

For TCEQ Use Only

Segment Number ____________________County ____________________
Expiration Date ______________________Region ____________________

[1] All facilities are designated as minors until formally classified as a major by EPA.

h. Payment Information

Mailed

Check or money order No.: Click to enter text. Check or money order amt.: Click to enter text.

Named printed on check or money order: Click to enter text.

Epay

Voucher number: Click to enter text. Copy of voucher attachment: Click to enter text.

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN605980739

Note: Locate the customer number using the TCEQ's Central Registry Customer Search[2].

b. Legal name of the entity (applicant) applying for this permit: Leprino Foods Company

Note: The owner of the facility must apply for the permit. The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

☒ Mr. ☐ Ms. First/Last Name: Steve Fritzler

Title: Vice President Eastern Region Credential: Click to enter text.

d. Will the applicant have overall financial responsibility for the facility?

☒ Yes ☐ No

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 3. Co-applicant Information (Instructions, Page 27)

☒ Check this box if there is no co-applicant.; otherwise, complete the below questions.

a. Legal name of the entity (co-applicant) applying for this permit: N/A

Note: The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

b. Customer Number (if applicant is an existing customer): CN 6059800739

Note: Locate the customer number using the TCEQ's Central Registry Customer Search.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

☐ Mr. ☐ Ms. First/Last Name: N/A

Title: N/A Credential: N/A

d. Will the co-applicant have overall financial responsibility for the facility?

☐ Yes ☐ No

[2] https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 4. Core Data Form (Instructions, Pages 27)

a. Complete one Core Data Form (TCEQ Form 10400) for each customer (applicant and co-applicant(s)) and include as an attachment. If the customer type selected on the Core Data Form is Individual, complete Attachment 1 of the Administrative Report. Attachment: B

Item 5. Application Contact Information (Instructions, Page 27)

Provide names of two individuals who can be contact for additional information about this application. Indicate if the individual can be contact about administrative or technical information, or both.

a. ☒ Administrative Contact . ☐ Technical Contact

☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: N/A

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

b. ☒ Administrative Contact . ☒ Technical Contact

☒ Mr. ☐ Ms. Full Name (First and Last): Allen Rienstra

Title: Consultant Credential: Click to enter text.

Organization Name: Trinity Consultants

Mailing Address: 6150 Clifton Street

City: Beaumont State: Texas Zip Code: 77708

Phone No: 409-504-6933 Fax No: N/A Email: allen.rienstra@trinityconsultants.com

Attachment: N/A

Item 6. Permit Contact Information (Instructions, Pages 28)

Provide two names of individuals that can be contacted throughout the permit term.

a. ☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

b. ☒ Mr. ☐ Ms. Full Name (First and Last): Allen Rienstra

Title: Consultant Credential: Click to enter text.

Organization Name: Trinity Consultant

Mailing Address: 6150 Clifton Street

City: Beaumont State: Texas Zip Code: 77708

Phone No: 409-504-6933 Fax No: N/A Email: allen.rienstra@trinityconsultants.com

Attachment: N/A

Item 7. Billing Contact Information (Instructions, Page 28)

The permittee is responsible for paying the annual fee. The annual fee will be assessed for permits **in effect on September 1 of each year**. The TCEQ will send a bill to the address provided in this section. The permittee is responsible for terminating the permit when it is no longer needed (form TCEQ-20029).

Provide the complete mailing address where the annual fee invoice should be mailed and the name and phone number of the permittee's representative responsible for payment of the invoice.

☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

Item 8. DMR/MER Contact Information (Instructions, Page 28)

Provide the name and mailing address of the person delegated to receive and submit DMRs or MERs. **Note:** DMR data must be submitted through the NetDMR system. An electronic reporting account can be established once the facility has obtained the permit number.

☒ Mr. ☐ Ms. Full Name (First and Last): James Frazier

Title: Environmental Scientist II Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-264-5372 Fax No: N/A Email: jfrazier@leprinofoods.com

Item 9. NOTICE INFORMATION (Instructions, Pages 28

a. Individual Publishing the Notices

☐ Mr. ☒ Ms. Full Name (First and Last): Hannah Bradish

Title: Environmental Compliance Engineer Credential: Click to enter text.

Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

b. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package (only for NORI, NAPD will be sent via regular mail)

☒ E-mail: allen.rienstra@trinityconsultants.com; hbradish@leprinofoods.com

☐ Fax: N/A

☒ Regular Mail (USPS)

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

c. Contact in the Notice

☐ Mr. ☒ Ms Full Name (First and Last): Kim DeVigil

Title: Director of Communications Credential: Click to enter text.

Organization Name: Leprino Foods Company

Phone No: 303-264-5336 Fax No: N/A Email: kdevigil@leprinofoods.com

d. Public Viewing Location Information

Note: If the facility or outfall is located in more than one county, provide a public viewing place for each county.

Public building name: TCEQ – Region 2 Location within the building: Reception Area

Physical Address of Building: 5012 50th St #100

City: Lubbock County: Lubbock

e. Bilingual Notice Requirements

This information is required for new, major amendment, and renewal applications. It is not required for minor amendment or minor modification applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are required.

1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

   ☒ Yes ☐ No ☐ N/A (Minor amendment or modification)

   If no, publication of an alternative language notice is not required; skip to Item 8 (Regulated Entity and Permitted Site Information.)

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

   ☒ Yes ☐ No ☐ N/A (Minor amendment or modification)

3. Do the students at these schools attend a bilingual education program at another location?

   ☐ Yes ☒ No ☐ N/A (Minor amendment or modification)

4. Would the school be required to provide a bilingual education program, but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☐ Yes ☒ No ☐ N/A (Minor amendment or modification)

5. If the answer is yes to question 1, 2, 3, or 4, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

f. Plain Language Summary Template – Complete the Plain Language Summary at the end of this application.

Item 10. Regulated Entity and Permitted Site Information (Instructions Pages 29-30)

a. TCEQ issued Regulated Entity Number (RN), if available: RN 111422333

Note: If your business site is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search the TCEQ's

Central Registry to determine the RN or to see if the larger site may already be registered as a Regulated Entity. If the site is found, provide the assigned RN.

b. Name of project or site (the name known by the community where located): Leprino Foods Lubbock Manufacturing Facility

c. Is the location address of the facility in the existing permit the same?

☐ Yes ☐ No ☒ N/A (new permit)

Note: If the facility is located in Bexar, Comal, Hays, Kinney, Medina, Travis, Uvalde, or Williamson County, additional information concerning protection of the Edwards Aquifer may be required.

d. Owner of treatment facility:

☐ Mr. ☐ Ms. Full Name (First and Last): N/A

or Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 970-347-5115 Fax No: N/A Email: jherrud@leprinofoods.com

e. Ownership of facility: ☐ Public ☒ Private ☐ Both ☐ Federal

f. Owner of land where treatment facility is or will be: Leprino Foods Company

☐ Mr. ☐ Ms. Full Name (First and Last): N/A

or Organization Name: Leprino Foods Company

Mailing Address: 1830 W. 38th Ave.

City: Denver State: Colorado Zip Code: 80211

Phone No: 970-347-5115 Fax No: N/A Email: jherrud@leprinofoods.com

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years (In some cases, a lease may not suffice - see instructions). Attachment: N/A

g. Owner of effluent TLAP disposal site (if applicable): N/A

☐ Mr. ☐ Ms. Full Name (First and Last): **N/A**

or Organization Name: **N/A**

Mailing Address: **N/A**

City: **N/A** State: **N/A** Zip Code: **N/A**

Phone No: **N/A** Fax No: **N/A** Email: **N/A**

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: **N/A**

h. Owner of sewage sludge disposal site (if applicable):

☐ Mr. ☐ Ms. Full Name (First and Last): **N/A**

or Organization Name: **N/A**

Mailing Address: **N/A**

City: **N/A** State: **N/A** Zip Code: **N/A**

Phone No: **N/A** Fax No: **N/A** Email: **N/A**

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: N/A

Item 11. TDPES Discharge/TLAP Disposal Information (Instructions, Pages 31-32)

a. Is the facility located on or does the treated effluent cross Native American Land?

☐ Yes ☒ No

b. Attach an original full size USGS Topographic Map (or an 8.5"×11" reproduced portion for renewal or amendment applications) with all required information. Check the box next to each item below to confirm it has been included on the map.

☒ One-mile radius
☒ Applicant's property boundaries
☒ Labeled point(s) of discharge
☐ Effluent disposal site boundaries
☐ Sewage sludge disposal site
☒ Three-miles downstream information
☒ Treatment facility boundaries
☒ Highlighted discharge route(s)
☒ All wastewater ponds
☒ New and future construction

Attachment: D

c. Is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: N/A

d. Are the point(s) of discharge in the existing permit correct?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: Outfall 001 discharges into Canyon Lake #6 – Classified Segment 1241A

e. Are the discharge route(s) in the existing permit correct?

☐ Yes ☒ No or New Permit

If no, or a new permit, provide an accurate description of the discharge route: Discharges to multiple energy dissipation controls will be pumped from the facility via a 14" force main approximately 2.7 miles to energy dissipation structures, then to a 24" HDPE line to the outfall structure located in Canyon Lake #6.

f. City nearest the outfall(s): Lubbock

g. County in which the outfalls(s) is/are located: Lubbock

h. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

☐ Yes ☒ No

If yes, indicate by a check mark if: ☐ Authorization granted ☐ Authorization pending

For new and amendment applications, attach copies of letters that show proof of contact and provide the approval letter upon receipt. Attachment: N/A

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: N/A

i. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?

☐ Yes ☒ No or New Permit

If no, or a new application, provide an accurate location description: N/A

j. City nearest the disposal site: N/A

k. County in which the disposal site is located: **N/A**

l. Disposal Site Latitude: **N/A** Longitude: **N/A**

m. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: **N/A**

n. For TLAPs, identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: **N/A**

Item 12. MISCELLANEOUS INFORMATION (Instructions, Page 33)

a. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

☐ Yes ☒ No

If yes, list each person: **N/A**

b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the account no.: **N/A** and total amount due: **N/A**

c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the enforcement order no.: **N/A** and amount due: **N/A**

Item 13. SIGNATURE PAGE (Instructions, Pages 33-34)

Permit No: WQ000 New Permit

Applicant Name: Joseph Herrud

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

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document and can provide documentation in proof of such authorization upon request.

Signatory name (typed or printed): Joseph Herrud

Signatory title: Senior Director of Environmental Engineering

Signature: ______________________________ Date: ____________________

(Use blue ink)

Subscribed and Sworn to before me by the said ______________________________

on this ______________________ day of ____________________, 20______.

My commission expires on the ______________ day of ____________________, 20______.

____

Notary Public [SEAL]

____

County, Texas

Note: *If co-applicants are necessary, each entity must submit an original, separate signature page.*

ATTACHMENT 1

INDIVIDUAL INFORMATION

Item 1. Individual information (Instructions, Page 38)

Complete this attachment if the facility applicant or co-applicant is an individual. Make additional copies of this attachment if both are individuals.

Prefix (Mr., Ms., or Miss): N/A

Full legal name (first, middle, and last): **N/A**

Driver's License or State Identification Number: **N/A**

Date of Birth: **N/A**

Mailing Address: **N/A**

City, State, and Zip Code: **N/A**

Phone No.: **N/A N/A**

Fax No.: **N/A**

E-mail Address: **N/A**

CN: **N/A**

Plain Language Summary for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

Leprino Foods Company (CN605980739) proposes to operate Leprino Foods Lubbock Manufacturing Facility (RN111422333) a cheese (except cottage cheese) manufacturing facility. The facility will be located approximately 0.5 miles east of East Loop 289, north of E 19th St and south of E 4th St, in Lubbock, Lubbock County, Texas 76403. The new application to discharge 2,000,000 gallons per day of treated wastewater, composing of food manufacturing process water, and cooling water for discharge to Outfall 001. With the exception of high TDS water, process wastewater and cooling water will treated by an onsite wastewater treatment plant. Wastewater and cooling water discharge will be continuous. All flows will be pumped from the facility through a 14" force main to an energy dissipation structure thence to a 24" HDPE line to the outfall structure (001) located in Canyon Lake #6 – classified segment 1241A. Process and cooling water will be supplied by Lubbock Public Water System owned and operated by the City of Lubbock (CN600130736, RN101248722). The facility will be equipped with four lagoons for purpose of wastewater management. Brine will be kept separate from the wastewater streams in production and have dedicated lift stations to send to two evaporation lagoons. Two additional lagoons will be utilized for effluent storage in the event of corrective action measures of emergency conditions. Solids collected in the evaporation lagoons will be removed on a two-year cycle by registered waste haulers. Domestic sewage will be routed to the Southeast Water Reclamation Plant Wastewater Treatment Facility WQ0010353002.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP

AGUAS RESIDUALES INDUSTRIALES/AGUAS PLUVIALES

El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar durante la revisión técnica de la solicitud y no son representaciones federales exigibles de la solicitud de permiso.

Leprino Foods Company (CN605980739) propone operar Leprino Foods Lubbock Manufacturing Facility (RN111422333) una instalación de fabricación de queso (excepto queso cottage). La instalación estará ubicada aproximadamente a 0,5 millas al este de East Loop 289, al norte de E 19th St y al sur de E 4th St, en Lubbock, Condado de Lubbock, Texas 76403. La nueva solicitud de vertido de 2.000.000 de galones diarios de aguas residuales tratadas, compuestas por agua de proceso de fabricación de alimentos y agua de refrigeración para su vertido en el emisor 001. Con la excepción del agua de salmuera, las aguas residuales de proceso y el agua de refrigeración serán tratadas por una planta de tratamiento de aguas residuales in situ. El vertido de aguas residuales y de refrigeración será continuo. Todos los flujos se bombearán desde la instalación a través de una tubería de impulsión de 14" hasta una estructura de disipación de energía y de ahí a una línea de HDPE de 24" hasta la estructura de vertido (001) situada en el lago Canyon #6 - segmento clasificado 1241A. El agua de proceso y de refrigeración será suministrada por el sistema público de agua de Lubbock, propiedad de la ciudad de Lubbock y operado por ella (CN600130736, RN101248722). La instalación estará equipada con cuatro lagunas para la gestión de las aguas residuales. La salmuera se mantendrá separada de los flujos de aguas residuales en la producción y tendrá estaciones de bombeo específicas para enviarla a dos lagunas de evaporación. Otras dos lagunas se utilizarán para el almacenamiento de efluentes en caso de que se adopten medidas correctoras en situaciones de emergencia. Los sólidos recogidos en las lagunas de evaporación serán retirados en un ciclo de dos años por transportistas de residuos registrados. Las aguas residuales domésticas se dirigirán a la planta de tratamiento de aguas residuales del sureste WQ0010353002.

3. INDUSTRIAL ADMINISTRATIVE REPORT 1.1

INDUSTRIAL ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Item 1. AFFECTED LANDOWNER INFORMATION (Instructions, Pages 35-36)

a. Attach a landowner map or drawing, with scale, as applicable. Check the box next to each item to confirm it has been provided.

☒ The applicant's property boundaries.

☒ The facility site boundaries within the applicant's property boundaries.

☒ The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone.

☒ The property boundaries of all landowners surrounding the applicant's property. (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)

☒ The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream.

☒ The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge.

☒ The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides.

☒ The boundaries of the effluent disposal site (e.g., irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property.

☒ The property boundaries of all landowners surrounding the applicant's property boundaries where the effluent disposal site is located.

☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners within one-quarter mile of the applicant's property boundaries where the sewage sludge land application site is located.

☐ The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (e.g., sludge surface disposal site or sludge monofil) is located.

Attachment: F

b. Check the box next to the format of the landowners list:

☒ Readable/Writeable CD ☐ Four sets of labels

Attachment: F

d. Provide the source of the landowners' names and mailing addresses: Lubbock County Appraisal District

e. As required by Texas Water Code § 5.115, is any permanent school fund land affected by this application?

☐ Yes ☒ No

If yes, provide the location and foreseeable impacts and effects this application has on the land(s): N/A

Item 2. ORIGINAL PHOTOGRAPHS (Instructions, Page 37)

Provide original ground level photographs. Check the box next to each of the following items to indicate it is included.

☒ At least one original photograph of the new or expanded treatment unit location.

☒ At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.

☒ At least one photograph of the existing/proposed effluent disposal site.

☒ A plot plan or map showing the location and direction of each photograph.

Attachment: G

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4. SUPPLEMENTAL PERMIT INFORMATION FORM

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: _____Renewal _____Major Amendment ____Minor Amendment _____New

County: ______________________________________ Segment Number: __________________

Admin Complete Date: _______________________

Agency Receiving SPIF:

______ Texas Historical Commission ______ U.S. Fish and Wildlife

______ Texas Parks and Wildlife Department ______ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 37)

The SPIF must be completed as a separate document. The TCEQ will mail a copy of the SPIF to each agency as required by the TCEQ agreement with EPA. If any of the items are not completely addressed or further information is needed, you will be contacted to provide the information before the permit is issued. Each item must be completely addressed.

Do not refer to a response of any item in the permit application form. Each attachment must be provided with this form separately from the administrative report of the application. The application will not be declared administratively complete without this form being completed in its entirety including all attachments.

The following applies to all applications:

1. Permittee Name: Leprino Foods Company

2. Permit No.: WQ000 New Permit EPA ID No.: TX0 New Permit

3. Address of the project (location description that includes street/highway, city/vicinity, and county): The Production Plant street address is 4301 East 19th Street, Lubbock, TX. The Wastewater Treatment Plant street address is 4502 East 4th Street, Lubbock, TX 79403. The Production Plant and the Treatment Plant are located on two contiguous tracts owned by Leprino Foods Company. The property is located approximately 0.5 miles to the east of Texas 289 Loop Frontage and bordered on the south by E 19th St, and on the north by E 4th Street,

4. Provide the name, address, phone and fax number, and email address of an individual that can be contacted to answer specific questions about the property.

   Full Name (First and Last): Hannah Bradish

   Organization Name: Leprino Foods Company Mailing Address: 1830 W. 38th Ave.

   City: Denver State: Colorado Zip Code: 80211

   Phone No: 303-548-8718 Fax No: N/A Email: hbradish@leprinofoods.com

5. List the county in which the facility is located: Lubbock

6. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property: N/A

7. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number: Discharges will be pumped from the facility via a 14" force main approximately 2.7 miles to two energy dissipation structures, then to a 24" HDPE line to a subsurface outfall structure located in Canyon Lake #6.

8. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report.) Attachment: H

9. Provide original photographs of any structures 50 years or older on the property. Attachment: N/A

10. Does your project involve any of the following? Check all that apply.

    ☒ Proposed access roads, utility lines, construction easements

    ☐ Visual effects that could damage or detract from a historic property's integrity

    ☐ Vibration effects during construction or as a result of project design

    ☐ Additional phases of development that are planned for the future

    ☐ Sealing caves, fractures, sinkholes, other karst features

    ☐ Disturbance of vegetation or wetlands

11. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features): Surface area to be disturbed is approximately 45 acres. Structural fill will be added for site preparation. No caves or karst features are expected to be present within the construction area.

12. Describe existing disturbances, vegetation, and land use: Construction activities have started and are covered under a Stormwater General Permit for Construction Activities (held by Whiting Turner).

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

13. List construction dates of all buildings and structures on the property: 11/22/2022

14. Provide a brief history of the property, and name of the architect/builder, if known: Property has been used for agricultural farming and is undeveloped. The Probst Group is the engineering firm of record for designing the facility layout and treatment facility.

5. INDUSTRIAL TECHNICAL REPORT 1.0

TECHNICAL REPORT 1.0
INDUSTRIAL

The following information **is required** for all applications for a TLAP or an individual TPDES discharge permit.

For additional information or clarification on the requested information, refer to the Instructions for Completing the Industrial Wastewater Permit Application[1] available on the TCEQ website.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate that the item has been considered. Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided for the item the attachment addresses.

NOTE: This application is for an industrial wastewater permit only. Additional authorizations from the TCEQ Waste Permits Division or the TCEQ Air Permits Division may be needed.

1. FACILITY/SITE INFORMATION (Instructions, Pages 39-40)

a. Describe the general nature of the business and type(s) of industrial and commercial activities. Include all applicable SIC codes (up to 4).

Leprino Foods Company proposes to construct a new mozzarella cheese and nutrition manufacturing facility in Lubbock, Texas. The manufactured dairy-based cheese will be for commercial food operators for public consumption. The Facility will be operating under the Primary Standard Industry Code: 2022 (Natural, Processed, and Imitation Cheese) and NAICS Code: 311513. See Attachment I for more details.

b. Describe all wastewater-generating processes at the facility.

Raw fluid milk is brought into the facility as the main ingredient to the cheese make process. The milk is reacted to coagulate the proteins and form cheese curds and liquid whey. The liquid whey is separated from the cheese and processed into nutrition products through separation and drying processes which removes the associated water. The associated water (COW water) and potable water used for daily sanitation is discharged to the onsite wastewater treatment plant and then discharged to Outfall 001. The brine used to cool and add salt to the cheese is managed in a separate evaporation system along with other high TDS waters. Cooling water discharges, boiler water, and reverse osmosis reject water will also be sent to the wastewater treatment facility and then discharged to Outfall 001. See Attachment I for more details.

[1] https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html

c. Provide a list of raw materials, major intermediates, and final products handled at the facility.

Materials List

Raw Materials	Intermediate Products	Final Products
Milk	Permeate	Mozzarella Cheese
Nonfat dry milk	Liquid Whey	Whey Protein Powder
Salt	Cream	Sweet Whey Powder
Cellulose	Skim Milk	Permeate Powder
		Cream

Attachment: N/A

d. Attach a facility map (drawn to scale) with the following information:

- Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.
- The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, outfalls, and sampling points, if significantly different from outfall locations.

Attachment: K

e. Is this a new permit application for an existing facility?

☐ Yes ☒ No

If **yes**, provide background discussion: N/A

f. Is/will the treatment facility/disposal site be located above the 100-year frequency flood level.

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: FEMA FIRM 48303CO310E

If **no**, provide the elevation of the 100-year frequency flood plain and describe what protective measures are used/proposed to prevent flooding (including tail water and rainfall run-on controls) of the treatment facility and disposal area: N/A

Attachment: N/A

g. For **new** or **major amendment** permit applications, will any construction operations result in a discharge of fill material into a water in the state?

☒ Yes ☐ No ☐ N/A (renewal only)

h. If **yes** to Item 1.g, has the applicant applied for a USACE CWA Chapter 404 Dredge and Fill permit?

☐ Yes ☒ No

If **yes**, provide the permit number: NWP-58

If **no**, provide an approximate date of application submittal to the USACE: N/A

2. TREATMENT SYSTEM (Instructions, Page 40)

a. List any physical, chemical, or biological treatment process(es) used/proposed to treat wastewater at this facility. Include a description of each treatment process, starting with initial treatment and finishing with the outfall/point of disposal.

The wastewater treatment plant (WWTP) will use a combination of anaerobic and aerobic activated sludge systems to treat high strength wastewater (HSW) and low strength wastewater (LSW) generated in production. The outfall point of disposal will be Canyon Lake #6. For wastewater treatment details please refer to Memo: Detailed Process Description for Project Armadillo found in Attachment P.

b. Attach a flow schematic **with a water balance** showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal.

Attachment: L

3. IMPOUNDMENTS (Instructions, Pages 40-42)

Does the facility use or plan to use any wastewater impoundments (e.g., lagoons or ponds?)

☒ Yes ☐ No

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a - 3.e** for **new or proposed** impoundments. **NOTE:** See instructions, Pages 40-42, for additional information on the attachments required by Items 3.a – 3.e.

a. Complete the table with the following information for each existing, new, or proposed impoundment:

Use Designation: Indicate the use designation for each impoundment as Treatment (**T**), Disposal (**D**), Containment (**C**), or Evaporation (**E**).

Associated Outfall Number: Provide an outfall number if a discharge occurs or will occur.

Liner Type: Indicate the liner type as Compacted clay liner (**C**), In-situ clay liner (**I**), Synthetic/plastic/rubber liner (**S**), or Alternate liner (**A**). **NOTE:** See instructions for further detail on liner specifications. If an alternate liner (A) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

Leak Detection System: If any leak detection systems are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no.

Groundwater Monitoring Wells and Data: If groundwater monitoring wells are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no. Attach any existing groundwater monitoring data.

Dimensions: Provide the dimensions, freeboard, surface area, storage capacity of the impoundments, and the maximum depth (not including freeboard). For impoundments with irregular shapes, submit surface area instead of length and width.

Compliance with 40 CFR Part 257, Subpart D: If the impoundment is required to be in compliance with 40 CFR Part 257, Subpart D, enter **Y** for yes. Otherwise, enter **N** for no.

Date of Construction: Enter the date construction of the impoundment commenced (mm/dd/yy).

Impoundment Information

Parameter	Evaporation Lagoon	Evaporation Lagoon	Non-Compliant Effluent Lagoon	Calamity Lagoon
Use Designation: (T) (D) (C) or (E)	E	E	C	T
Associated Outfall Number	N/A	N/A	001	001
Liner Type (C) (I) (S) or (A)	S	S	S	S
Alt. Liner Attachment Reference	N/A	N/A	N/A	N/A
Leak Detection System, Y/N	Y	Y	Y	Y
Groundwater Monitoring Wells, Y/N	N	N	N	N
Groundwater Monitoring Data Attachment	N	N	N	N
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y	Y	Y	Y
Length (ft)	635	635	590	Irregular
Width (ft)	635	635	320	Irregular
Max Depth From Water Surface (ft), Not Including Freeboard	5.5	5.5	10.5	6.5
Freeboard (ft)	18”	18”	18”	18”
Surface Area (acres)	9.25	9.25	3.25	0.8
Storage Capacity (gallons)	12,500,000	12,500,000	10,500,000	1,500,000
40 CFR Part 257, Subpart D, Y/N	N	N	N	N
Date of Construction (estimated)	09/01/2022	09/01/2022	09/01/2022	09/01/2022

Impoundment Information

Parameter	Pond # N/A	Pond # N/A	Pond # N/A	Pond # N/A
Use Designation: (T) (D) (C) or (E)	N/A	N/A	N/A	N/A
Associated Outfall Number	N/A	N/A	N/A	N/A
Liner Type (C) (I) (S) or (A)	N/A	N/A	N/A	N/A
Alt. Liner Attachment Reference	N/A	N/A	N/A	N/A
Leak Detection System, Y/N	N/A	N/A	N/A	N/A
Groundwater Monitoring Wells, Y/N	N/A	N/A	N/A	N/A
Groundwater Monitoring Data Attachment	N/A	N/A	N/A	N/A
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	N/A	N/A	N/A	N/A
Length (ft)	N/A	N/A	N/A	N/A
Width (ft)	N/A	N/A	N/A	N/A
Max Depth From Water Surface (ft), not including freeboard	N/A	N/A	N/A	N/A
Freeboard (ft)	N/A	N/A	N/A	N/A
Surface Area (acres)	N/A	N/A	N/A	N/A
Storage Capacity (gallons)	N/A	N/A	N/A	N/A

Parameter	Pond # N/A	Pond # N/A	Pond # N/A	Pond # N/A
40 CFR Part 257, Subpart D, Y/N	N/A	N/A	N/A	N/A
Date of Construction	N/A	N/A	N/A	N/A

Attachment: N

The following information (**Items 3.b – 3.e**) is required only for **new or proposed** impoundments.

b. For new or proposed impoundments, attach any available information on the following items. If attached, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed**.

i. Liner data

☐ Yes ☐ No ☒ Not yet designed

ii. Leak detection system or groundwater monitoring data

☐ Yes ☐ No ☒ Not yet designed

iii. Groundwater impacts

☐ Yes ☒ No ☐ Not yet designed

NOTE: Item b.iii is required if the bottom of the pond is not above the seasonal high-water table in the shallowest water-bearing zone.

Attachment: N

For TLAP applications: Items 3.c – 3.e are **not required**, continue to Item 4.

c. Attach a USGS map or a color copy of original quality and scale which accurately locates and identifies all known water supply wells and monitor wells within ½-mile of the impoundments.

Attachment: N

d. Attach copies of State Water Well Reports (e.g., driller's logs, completion data, etc.), and data on depths to groundwater for all known water supply wells including a description of how the depths to groundwater were obtained.

Attachment: N

e. Attach information pertaining to the groundwater, soils, geology, pond liner, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

Attachment: N

4. OUTFALL/DISPOSAL METHOD INFORMATION (Instructions, Pages 42-43)

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge operations, and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/or numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

Outfall Latitude and Longitude

Outfall Number	Latitude-decimal degrees	Longitude-decimal degrees
001	33.581388	-101.812317

Outfall Location Description

Outfall Number	Location Description
001	At Canyon Lake #6 approximately 30 from the edge of water on the bank (water surface elevation=3131.50) and approximately 3' from the top of the outfall box to the water surface.

Description of Sampling Points (if different from Outfall location)

Outfall Number	Description of Sampling Point
001	Sampling point will be collected in the main WWTP just downstream after treatment from the effluent pumps.

Outfall Flow Information – Permitted and Proposed

Outfall Number	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
001	N/A	N/A	2.0	2.5	10/01/2024

Outfall Discharge – Method and Measurement

Outfall Number	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	Electro-magnetic flowmeter

Outfall Discharge – Flow Characteristics

Outfall Number	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
001	N	Y	N	24	31	12
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Outfall Number	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Wastestream Contributions

Outfall No.: 001

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Milk Receiving	0.14	7.18
Cheese	0.64	32.82
Processing	0.05	2.56
Nutrition	0.56	28.72
Boilers/Utilities	0.56	2.56
Cooling Tower/Evap. Condenser Blowdown	0.25	12.82
Potential RO Reject	0.26	13.33

Outfall No.: N/A

Contributing Wastestreams	Volume (MGD)	% of Total Flow

Outfall No.: N/A

Contributing Wastestreams	Volume (MGD)	% of Total Flow

Contributing Wastestreams	Volume (MGD)	% of Total Flow

Attachment: L

5. BLOWDOWN AND ONCE-THROUGH COOLING WATER DISCHARGES (Instructions, Page 44)

a. Does the facility use/propose to use any cooling towers which discharge blowdown or other wastestreams to the outfall(s)?

☒ Yes ☐ No

NOTE: If the facility uses or plans to use cooling towers, Item 12 **is required**.

b. Does the facility use or plan to use any boilers that discharge blowdown or other wastestreams to the outfall(s)?

☒ Yes ☐ No

c. Does or will the facility discharge once-through cooling water to the outfall(s)?

☐ Yes ☒ No

NOTE: If the facility uses or plans to use once-through cooling water, Item 12 **is required**.

d. If **yes** to Items 5.a, 5.b, **or** 5.c, attach the SDS with the following information for each chemical additive.

- Manufacturers Product Identification Number
- Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)
- Chemical composition including CASRN for each ingredient
- Classify product as non-persistent, persistent, or bioaccumulative
- Product or active ingredient half-life
- Frequency of product use (e.g., 2 hours/day once every two weeks)
- Product toxicity data specific to fish and aquatic invertebrate organisms
- Concentration of whole product or active ingredient, as appropriate, in wastestream.

Attach a summary of this information in addition to the submittal of the SDS for each specific wastestream and the associated chemical additives and specify which outfalls are affected.

Attachment: M

e. Cooling Towers and Boilers

If **yes** to either Item 5.a **or** 5.b, complete the following table.

Cooling Towers and Boilers

Type of Unit	Number of Units	Dly Avg Blowdown (gallons/day)	Dly Max Blowdown (gallons/day)
Cooling Towers (1 unit) /Evaporative Condensers (6 units)	7	250,000	275,000
Boilers	5	35,000	50,000

6. STORMWATER MANAGEMENT (Instructions, Page 44)

Are there any existing/proposed outfalls which discharge stormwater associated with industrial activities, as defined at *40 CFR § 122.26(b)(14)*, commingled with any other wastestream?

☐ Yes ☒ No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in some manner which may result in exposure of the activities or materials to stormwater: N/A

7. DOMESTIC SEWAGE, SEWAGE SLUDGE, AND SEPTAGE MANAGEMENT AND DISPOSAL (Instructions, Page 45)

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.

☒ Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. **Complete Item 7.b**.

☒ Domestic sewage disposed of by an on-site septic tank and drainfield system. **Complete Item 7.b**.

☐ Domestic and industrial treatment sludge **ARE commingled** prior to use or disposal.

☐ Industrial wastewater and domestic sewage are treated separately, and the respective sludge **IS NOT commingled** prior to sludge use or disposal. **Complete Worksheet 5.0**.

☐ Facility is a POTW. **Complete Worksheet 5.0**.

☐ Domestic sewage is not generated on-site.

☐ Other (e.g., portable toilets), specify and **Complete Item 7.b**: N/A

b. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste-disposal facility which receives the domestic sewage/septage. If hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.

Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.
Southeast Water Reclamation Plant Wastewater Treatment Facility	WQ0010353002
Septic System Hauler - TBD	TBD

8. IMPROVEMENTS OR COMPLIANCE/ENFORCEMENT REQUIREMENTS (Instructions, Page 45)

a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?

☐ Yes ☒ No

b. Has the permittee completed or planned for any improvements or construction projects?

☐ Yes ☒ No

c. If **yes** to either 8.a **or** 8.b, provide a brief summary of the requirements and a status update: N/A

9. TOXICITY TESTING (Instructions, Page 45)

Have any biological tests for acute or chronic toxicity been made on any of the discharges or on a receiving water in relation to the discharge within the last three years?

☐ Yes ☒ No

If **yes**, identify the tests and describe their purposes: N/A

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA.

Attachment: N/A

10. OFF-SITE/THIRD PARTY WASTES (Instructions, Page 45)

a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

☒ Yes ☐ No

If **yes**, provide responses to Items 10.b through 10.d below.

If **no**, proceed to Item 11.

b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility's activities.

Attachment: See end of this section

c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility's wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

☐ Yes ☒ No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

Attachment: Click to enter text.

d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

☐ Yes ☒ No

If **yes**, **Worksheet 6.0** of this application **is required**.

11. RADIOACTIVE MATERIALS (Instructions, Pages 46)

a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material	Concentration (pCi/L)
N/A	N/A

b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

Radioactive Materials Present in the Discharge

Radioactive Material	Concentration (pCi/L)
N/A	N/A

12. COOLING WATER (Instructions, Pages 46-47)

a. Does the facility use or propose to use water for cooling purposes?

☒ Yes ☐ No

If **no**, stop here. If **yes**, complete Items 12.b thru 12.f.

b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

☐ Yes ☒ No

If **yes**, stop here. If **no**, continue.

c. Cooling Water Supplier

i. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

Cooling Water Intake Structure(s) Owner(s) and Operator(s)

CWIS ID	LUBBOCK PUBLIC WATER SYSTEM			
Owner	City of Lubbock			
Operator	City of Lubbock			

ii. Cooling water is/will be obtained from a Public Water Supplier (PWS)

☒ Yes ☐ No

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here: PWS No. 1520002

iii. Cooling water is/will be obtained from a reclaimed water source?

☐ Yes ☐ No

If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here: N/A

iv. Cooling water is/will be obtained from an Independent Supplier

☐ Yes ☐ No

If **yes**, provide the actual intake flow of the Independent Supplier's CWIS that is/will be used to provide water for cooling purposes to the facility and proceed: N/A

If **no**, proceed to Item 12.d.

d. 316(b) General Criteria

i. The CWIS(s) used to provide water for cooling purposes to the facility has or will have a cumulative design intake flow of 2 MGD or greater.

☐ Yes ☐ No

ii. At least 25% of the total water withdrawn by the CWIS is/will be used at the facility exclusively for cooling purposes on an annual average basis.

☐ Yes ☐ No

iii. The CWIS(s) withdraw(s)/propose(s) to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

☐ Yes ☐ No

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*: Click to enter text.

If **yes** to all three questions in Item 12.d, the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to **Item 12.f**.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however, a determination is required based upon BPJ. Proceed to **Item 12.e**.

e. The facility does not meet the minimum requirements to be subject to the fill requirements of Section 316(b) **and uses/proposes to use cooling towers**.

☐ Yes ☐ No

If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ.

f. Oil and Gas Exploration and Production

i. The facility is subject to requirements at 40 CFR Part 435, Subparts A or D.

☐ Yes ☐ No

If **yes**, continue. If **no**, skip to Item 12.g.

ii. The facility is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u).

☐ Yes ☐ No

If **yes**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ. If **no**, skip to Item 12.g.iii.

g. Compliance Phase and Track Selection

i. Phase I – New facility subject to 40 CFR Part 125, Subpart I

☐ Yes ☐ No

If **yes**, check the box next to the facility's compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – AIF greater than 2 MGD, but less than 10 MGD
- Attach information required by *40 CFR §§ 125.86(b)(2)-(4)*.

☐ Track I – AIF greater than 10 MGD
- Attach information required by *40 CFR § 125.86(b)*.

☐ Track II
- Attach information required by *40 CFR § 125.86(c)*.

Attachment: Click to enter text.

ii. Phase II – Existing facility subject to 40 CFR Part 125, Subpart J

☐ Yes ☐ No

If **yes**, complete Worksheets 11.0 through 11.3, as applicable.

iii. Phase III – New facility subject to 40 CFR Part 125, Subpart N

☐ Yes ☐ No

If **yes**, check the box next to the facility's compliance track selection and provide the requested information.

☐ Track I – Fixed facility
- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – Not a fixed facility
- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except the CWIS latitude and longitude under Item 2.a).

☐ Track II – Fixed facility
- Attach information required by 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

Attachment: Click to enter text.

NOTE: Item 13 is required only for existing permitted facilities.

13. PERMIT CHANGE REQUESTS (Instructions, Pages 49-50)

a. Is the facility requesting a **major amendment** of an existing permit?

☐ Yes ☒ No

If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

N/A

b. Is the facility requesting any **minor amendments** to the permit?

☐ Yes ☒ No

If **yes**, list and discuss the requested changes.

N/A

c. Is the facility requesting any **minor modifications** to the permit?

☐ Yes ☒ No

If **yes**, list and discuss the requested changes.

N/A

Attachment for 10b.

- List of wastes received (including volumes, characterization, and capability with on-site wastes). **Wastewater identical in quality to the on-site generated wastewater including, process wastewater and high TDS water, will be received. Volumes are unknown, but the facility will only accept volumes that are allowed by the current permit limits to be maintained.**

- Identify the sources of wastes received (including the legal name and addresses of the generators). **Legal Name: Leprino Foods Company**
Addresses: All US operations

- Description of the relationship of waste source(s) with the facility's activities. **Waste source will be from processes at other Leprino sites in the U.S.**

6. WORKSHEET 1.0 EPA EFFLUENT GUIDELINES

WORKSHEET 1.0
EPA CATEGORICAL EFFLUENT GUIDELINES

This worksheet **is required** for all applications for TPDES permits for discharges of wastewaters subject to EPA categorical effluent limitation guidelines (ELGs).

1. CATEGORICAL INDUSTRIES (Instructions, Pages 50-52)

Is this facility subject to any of the 40 CFR categorical ELGs outlined on page 53 of the instructions?

☒ Yes ☐ No

If **no**, this worksheet is not required. If **yes**, provide the appropriate information in the table below.

40 CFR Effluent Guidelines

Industry	40 CFR Part
Dairy Products Processing	405

2. PRODUCTION/PROCESS DATA (Instructions, Page 54)

NOTE: For all TPDES permit applications requesting individual permit coverage for discharges of oil and gas exploration and production wastewater (discharges into or adjacent to water in the state, falling under the Oil and Gas Extraction Effluent Guidelines – 40 CFR Part 435), see Worksheet 12.0, Item 2 instead.

a. **Production Data**

Provide the appropriate data for effluent guidelines with production-based effluent limitations.

Production Data

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units
405.65 Subpart F	Please refer to Attachment O – Categorical Effluent Limits Analysis	Please refer to Attachment O – Categorical Effluent Limits Analysis	Pounds per 100 lb of BOD5 input

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units

b. **Organic Chemicals, Plastics, and Synthetic Fibers Manufacturing Data (40 CFR Part 414)**

Provide each applicable subpart and the percent of total production. Provide data for metal-bearing and cyanide-bearing wastestreams, as required by *40 CFR Part 414, Appendices A and B*.

Percentages of Total Production

Subcategory	Percent of Total Production	Appendix A and B - Metal	Appendix A – Cyanide
N/A			

c. **Refineries (40 CFR Part 419)**

Provide the applicable subcategory and a brief justification.

N/A

3. PROCESS/NON-PROCESS WASTEWATER FLOWS (Instructions, Page 54)

Provide a breakdown of wastewater flow(s) generated by the facility, including both process and non-process wastewater flow(s). Specify which wastewater flows are to be authorized for discharge under this permit and the disposal practices for wastewater flows, excluding domestic, which are not to be authorized for discharge under this permit.

Raw fluid milk is brought into the facility as the main ingredient to the cheesemake process. The milk is reacted to coagulate the proteins and form cheese curds and liquid whey. The liquid whey is separated from the cheese and processed into nutrition products through separation and drying processes which removes the associated water. The associated water (COW water) and potable water used for daily sanitation is discharged to the onsite wastewater treatment plant and then discharged to Outfall 001. The brine used to cool and add salt to the cheese is managed in a separate evaporation system along with other high TDS waters. Cooling water discharges, boiler water, and reverse osmosis reject water will also be sent to the wastewater treatment facility and then discharged to Outfall 001. See Attachment I for more details.

4. NEW SOURCE DETERMINATION (Instructions, Page 54)

Provide a list of all wastewater-generating processes subject to EPA categorical ELGs, identify the appropriate guideline Part and Subpart, and provide the date the process/construction commenced.

Wastewater-generating Processes Subject to Effluent Guidelines

Process	EPA Guideline: Part	EPA Guideline: Subpart	Date Process/ Construction Commenced
Manufacture of Mozzarella Cheese	405	F	10-01-2024/9-01-2022

7. WORKSHEET 2.0 POLLUTANT ANALYSIS REQUIREMENTS

WORKSHEET 2.0
POLLUTANT ANALYSES REQUIREMENTS

Worksheet 2.0 **is required** for all applications submitted for a TPDES permit. Worksheet 2.0 is not required for applications for a permit to dispose of all wastewater by land disposal or for discharges solely of stormwater associated with industrial activities.

1. LABORATORY ACCREDITATION (Instructions, Page 56)

Effective July 1, 2008, all laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification* with the following general exemptions:

a. The laboratory is an in-house laboratory and is:

i. periodically inspected by the TCEQ; or

ii. located in another state and is accredited or inspected by that state; or

iii. performing work for another company with a unit located in the same site; or

iv. performing pro bono work for a governmental agency or charitable organization.

b. The laboratory is accredited under federal law.

c. The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.

d. The laboratory supplies data for which the TCEQ does not offer accreditation.

Review *30 TAC Chapter 25* for specific requirements. The following certification statement shall be signed and submitted with every application. See Instructions, Page 34, for a list of approved signatories.

I, Click to enter text., certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

____

(Signature)

2. GENERAL TESTING REQUIREMENTS (Instructions, Pages 56-58)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): Click to enter text.

b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment:** Click to enter text.

3. SPECIFIC TESTING REQUIREMENTS (Instructions, Pages 58-69)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** Click to enter text.

TABLE 1 and TABLE 2 (Instructions, Page 58)

Completion of Tables 1 and 2 **is required** for **all external outfalls** for all TPDES permit applications.

Table 1 for Outfall No.: 001 – Proxy Data Sourced From Process Engineering

Samples are (check one): ☐ **Composite** ☐ **Grab**

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	< 5 mg/L	No Data	No Data	No Data
CBOD (5-day)	<5 mg/L	No Data	No Data	No Data
Chemical oxygen demand	< 50 mg/L	No Data	No Data	No Data
Total organic carbon	<100 mg/L	No Data	No Data	No Data
Dissolved oxygen	6 mg/L	No Data	No Data	No Data
Ammonia nitrogen	< 1 mg/L	No Data	No Data	No Data
Total suspended solids	< 10 mg/L	No Data	No Data	No Data
Nitrate nitrogen	< 100 mg/L	No Data	No Data	No Data
Total organic nitrogen	< 10 mg/L	No Data	No Data	No Data
Total phosphorus	< 1.5 mg/L	No Data	No Data	No Data
Oil and grease	< 10 mg/L	No Data	No Data	No Data
Total residual chlorine	< 0.1 mg/L	No Data	No Data	No Data
Total dissolved solids	< 2,500 mg/L	No Data	No Data	No Data
Sulfate	No Data	No Data	No Data	No Data
Chloride	< 500 mg/L	No Data	No Data	No Data
Fluoride	No Data	No Data	No Data	No Data
Total alkalinity (mg/L as $CaCO_3$)	< 2,000 mg/L	No Data	No Data	No Data
Temperature (°F)	<85 deg F	No Data	No Data	No Data
pH (standard units)	6.8 to 7.8 s.u	No Data	No Data	No Data

Table 2 for Outfall No.: 001 – Proxy Data Sourced From Process Engineering

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	No Data	No Data	No Data	No Data	2.5
Antimony, total	No Data	No Data	No Data	No Data	5
Arsenic, total	No Data	No Data	No Data	No Data	0.5
Barium, total	No Data	No Data	No Data	No Data	3
Beryllium, total	No Data	No Data	No Data	No Data	0.5
Cadmium, total	No Data	No Data	No Data	No Data	1
Chromium, total	No Data	No Data	No Data	No Data	3
Chromium, hexavalent	No Data	No Data	No Data	No Data	3
Chromium, trivalent	No Data	No Data	No Data	No Data	N/A
Copper, total	<20	No Data	No Data	No Data	2
Cyanide, available	No Data	No Data	No Data	No Data	2/10
Lead, total	No Data	No Data	No Data	No Data	0.5
Mercury, total	No Data	No Data	No Data	No Data	0.005/0.0005
Nickel, total	No Data	No Data	No Data	No Data	2
Selenium, total	No Data	No Data	No Data	No Data	5
Silver, total	No Data	No Data	No Data	No Data	0.5
Thallium, total	No Data	No Data	No Data	No Data	0.5
Zinc, total	No Data	No Data	No Data	No Data	5.0

TABLE 3 (Instructions, Page 58)

Completion of Table 3 **is required** for all **external outfalls** which discharge process wastewater.

Partial completion of Table 3 **is required** for all **external outfalls** which discharge non-process wastewater and stormwater associated with industrial activities commingled with other wastestreams (see instructions for additional guidance).

Table 3 for Outfall No.: 001 – Proxy Data Sourced From Process Engineering

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Acrylonitrile	No Data	No Data	No Data	No Data	50
Anthracene	No Data	No Data	No Data	No Data	10
Benzene	No Data	No Data	No Data	No Data	10
Benzidine	No Data	No Data	No Data	No Data	50
Benzo(a)anthracene	No Data	No Data	No Data	No Data	5
Benzo(a)pyrene	No Data	No Data	No Data	No Data	5
Bis(2-chloroethyl)ether	No Data	No Data	No Data	No Data	10
Bis(2-ethylhexyl)phthalate	No Data	No Data	No Data	No Data	10
Bromodichloromethane [Dichlorobromomethane]	No Data	No Data	No Data	No Data	10
Bromoform	No Data	No Data	No Data	No Data	10
Carbon tetrachloride	No Data	No Data	No Data	No Data	2
Chlorobenzene	No Data	No Data	No Data	No Data	10
Chlorodibromomethane [Dibromochloromethane]	No Data	No Data	No Data	No Data	10
Chloroform	No Data	No Data	No Data	No Data	10
Chrysene	No Data	No Data	No Data	No Data	5
m-Cresol [3-Methylphenol]	No Data	No Data	No Data	No Data	10
o-Cresol [2-Methylphenol]	No Data	No Data	No Data	No Data	10
p-Cresol [4-Methylphenol]	No Data	No Data	No Data	No Data	10
1,2-Dibromoethane	No Data	No Data	No Data	No Data	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	No Data	No Data	No Data	No Data	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	No Data	No Data	No Data	No Data	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	No Data	No Data	No Data	No Data	10
3,3'-Dichlorobenzidine	No Data	No Data	No Data	No Data	5
1,2-Dichloroethane	No Data	No Data	No Data	No Data	10
1,1-Dichloroethene [1,1-Dichloroethylene]	No Data	No Data	No Data	No Data	10
Dichloromethane [Methylene chloride]	No Data	No Data	No Data	No Data	20
1,2-Dichloropropane	No Data	No Data	No Data	No Data	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,3-Dichloropropene [1,3-Dichloropropylene]	No Data	No Data	No Data	No Data	10
2,4-Dimethylphenol	No Data	No Data	No Data	No Data	10
Di-n-Butyl phthalate	No Data	No Data	No Data	No Data	10
Ethylbenzene	No Data	No Data	No Data	No Data	10
Fluoride	No Data	No Data	No Data	No Data	500
Hexachlorobenzene	No Data	No Data	No Data	No Data	5
Hexachlorobutadiene	No Data	No Data	No Data	No Data	10
Hexachlorocyclopentadiene	No Data	No Data	No Data	No Data	10
Hexachloroethane	No Data	No Data	No Data	No Data	20
Methyl ethyl ketone	No Data	No Data	No Data	No Data	50
Nitrobenzene	No Data	No Data	No Data	No Data	10
N-Nitrosodiethylamine	No Data	No Data	No Data	No Data	20
N-Nitroso-di-n-butylamine	No Data	No Data	No Data	No Data	20
Nonylphenol	No Data	No Data	No Data	No Data	333
Pentachlorobenzene	No Data	No Data	No Data	No Data	20
Pentachlorophenol	No Data	No Data	No Data	No Data	5
Phenanthrene	No Data	No Data	No Data	No Data	10
Polychlorinated biphenyls (PCBs) (**)	No Data	No Data	No Data	No Data	0.2
Pyridine	No Data	No Data	No Data	No Data	20
1,2,4,5-Tetrachlorobenzene	No Data	No Data	No Data	No Data	20
1,1,2,2-Tetrachloroethane	No Data	No Data	No Data	No Data	10
Tetrachloroethene [Tetrachloroethylene]	No Data	No Data	No Data	No Data	10
Toluene	No Data	No Data	No Data	No Data	10
1,1,1-Trichloroethane	No Data	No Data	No Data	No Data	10
1,1,2-Trichloroethane	No Data	No Data	No Data	No Data	10
Trichloroethene [Trichloroethylene]	No Data	No Data	No Data	No Data	10
2,4,5-Trichlorophenol	No Data	No Data	No Data	No Data	50
TTHM (Total trihalomethanes)	No Data	No Data	No Data	No Data	10
Vinyl chloride	No Data	No Data	No Data	No Data	10

(*) Indicate units if different from µg/L.
(**) Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB-1016. If all non-detects, enter the highest non-detect preceded by a "<".

TABLE 4 (Instructions, Pages 58-59)

Partial completion of Table 4 **is required** for each **external outfall** based on the conditions below.

a. Tributyltin

Is this facility an industrial/commercial facility which currently or proposes to directly dispose of wastewater from the types of operations listed below or a domestic facility which currently or proposes to receive wastewater from the types of industrial/commercial operations listed below?

☐ Yes ☒ No

If **yes**, check the box next to each of the following criteria which apply and provide the appropriate testing results in Table 4 below (check all that apply).

☐ Manufacturers and formulators of tributyltin or related compounds.
☐ Painting of ships, boats and marine structures.
☐ Ship and boat building and repairing.
☐ Ship and boat cleaning, salvage, wrecking and scaling.
☐ Operation and maintenance of marine cargo handling facilities and marinas.
☐ Facilities engaged in wood preserving.
☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. Enterococci (discharge to saltwater)

i. This facility discharges/proposes to discharge directly into saltwater receiving waters **and** Enterococci bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

ii. Domestic wastewater is/will be discharged.

☐ Yes ☒ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

c. E. coli (discharge to freshwater)

i. This facility discharges/proposes to discharge directly into freshwater receiving waters **and** *E. coli* bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

ii. Domestic wastewater is/will be discharged.

☐ Yes ☒ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

Table 4 for Outfall No.: **N/A**
Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1	Sample 2	Sample 3	Sample 4	MAL
Tributyltin (μg/L)	N/A	N/A	N/A	N/A	0.010
Enterococci (cfu or MPN/100 mL)	N/A	N/A	N/A	N/A	N/A
E. coli (cfu or MPN/100 mL)	N/A	N/A	N/A	N/A	N/A

TABLE 5 (Instructions, Page 59)

Completion of Table 5 **is required** for all **external outfalls** which discharge process wastewater from a facility which manufactures or formulates pesticides or herbicides or other wastewaters which may contain pesticides or herbicides.

If this facility does not/will not manufacture or formulate pesticides or herbicides and does not/will not discharge other wastewaters which may contain pesticides or herbicides, check N/A.

☒ N/A

Table 5 for Outfall No.: N/A

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin	N/A	N/A	N/A	N/A	0.01
Carbaryl	N/A	N/A	N/A	N/A	5
Chlordane	N/A	N/A	N/A	N/A	0.2
Chlorpyrifos	N/A	N/A	N/A	N/A	0.05
4,4'-DDD	N/A	N/A	N/A	N/A	0.1
4,4'-DDE	N/A	N/A	N/A	N/A	0.1
4,4'-DDT	N/A	N/A	N/A	N/A	0.02
2,4-D	N/A	N/A	N/A	N/A	0.7
Danitol [Fenpropathrin]	N/A	N/A	N/A	N/A	—
Demeton	N/A	N/A	N/A	N/A	0.20
Diazinon	N/A	N/A	N/A	N/A	0.5/0.1
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	1
Dieldrin	N/A	N/A	N/A	N/A	0.02
Diuron	N/A	N/A	N/A	N/A	0.090
Endosulfan I (*alpha*)	N/A	N/A	N/A	N/A	0.01
Endosulfan II (*beta*)	N/A	N/A	N/A	N/A	0.02
Endosulfan sulfate	N/A	N/A	N/A	N/A	0.1
Endrin	N/A	N/A	N/A	N/A	0.02
Guthion [Azinphos methyl]	N/A	N/A	N/A	N/A	0.1
Heptachlor	N/A	N/A	N/A	N/A	0.01
Heptachlor epoxide	N/A	N/A	N/A	N/A	0.01
Hexachlorocyclohexane (*alpha*)	N/A	N/A	N/A	N/A	0.05
Hexachlorocyclohexane (*beta*)	N/A	N/A	N/A	N/A	0.05
Hexachlorocyclohexane (*gamma*) [Lindane]	N/A	N/A	N/A	N/A	0.05
Hexachlorophene	N/A	N/A	N/A	N/A	10
Malathion	N/A	N/A	N/A	N/A	0.1
Methoxychlor	N/A	N/A	N/A	N/A	2.0
Mirex	N/A	N/A	N/A	N/A	0.02
Parathion (ethyl)	N/A	N/A	N/A	N/A	0.1
Toxaphene	N/A	N/A	N/A	N/A	0.3
2,4,5-TP [Silvex]	N/A	N/A	N/A	N/A	0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 **is required** for all **external outfalls**.

Table 6 for Outfall No.: 001

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutants	Believed Present	Believed Absent	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	MAL (µg/L)*
Bromide	☐	☒					400
Color (PCU)	☐	☒					—
Nitrate-Nitrite (as N)	☒	☐					—
Sulfide (as S)	☐	☒					—
Sulfite (as SO3)	☐	☒					—
Surfactants	☒	☐					—
Boron, total	☐	☒					20
Cobalt, total	☐	☒					0.3
Iron, total	☐	☒					7
Magnesium, total	☐	☒					20
Manganese, total	☐	☒					0.5
Molybdenum, total	☐	☒					1
Tin, total	☐	☒					5
Titanium, total	☐	☒					30

* Indicate units if different from µg/L.

TABLE 7 (Instructions, Page 60)

Check the box next to any of the industrial categories applicable to this facility. If no categories are applicable, check N/A. If GC/MS testing is required, check the box provided to confirm the testing results for the appropriate parameters are provided with the application.

☒ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/Neutrals Table 10	Pesticides Table 11
☐ Adhesives and Sealants		☐ Yes	☐ Yes	☐ Yes	No
☐ Aluminum Forming	467	☐ Yes	☐ Yes	☐ Yes	No
☐ Auto and Other Laundries		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Battery Manufacturing	461	☐ Yes	No	☐ Yes	No
☐ Coal Mining	434	No	No	No	No
☐ Coil Coating	465	☐ Yes	☐ Yes	☐ Yes	No
☐ Copper Forming	468	☐ Yes	☐ Yes	☐ Yes	No
☐ Electric and Electronic Components	469	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Electroplating	413	☐ Yes	☐ Yes	☐ Yes	No
☐ Explosives Manufacturing	457	No	☐ Yes	☐ Yes	No
☐ Foundries		☐ Yes	☐ Yes	☐ Yes	No
☐ Gum and Wood Chemicals - Subparts A,B,C,E	454	☐ Yes	☐ Yes	No	No
☐ Gum and Wood Chemicals - Subparts D,F	454	☐ Yes	☐ Yes	☐ Yes	No
☐ Inorganic Chemicals Manufacturing	415	☐ Yes	☐ Yes	☐ Yes	No
☐ Iron and Steel Manufacturing	420	☐ Yes	☐ Yes	☐ Yes	No
☐ Leather Tanning and Finishing	425	☐ Yes	☐ Yes	☐ Yes	No
☐ Mechanical Products Manufacturing		☐ Yes	☐ Yes	☐ Yes	No
☐ Nonferrous Metals Manufacturing	421,471	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	☐ Yes	☐ Yes	☐ Yes	No
☐ Ore Mining - Subpart B	440	No	☐ Yes	No	No
☐ Organic Chemicals Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Paint and Ink Formulation	446,447	☐ Yes	☐ Yes	☐ Yes	No
☐ Pesticides	455	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Petroleum Refining	419	☐ Yes	No	No	No
☐ Pharmaceutical Preparations	439	☐ Yes	☐ Yes	☐ Yes	No
☐ Photographic Equipment and Supplies	459	☐ Yes	☐ Yes	☐ Yes	No
☐ Plastic and Synthetic Materials Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Plastic Processing	463	☐ Yes	No	No	No
☐ Porcelain Enameling	466	No	No	No	No
☐ Printing and Publishing		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Pulp and Paperboard Mills - Subpart C	430	☐ *	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subparts F, K	430	☐ *	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	☐ Yes	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts I, J, L	430	☐ Yes	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subpart E	430	☐ Yes	☐ Yes	☐ Yes	☐ *
☐ Rubber Processing	428	☐ Yes	☐ Yes	☐ Yes	No
☐ Soap and Detergent Manufacturing	417	☐ Yes	☐ Yes	☐ Yes	No
☐ Steam Electric Power Plants	423	☐ Yes	☐ Yes	No	No
☐ Textile Mills (Not Subpart C)	410	☐ Yes	☐ Yes	☐ Yes	No
☐ Timber Products Processing	429	☐ Yes	☐ Yes	☐ Yes	☐ Yes

* Test if believed present.

TABLES 8, 9, 10, and 11 (Instructions, Page 60)

Completion of Tables 8, 9, 10, and 11 **is required** as specified in Table 7 for all **external outfalls** that contain process wastewater.

Completion of Tables 8, 9, 10, and 11 **may be required** for types of industry not specified in Table 7 for specific parameters that are believed to be present in the wastewater.

Table 8 for Outfall No.: N/A : Volatile Compounds

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acrolein	N/A	N/A	N/A	N/A	50
Acrylonitrile	N/A	N/A	N/A	N/A	50
Benzene	N/A	N/A	N/A	N/A	10
Bromoform	N/A	N/A	N/A	N/A	10
Carbon tetrachloride	N/A	N/A	N/A	N/A	2
Chlorobenzene	N/A	N/A	N/A	N/A	10
Chlorodibromomethane	N/A	N/A	N/A	N/A	10
Chloroethane	N/A	N/A	N/A	N/A	50
2-Chloroethylvinyl ether	N/A	N/A	N/A	N/A	10
Chloroform	N/A	N/A	N/A	N/A	10
Dichlorobromomethane [Bromodichloromethane]	N/A	N/A	N/A	N/A	10
1,1-Dichloroethane	N/A	N/A	N/A	N/A	10
1,2-Dichloroethane	N/A	N/A	N/A	N/A	10
1,1-Dichloroethylene [1,1-Dichloroethene]	N/A	N/A	N/A	N/A	10
1,2-Dichloropropane	N/A	N/A	N/A	N/A	10
1,3-Dichloropropylene [1,3-Dichloropropene]	N/A	N/A	N/A	N/A	10
Ethylbenzene	N/A	N/A	N/A	N/A	10
Methyl bromide [Bromomethane]	N/A	N/A	N/A	N/A	50
Methyl chloride [Chloromethane]	N/A	N/A	N/A	N/A	50
Methylene chloride [Dichloromethane]	N/A	N/A	N/A	N/A	20
1,1,2,2-Tetrachloroethane	N/A	N/A	N/A	N/A	10
Tetrachloroethylene [Tetrachloroethene]	N/A	N/A	N/A	N/A	10
Toluene	N/A	N/A	N/A	N/A	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	N/A	N/A	N/A	N/A	10
1,1,1-Trichloroethane	N/A	N/A	N/A	N/A	10
1,1,2-Trichloroethane	N/A	N/A	N/A	N/A	10
Trichloroethylene [Trichloroethene]	N/A	N/A	N/A	N/A	10
Vinyl chloride	N/A	N/A	N/A	N/A	10

* Indicate units if different from µg/L.

Table 9 for Outfall No.: N/A : Acid Compounds
Samples are (check one): ☐ Composites ☐ Grabs

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol	N/A	N/A	N/A	N/A	10
2,4-Dichlorophenol	N/A	N/A	N/A	N/A	10
2,4-Dimethylphenol	N/A	N/A	N/A	N/A	10
4,6-Dinitro-o-cresol	N/A	N/A	N/A	N/A	50
2,4-Dinitrophenol	N/A	N/A	N/A	N/A	50
2-Nitrophenol	N/A	N/A	N/A	N/A	20
4-Nitrophenol	N/A	N/A	N/A	N/A	50
p-Chloro-m-cresol	N/A	N/A	N/A	N/A	10
Pentachlorophenol	N/A	N/A	N/A	N/A	5
Phenol	N/A	N/A	N/A	N/A	10
2,4,6-Trichlorophenol	N/A	N/A	N/A	N/A	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: N/A : Base/Neutral Compounds
Samples are (check one): ☐ Composites ☐ Grabs

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acenaphthene	N/A	N/A	N/A	N/A	10
Acenaphthylene	N/A	N/A	N/A	N/A	10
Anthracene	N/A	N/A	N/A	N/A	10
Benzidine	N/A	N/A	N/A	N/A	50
Benzo(a)anthracene	N/A	N/A	N/A	N/A	5
Benzo(a)pyrene	N/A	N/A	N/A	N/A	5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]	N/A	N/A	N/A	N/A	10
Benzo(ghi)perylene	N/A	N/A	N/A	N/A	20
Benzo(k)fluoranthene	N/A	N/A	N/A	N/A	5
Bis(2-chloroethoxy)methane	N/A	N/A	N/A	N/A	10
Bis(2-chloroethyl)ether	N/A	N/A	N/A	N/A	10
Bis(2-chloroisopropyl)ether	N/A	N/A	N/A	N/A	10
Bis(2-ethylhexyl)phthalate	N/A	N/A	N/A	N/A	10
4-Bromophenyl phenyl ether	N/A	N/A	N/A	N/A	10
Butylbenzyl phthalate	N/A	N/A	N/A	N/A	10
2-Chloronaphthalene	N/A	N/A	N/A	N/A	10
4-Chlorophenyl phenyl ether	N/A	N/A	N/A	N/A	10
Chrysene	N/A	N/A	N/A	N/A	5
Dibenzo(a,h)anthracene	N/A	N/A	N/A	N/A	5
1,2-Dichlorobenzene [o-Dichlorobenzene]	N/A	N/A	N/A	N/A	10
1,3-Dichlorobenzene [m-Dichlorobenzene]	N/A	N/A	N/A	N/A	10
1,4-Dichlorobenzene [p-Dichlorobenzene]	N/A	N/A	N/A	N/A	10
3,3'-Dichlorobenzidine					5

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Diethyl phthalate	N/A	N/A	N/A	N/A	10
Dimethyl phthalate	N/A	N/A	N/A	N/A	10
Di-n-butyl phthalate	N/A	N/A	N/A	N/A	10
2,4-Dinitrotoluene	N/A	N/A	N/A	N/A	10
2,6-Dinitrotoluene	N/A	N/A	N/A	N/A	10
Di-n-octyl phthalate	N/A	N/A	N/A	N/A	10
1,2-Diphenylhydrazine (as Azobenzene)	N/A	N/A	N/A	N/A	20
Fluoranthene	N/A	N/A	N/A	N/A	10
Fluorene	N/A	N/A	N/A	N/A	10
Hexachlorobenzene	N/A	N/A	N/A	N/A	5
Hexachlorobutadiene	N/A	N/A	N/A	N/A	10
Hexachlorocyclopentadiene	N/A	N/A	N/A	N/A	10
Hexachloroethane	N/A	N/A	N/A	N/A	20
Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	N/A	5
Isophorone	N/A	N/A	N/A	N/A	10
Naphthalene	N/A	N/A	N/A	N/A	10
Nitrobenzene	N/A	N/A	N/A	N/A	10
N-Nitrosodimethylamine	N/A	N/A	N/A	N/A	50
N-Nitrosodi-n-propylamine	N/A	N/A	N/A	N/A	20
N-Nitrosodiphenylamine	N/A	N/A	N/A	N/A	20
Phenanthrene	N/A	N/A	N/A	N/A	10
Pyrene	N/A	N/A	N/A	N/A	10
1,2,4-Trichlorobenzene	N/A	N/A	N/A	N/A	10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: N/A : Pesticides

Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Aldrin	N/A	N/A	N/A	N/A	0.01
alpha-BHC [alpha-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
beta-BHC [beta-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
gamma-BHC [gamma-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
delta-BHC [delta-Hexachlorocyclohexane]	N/A	N/A	N/A	N/A	0.05
Chlordane	N/A	N/A	N/A	N/A	0.2
4,4'-DDT	N/A	N/A	N/A	N/A	0.02
4,4'-DDE	N/A	N/A	N/A	N/A	0.1
4,4'-DDD	N/A	N/A	N/A	N/A	0.1
Dieldrin	N/A	N/A	N/A	N/A	0.02
Endosulfan I (alpha)	N/A	N/A	N/A	N/A	0.01
Endosulfan II (beta)	N/A	N/A	N/A	N/A	0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Endosulfan sulfate	N/A	N/A	N/A	N/A	0.1
Endrin	N/A	N/A	N/A	N/A	0.02
Endrin aldehyde	N/A	N/A	N/A	N/A	0.1
Heptachlor	N/A	N/A	N/A	N/A	0.01
Heptachlor epoxide	N/A	N/A	N/A	N/A	0.01
PCB 1242	N/A	N/A	N/A	N/A	0.2
PCB 1254	N/A	N/A	N/A	N/A	0.2
PCB 1221	N/A	N/A	N/A	N/A	0.2
PCB 1232	N/A	N/A	N/A	N/A	0.2
PCB 1248	N/A	N/A	N/A	N/A	0.2
PCB 1260	N/A	N/A	N/A	N/A	0.2
PCB 1016	N/A	N/A	N/A	N/A	0.2
Toxaphene	N/A	N/A	N/A	N/A	0.3

* Indicate units if different from µg/L.

Attachment: N/A

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

Complete of Table 12 **is required** for **external outfalls**, as directed below. (Instructions, Pages 60-61)

a. Indicate which compound(s) are manufactured or used at the facility and provide a brief description of the conditions of its/their presence at the facility (check all that apply).

- ☐ 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5
- ☐ 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1
- ☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4
- ☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

b. Does the applicant or anyone at the facility know or have any reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be present in the effluent proposed for discharge?

☐ Yes ☒ No

Description: N/A

If **yes** to either Items a **or** b, complete Table 12 as instructed.

Table 12 for Outfall No.: N/A
Samples are (check one): ☐ **Composites** ☐ **Grabs**

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
2,3,7,8-TCDD	1	N/A	N/A	N/A	N/A	10
1,2,3,7,8-PeCDD	1.0	N/A	N/A	N/A	N/A	50
2,3,7,8-HxCDDs	0.1	N/A	N/A	N/A	N/A	50
1,2,3,4,6,7,8-HpCDD	0.01	N/A	N/A	N/A	N/A	50
2,3,7,8-TCDF	0.1	N/A	N/A	N/A	N/A	10
1,2,3,7,8-PeCDF	0.03	N/A	N/A	N/A	N/A	50
2,3,4,7,8-PeCDF	0.3	N/A	N/A	N/A	N/A	50
2,3,7,8-HxCDFs	0.1	N/A	N/A	N/A	N/A	50
2,3,4,7,8-HpCDFs	0.01	N/A	N/A	N/A	N/A	50
OCDD	0.0003	N/A	N/A	N/A	N/A	100
OCDF	0.0003	N/A	N/A	N/A	N/A	100
PCB 77	0.0001	N/A	N/A	N/A	N/A	500
PCB 81	0.0003	N/A	N/A	N/A	N/A	500
PCB 126	0.1	N/A	N/A	N/A	N/A	500
PCB 169	0.03	N/A	N/A	N/A	N/A	500
Total		N/A	N/A	N/A	N/A	

TABLE 13 (HAZARDOUS SUBSTANCES)

Complete Table 13 **is required** for all **external outfalls** as directed below. (Instructions, Page 61)

a. Are there any pollutants listed in the instructions (pages 55-62) believed present in the discharge?

☐ Yes ☒ No

b. Are there pollutants listed in Item 1.c. of Technical Report 1.0 which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

☐ Yes ☒ No

If **yes** to either Items a **or** b, complete Table 13 as instructed.

Table 13 for Outfall No.: N/A
Samples are (check one): ☐ **Composites** ☐ **Grabs**

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method
N/A	N/A	N/A	N/A	N/A	N/A	N/A

8. WORKSHEET 3.1 SURFACE LAND APPLICATION AND EVAPORATION

WORKSHEET 3.1
SURFACE LAND APPLICATION AND EVAPORATION

This worksheet **is required** for all applications for a permit to dispose of wastewater by surface land application or evaporation.

1. EDWARDS AQUIFER (Instructions, Page 74)

a. Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☒ No

If **no**, proceed to Item 2. If **yes**, complete Items 1.b **and** 1.c.

b. Check the box next to the subchapter applicable to the facility.

☐ *30 TAC Chapter 213, Subchapter A*

☐ *30 TAC Chapter 213, Subchapter B*

c. If *30 TAC Chapter 213, Subchapter A* applies, attach **either**: 1) a Geologic Assessment (if conducted in accordance with *30 TAC § 213.5*) **or** 2) a report that contains the following information:

- A description of the surface geological units within the proposed land application site and wastewater pond area.
- The location and extent of any sensitive recharge features in the land application site and wastewater pond area
- A list of any proposed BMPs to protect the recharge features.

Attachment: N/A

2. SURFACE SPRAY/IRRIGATION (Instructions, Pages 74-75)

a. Provide the following information on the irrigation operations:

Area under irrigation (acres): N/A

Design application rate (acre-ft/acre/yr): **N/A**

Design application frequency (hours/day): **N/A**

Design application frequency (days/week): **N/A**

Design total nitrogen loading rate (lbs nitrogen/acre/year): **N/A**

Average slope of the application area (percent): **N/A**

Maximum slope of the application area (percent): **N/A**

Irrigation efficiency (percent): **N/A**

Effluent conductivity (mmhos/cm): **N/A**

Soil conductivity (mmhos/cm): **N/A**

Curve number: **N/A**

Describe the application method and equipment: **N/A**

b. Attach a detailed engineering report which includes a water balance, storage volume calculations, and a nitrogen balance.

Attachment: N/A

3. EVAPORATION PONDS (Instructions, Page 75)

a. Daily average effluent flow into ponds: 80,000 gallons per day

b. Attach a separate engineering report of evaporation calculations for average long-term and worst-case critical conditions.

Attachment: N

4. EVAPOTRANSPIRATION BEDS (Instructions, Page 75)

a. Provide the following information on the evapotranspiration beds:

Number of beds: N/A

Area of bed(s) (acres): N/A

Depth of bed(s) (feet): N/A

Void ratio of soil in the beds: N/A

Storage volume within the beds (include units): N/A

Description of any lining to protect groundwater: N/A

b. Attach a certification by a licensed Texas professional engineer that the liner meets TCEQ requirements.

Attachment: N/A

c. Attach a separate engineering report with water balance, storage volume calculations, and description of the liner.

Attachment: N/A

5. OVERLAND FLOW (Instructions, Page 75)

a. Provide the following information on the overland flow:

Area used for application (acres): N/A

Slopes for application area (percent): N/A

Design application rate (gpm/foot of slope width): N/A

Slope length (feet): N/A

Design BOD_5 loading rate (lbs BOD_5/acre/day): N/A

Design application frequency (hours/day): N/A

Design application frequency (days/week): N/A

b. Attach a separate engineering report with the method of application and design requirements according to *30 TAC § 217.212*.

Attachment: N/A

9. WORKSHEET 4.0 RECEIVING WATERS

WORKSHEET 4.0
RECEIVING WATERS

This worksheet **is required** for all TPDES permit applications.

1. DOMESTIC DRINKING WATER SUPPLY (Instructions, Page 81)

a. There is a surface water intake for domestic drinking water supply located within 5 (five) miles downstream from the point/proposed point of discharge.

☐ Yes ☒ No

If **no**, stop here and proceed to Item 2. If **yes**, provide the following information:

i. The legal name of the owner of the drinking water supply intake: Click to enter text.

v. The distance and direction from the outfall to the drinking water supply intake: Click to enter text.

b. Locate and identify the intake on the USGS 7.5-minute topographic map provided for Administrative Report 1.0.

☐ Check this box to confirm the above requested information is provided.

2. DISCHARGE INTO TIDALLY INFLUENCED WATERS (Instructions, Page 81)

If the discharge is to tidally influenced waters, complete this section. Otherwise, proceed to Item 3.

a. Width of the receiving water at the outfall: feet

b. Are there oyster reefs in the vicinity of the discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the oyster reefs: Click to enter text.

c. Are there sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the grasses: Click to enter text.

3. CLASSIFIED SEGMENT (Instructions, Page 81)

The discharge is/will be directly into (or within 300 feet of) a classified segment.

☒ Yes ☐ No

If **yes**, stop here. It is not necessary to complete Items 4 and 5 of this worksheet or Worksheet 4.1.

If **no**, complete Items 4 and 5 and Worksheet 4.1 may be required.

4. DESCRIPTION OF IMMEDIATE RECEIVING WATERS (Instructions, Page 82)

a. Name of the immediate receiving waters: Click to enter text.

b. Check the appropriate description of the immediate receiving waters:

☐ Lake or Pond

- Surface area (acres): Click to enter text.
- Average depth of the entire water body (feet): Click to enter text.
- Average depth of water body within a 500-foot radius of the discharge point (feet): Click to enter text.

☐ Man-Made Channel or Ditch
☐ Stream or Creek
☐ Freshwater Swamp or Marsh
☐ Tidal Stream, Bayou, or Marsh
☐ Open Bay
☐ Other, specify: Click to enter text.

If **Man-Made Channel or Ditch** or **Stream or Creek** were selected above, provide responses to Items 4.c – 4.g below:

c. For **existing discharges**, check the description below that best characterizes the area **upstream** of the discharge.

For **new discharges**, check the description below that best characterizes the area **downstream** of the discharge.

☐ Intermittent (dry for at least one week during most years)
☐ Intermittent with Perennial Pools (enduring pools containing habitat to maintain aquatic life uses)
☐ Perennial (normally flowing)

Check the source(s) of the information used to characterize the area upstream (existing discharge) or downstream (new discharge):

☐ USGS flow records
☐ personal observation
☐ historical observation by adjacent landowner(s)
☐ other, specify: Click to enter text.

d. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point: Click to enter text.

e. The receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.).

☐ Yes ☐ No

If **yes**, describe how: Click to enter text.

f. General observations of the water body during normal dry weather conditions: Click to enter text.

Date and time of observation: Click to enter text.

g. The water body was influenced by stormwater runoff during observations.

☐ Yes ☐ No

If **yes**, describe how: Click to enter text.

5. GENERAL CHARACTERISTICS OF WATER BODY (Instructions, Page 82)

a. Is the receiving water upstream of the existing discharge or proposed discharge site influenced by any of the following (check all that apply):

- ☐ oil field activities
- ☐ urban runoff
- ☐ agricultural runoff
- ☐ septic tanks
- ☐ upstream discharges
- ☐ other, specify: Click to enter text.

b. Uses of water body observed or evidence of such uses (check all that apply):

- ☐ livestock watering
- ☐ fishing
- ☐ picnic/park activities
- ☐ non-contact recreation
- ☐ industrial water supply
- ☐ other, specify: Click to enter text.
- ☐ domestic water supply
- ☐ irrigation withdrawal
- ☐ contact recreation
- ☐ navigation

c. Description which best describes the aesthetics of the receiving water and the surrounding area (check only one):

☐ **Wilderness:** outstanding natural beauty; usually wooded or un-pastured area: water clarity exceptional

☐ **Natural Area:** trees or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored

☐ **Common Setting:** not offensive, developed but uncluttered; water may be colored or turbid

☐ **Offensive:** stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

10. WORKSHEET 7.0 STORMWATER DISCHARGES

WORKSHEET 7.0
STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

This worksheet **is required** for all TPDES permit applications requesting individual permit coverage for discharges consisting of **either**: 1) solely of stormwater discharges associated with industrial activities, as defined in *40 CFR § 122.26(b)(14)(i-xi)*, **or** 2) stormwater discharges associated with industrial activities and any of the listed allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6.

Discharges of stormwater as defined in *40 CFR § 122.26 (b)(13)* are not required to obtain authorization under a TPDES permit (see exceptions at *40 CFR §§ 122.26(a)(1)* and *(9)*). Authorization for discharge may be required from a local municipal separate storm sewer system.

1. APPLICABILITY (Instructions, Page 90)

Do discharges from any of the existing/proposed outfalls consist either 1) solely of stormwater discharges associated with industrial activities **or** 2) stormwater discharges associated with industrial activities and any of the allowable non-stormwater discharges?

☒ Yes ☐ No

If **no**, stop here. If **yes**, proceed as directed.

2. STORMWATER OUTFALL COVERAGE (Instructions, Page 91)

List each existing/proposed stormwater outfall at the facility and indicate which type of authorization covers or is proposed to cover discharges.

Authorization coverage

Outfall	Authorized Under MSGP	Authorized Under Individual Permit
TBD	☒	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

If **all** existing/proposed outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) are **authorized under the MSGP**, **stop** here.

If **seeking authorization** for any outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) **under an individual permit**, **proceed**.

NOTE: The following information is required for each existing/proposed stormwater outfall for which the facility is seeking individual permit authorization under this application.

3. SITE MAP (Instructions, Page 91)

Attach a site map or maps (drawn to scale) of the entire facility with the following information.

- the location of each stormwater outfall to be covered by the permit
- an outline of the drainage area that is within the facility's boundary and that contributes stormwater to each outfall to be covered by the permit
- connections or discharge points to municipal separate storm sewer systems
- locations of all structures (e.g. buildings, garages, storage tanks)
- structural control devices that are designed to reduce pollution in discharges of stormwater associated with industrial activities
- process wastewater treatment units (including ponds)
- bag house and other air treatment units exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)
- landfills; scrapyards; surface water bodies (including wetlands)
- vehicle and equipment maintenance areas
- physical features of the site that may influence discharges of stormwater associated with industrial activities or contribute a dry weather flow
- locations where spills or leaks of reportable quality (as defined in *30 TAC § 327.4*) have occurred during the three years before this application was submitted to obtain coverage under an individual permit
- processing areas, storage areas, material loading/unloading areas, and other locations where significant materials are exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)

☐ Check the box to confirm all the above information was provided on the facility site map(s).

Attachment: FACILITY/SITE INFORMATION (Instructions, Pages 91-92)

a. Provide the area of impervious surface and the total area drained by each stormwater outfall requested for authorization by this permit application.

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)
N/A		

b. Provide the following local area rainfall information and the source of the information.

Wettest month: Click to enter text.

Average rainfall for wettest month (total inches): Click to enter text.

25-year, 24-hour rainfall (inches): Click to enter text.

Source: Click to enter text.

c. Attach an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. **Attachment:** Click to enter text.

d. Attach narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff (see instructions for guidance). **Attachment:** Click to enter text.

e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: Click to enter text.

4. LABORATORY ACCREDITATION CERTIFICATION (Instructions, Page 92)

Effective July 1, 2008, all laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification* with the following general exemptions:

a. The laboratory is an in-house laboratory and is:
   i. periodically inspected by the TCEQ; or
   ii. located in another state and is accredited or inspected by that state; or
   iii. performing work for another company with a unit located in the same site; or

vi. performing pro bono work for a governmental agency or charitable organization.

b. The laboratory is accredited under federal law.

c. The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.

d. The laboratory supplies data for which the TCEQ does not offer accreditation.

Review *30 TAC Chapter 25* for specific requirements. The following certification statement shall be signed and submitted with every application. See Instructions, Page 32, for a list of approved signatories.

I, Click to enter text., certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

____

(Signature)

5. POLLUTANT ANALYSIS (Instructions, Pages 92-93)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): Click to enter text.

b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Complete Table 17 as directed on page 92 of the Instructions.

Table 17 Pollutant Analysis for Outfall No.: N/A

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002
Lead, total						0.0005
Mercury, total						0.000005
Nickel, total						0.002
Selenium, total						0.005
Silver, total						0.0005
Zinc, total						0.005

* Taken during first 30 minutes of storm event
** Flow-weighted composite sample

d. Complete Table 18 as directed on pages 92-94 of the Instructions.

Table 18 Pollutant Analysis for Outfall No.: N/A

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled

* Taken during first 30 minutes of storm event
** Flow-weighted composite sample

Attachment: Click to enter text.

6. STORM EVENT DATA (Instructions, Page 94)

Provide the following data for the storm event(s) which resulted in the maximum values for the analytical data submitted:

Date of storm event: N/A

Duration of storm event (minutes): N/A

Total rainfall during storm event (inches): N/A

Number of hours the between beginning of the storm measured and the end of the previous measurable storm event (hours): N/A

Maximum flow rate during rain event (gallons/minute): N/A

Total stormwater flow from rain event (gallons): N/A

Provide a description of the method of flow measurement or estimate: N/A

ATTACHMENT A. COPY OF FEE SUBMITTAL

Admin Report 1.0 Pg. 2, 1.e.

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if mailing the payment. (Instructions, Page 37)

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- Do not mail this form with the application form.
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP **Permit No:** WQ000New Permit

1. Check or Money Order Number: Click to enter text.
2. Check or Money Order Amount: Click to enter text.
3. Date of Check or Money Order: Click to enter text.
4. Name on Check or Money Order: Click to enter text.
5. APPLICATION INFORMATION

   Name of Project or Site: Click to enter text.

   Physical Address of Project or Site: Click to enter text.

   If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application. Attachment: Click to enter text.

Staple Check or Money Order in This Space

ATTACHMENT B. CORE DATA FORM

Admin Report 1.0 Pg. 3, 2.c

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number (if issued)**
CN 605980739		RN 111422333

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	1/31/2022

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

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

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

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

Leprino Foods Company

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0804053405	32079092204	84-0500292	00-707-6664

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

☐ Owner ☐ Operator ☒ Owner & Operator

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

15. Mailing Address:	1830 W 38th Ave						
	City	Denver	**State**	CO	**ZIP**	80211	**ZIP + 4**

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*
(970) 347-5115		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Leprino Foods Lubbock Manufacturing Facility

23. Street Address of the Regulated Entity: *(No PO Boxes)*	4301 East 19th Street							
	City	Lubbock	State	TX	ZIP	79403	ZIP + 4	
24. County								

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:			
26. Nearest City		State	Nearest ZIP Code

27. Latitude (N) In Decimal:	33.580192°		28. Longitude (W) In Decimal:	-101.777402°	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
33	34	48.69	101	46	38.65

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
2022	2023	311513	311514

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

Cheese (except cottage cheese) manufacturing

34. Mailing Address:	1830 W 38th Ave							
	City	Denver	State	CO	ZIP	80211	ZIP + 4	
35. E-Mail Address:	hbradish@leprinofoods.com							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(303) 548-8718		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Hannah Bradish	41. Title:	Environmental Compliance Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(303) 548-8718		( ) -	hbradish@leprinofoods.com

SECTION V: Authorized Signature

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

Company:	Leprino Foods Company	Job Title:	Senior Director of Environmental Engineering
Name *(In Print)*:	Joseph Herrud	Phone:	(303) 480- **2894**
Signature:		Date:	

ATTACHMENT C. PROPERTY OWNERSHIP

Admin Report 1.0 Pg. 6, 8.f

LUBBOCK CENTRAL APPRAISAL DISTRICT

Property	Owner	Property Address	Tax Year		2022 Assessed Value
R318755	LEPRINO FOODS COMPANY	E 4TH ST, LUBBOCK, TX 79403	2022	CERTIFIED	$252,105

2022 GENERAL INFORMATION

Property Status	Active
Property Type	Commercial and Industrial Vacant Land
Legal Description	BLK O SEC 6 AB 1407 TR 1C & RR1C AC: 157.311
Neighborhood	0504 - City Of Lubbock
Account	AC56006-91407-30000-000
Related Properties	R136696, R343830
Map Number	596

2022 OWNER INFORMATION

Owner Name	LEPRINO FOODS COMPANY
Owner ID	
Exemptions	
Percent Ownership	100%
Mailing Address	1830 W 38TH AVE DENVER, CO 80211-2225
Agent	-

2022 VALUE INFORMATION

Improvement Homesite Value	$0
Improvement Non-Homesite Value	$0
Total Improvement Market Value	$0
Land Homesite Value	$0
Land Non-Homesite Value	$252,105
Land Agricultural Market Value	$0
Total Land Market Value	$252,105
Total Market Value	$252,105
Agricultural Use	$0
Timber Use	$0
Total Appraised Value	$252,105
Homestead Cap Loss	-$0
Total Assessed Value	$252,105

2022 ENTITIES & EXEMPTIONS

TAXING ENTITY	EXEMPTIONS	EXEMPTIONS AMOUNT	TAXABLE VALUE	TAX RATE PER 100	TAX CEILING
CLB- City Of Lubbock		$0	$176,819	0.52323	0
GLB- Lubbock County		$0	$176,819	0.35999	0
HSP- Lubb Cnty Hospital		$0	$176,819	0.103164	0
SRS- Roosevelt ISD		$0	$176,819	1.2679	0
WHP- Hi Plains Water		$0	$176,819	0.0051	0
TOTALS				**2.259384**	

2022 LAND SEGMENTS

LAND SEGMENT TYPE	STATE CODE	HOMESITE	MARKET VALUE	AG USE	TIM USE	LAND SIZE
1 - Irr Crop	C1 - Real Property: Vacant Lots and Tracts	No	$230,000	$0	$0	115.000000 acres
2 - Irr Crop	C1 - Real Property: Vacant Lots and Tracts	No	$0	$0	$0	4.970000 acres
3 - Dry Crop	C1 - Real Property: Vacant Lots and Tracts	No	$20,881	$0	$0	25.341000 acres
4 - Dry Crop	C1 - Real Property: Vacant Lots and Tracts	No	$1,224	$0	$0	12.000000 acres
TOTALS						**6,852,467 Sq. ft / 157.311000 acres**

VALUE HISTORY

YEAR	IMPROVEMENT	LAND	MARKET	AG MARKET	AG USE	APPRAISED	HS CAP LOSS	ASSESSED
2021	$0	$346,509	$346,509	$0	$0	$346,509	$0	$346,509
2020	$0	$500	$500	$199,473	$72,111	$72,611	$0	$72,611
2019	$0	$500	$500	$199,473	$83,687	$84,187	$0	$84,187
2018	$0	$500	$500	$199,473	$90,766	$91,266	$0	$91,266
2017	$0	$500	$500	$199,473	$53,346	$53,846	$0	$53,846

SALES HISTORY

DEED DATE	SELLER	BUYER	INSTR #	VOLUME/PAGE
4/19/2022	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	LEPRINO FOODS COMPANY	2022-18637	
12/29/2020	CARLTON, WILLIAM H, Jr	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	2020-59091	
1/25/2010	MR W FIREWORKS INC	CARLTON, WILLIAM H, Jr	2010-2205	

ATTACHMENT D. USGS MAP

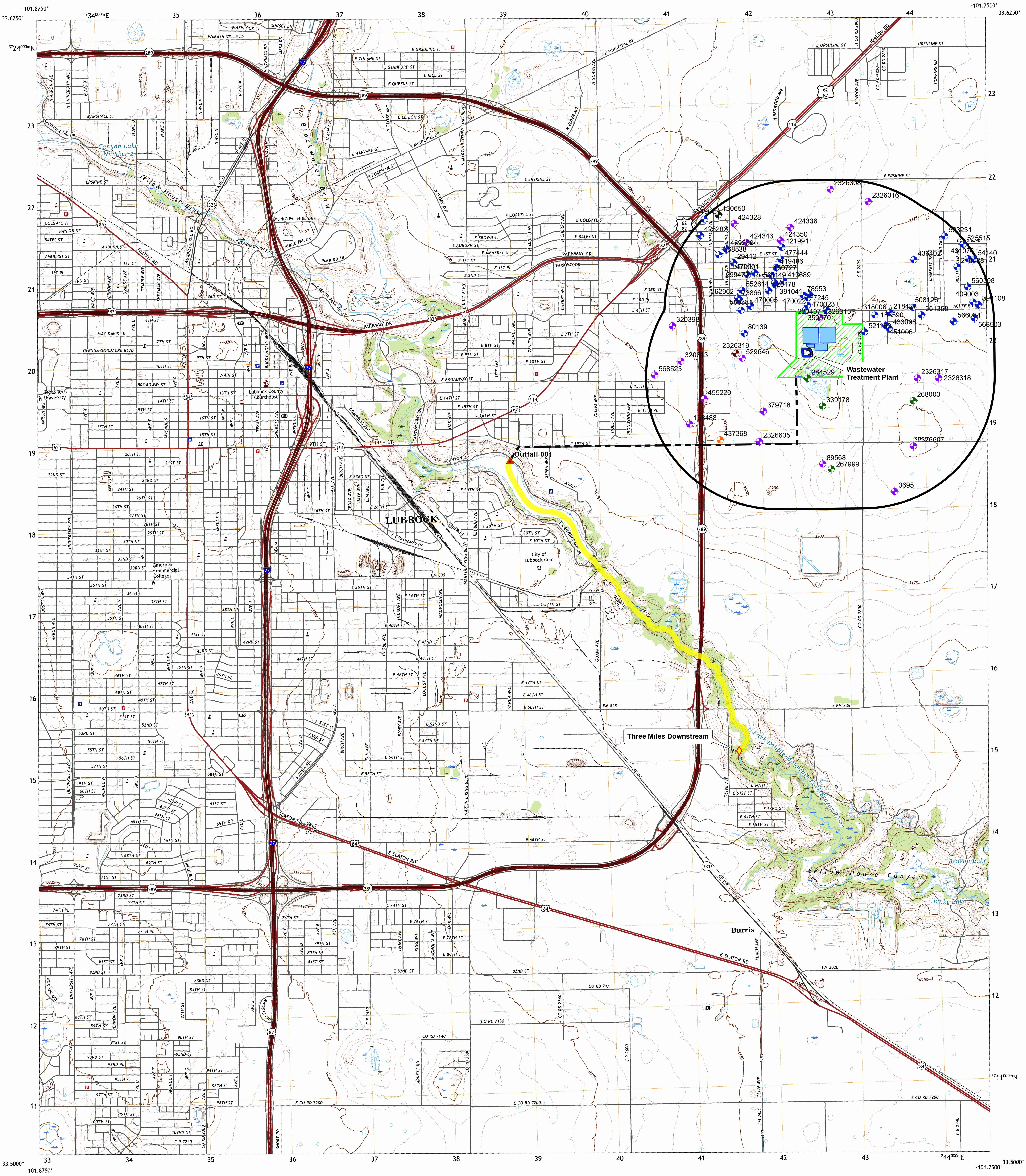
Admin Report 1.0 Pg. 7, 9b

USGS science for a changing world

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

The National Map US Topo

LUBBOCK EAST QUADRANGLE
TEXAS - LUBBOCK COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14S
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....................NAIP, September 2016 - November 2016
Roads....................U.S. Census Bureau, 2015 - 2018
Names....................GNIS, 1979 - 2021
Hydrography....................National Hydrography Dataset, 2004 - 2018
Contours....................National Elevation Dataset, 2020
Boundaries....................Multiple sources; see metadata file 2019 - 2021

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

MN
GN
6°0´
107 MILS
1°33´
28 MILS

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
KC
Grid Zone Designation
14S

SCALE 1:24 000

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

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

TEXAS
QUADRANGLE LOCATION

1 Shallowater
2 New Deal
3 Idalou
4 Lubbock West
5 Buffalo Springs Lake
6 Slide
7 Woodrow
8 Slaton

ADJOINING QUADRANGLES

ROAD CLASSIFICATION

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

LUBBOCK EAST, TX
2022

Legend

- Property Boundary
- Wastewater Treatment Plant
- Impoundments
- Proposed 14" HDPE Discharge Pipe
- Outfall Location
- Discharge Route
- Downstream Marker
- One Mile Radius

Wells

- Domestic
- Environmental Soil Boring
- Industrial
- Irrigation
- Monitor
- Public Supply
- Test Well

ATTACHMENT E. DISCHARGE ROUTE DESCRIPTION

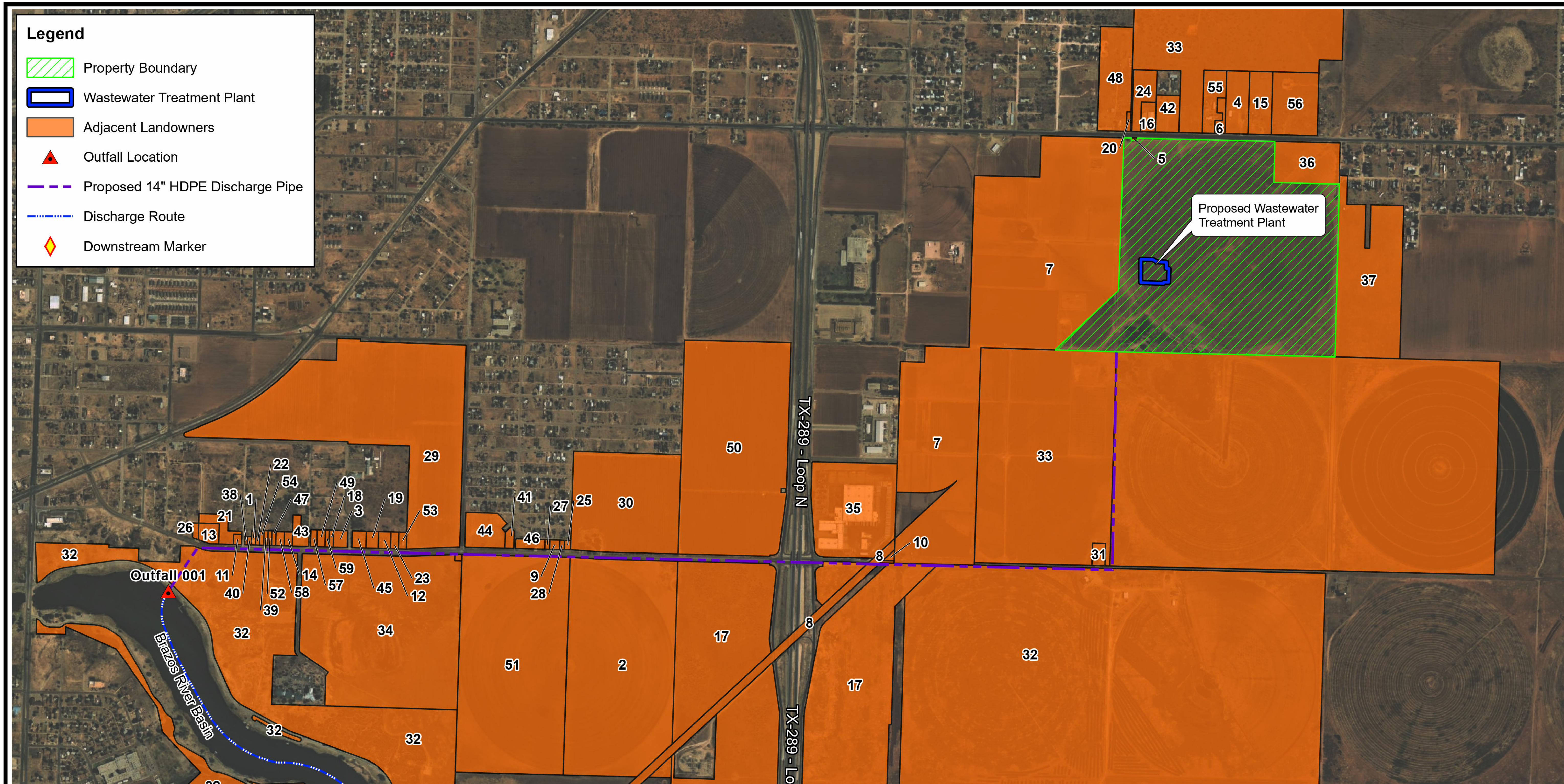
Admin Report 1.0 Pg. 7, 9.d

The proposed discharge route is as follows:

Treated effluent will pumped from the facility through a 14” force main approximately 2.7 miles to an energy dissipation structure thence to a 24” HDPE line to a subsurface outfall structure located in Canyon Lake #6 – classified segment 1241A.

ATTACHMENT F. ADJACENT LANDOWNER INFORMATION

Admin Report 1.1 Pg. 10, 1a, & c



LEPRINO FOODS
LUBBOCK, TEXAS

ADJACENT LANDOWNER MAP

DRAWN BY: L WILSON	SCALE: AS NOTED	PROJ. NO.	TPDES 2022
CHECKED BY: A RIENSTRA		FILE NO.	Project.mxd
APPROVED BY: A RIENSTRA	DATE PRINTED: 8/23/2022	**FIGURE 2**	
DATE: August 2022			

Trinity Consultants

1001 Louisiana Street
Suite 3250
Houston, Texas 77002
Ph. 713-955-1230

9737 Great Hills Trail
Suite 340
Austin, Texas 78759
Ph. 512-693-4190

J:\Prj\Leprino Foods\TPDES 2022\Project.aprx

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
1	606 HAROLD LLC	PO BOX 573036	HOUSTON	TX	77257
2	ADAMS C POWELL & CAROL	7317 E FM 40	LUBBOCK	TX	79403
3	ADEBANJO ADESOJI & JEROME ADEBANJO	924 E EMORY ST APT 3104	LUBBOCK	TX	79403
4	ALONSO ANDRES C & MACRUZ A	1107 46TH ST	LUBBOCK	TX	79412
5	ATMOS ENERGY CORPORATION	PO BOX 650205	DALLAS	TX	75265-0205
6	BAIGEN, MICHELLE	325 PRIVATE ROAD 2760	LUBBOCK	TX	79403-8244
7	BASF CORPORATION	100 PARK AVE	FLORHAM PARK	NJ	07932-1089
8	BNSF RAILWAY COMPANY	PO BOX 961089	FORT WORTH	TX	76161-0089
9	BRAXTON, OLA JEAN R	12083 APPLEBURY CT	RNCHO CORDOVA	CA	95742-8112
10	BROWN, BILL W	ADDRESS UNKNOWN			
11	BUTLER, REGINA	4013 47TH ST	LUBBOCK	TX	79413
12	CARRIZALES STEVEN GABRIEL	1523 E MAIN ST	LUBBOCK	TX	79403-5207
13	CARTER, BRYCE CYRLOYD	4013 47TH ST	LUBBOCK	TX	79413
14	CERDA JOSE L & GUADALUPE REYES & ZETA RODRIGUEZ	2902 2ND PL	LUBBOCK	TX	79415
15	CHAVEZ JOANN O & JOEL JR & MARIA O RHODES	4703 E 4TH ST	LUBBOCK	TX	79403-5007
16	COLE DG LUBBOCK FM 40 TX LLC	PO BOX 460369	HOUSTON	TX	77056
17	CRBBB PARTNERSHIP LP	5201 19TH ST	LUBBOCK	TX	79407
18	DAVIS, WILLIAM E	HC 2 BOX 1170	CAMP WOOD	TX	78833-9602
19	FULL ARMOR MINISTRIES	PO BOX 1574	LUBBOCK	TX	79408
20	GAONA ABEL & EVA	4435 E FM 40	LUBBOCK	TX	79403
21	GARCIA ANGEL & EMERY	2506 58TH ST	LUBBOCK	TX	79413-5632
22	GIL, LUIS JESUS	PO BOX 348	SMYER	TX	79367-0348
23	GREEN, TINA	3406 E BROADWAY	LUBBOCK	TX	79403
24	GUTIERREZ RAYMOND Z & RACHAEL GARCIA	808 E 76TH ST	LUBBOCK	TX	79404-6417
25	HARTFIELD, ROBERT	3605 N COUNTY ROAD 2775	LUBBOCK	TX	79403
26	HERRERA, RAMONA (TOD)	2211 E 19TH ST	LUBBOCK	TX	79403
27	JOHNSON JOSEPH ESTATE OF & ESTATE OF RUBY JOHNSON	3413 E 19TH ST	LUBBOCK	TX	79403
28	JOHNSON, TREVA S	3413 E 19TH ST	LUBBOCK	TX	79403
29	KASTMAN INTERESTS LTD	PO BOX 5930	LUBBOCK	TX	79408-5930
30	KEYS CINDY KIM HOLEMAN	108 HELTON	GRANBURY	TX	76049-1335
31	LOS CARNALES MC	4022 WOODROW RD	LUBBOCK	TX	79423
32	LUBBOCK CITY OF	PO BOX 2000	LUBBOCK	TX	79457-0001
33	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	1500 BROADWAY STE 600	LUBBOCK	TX	79401-3167
34	LUBBOCK REGIONAL MENTAL HEALTH & MENTAL RETARDATIO	PO BOX 2828	LUBBOCK	TX	79408-2828
35	MC LANE FOOD SERVICE	PO BOX 5550	LUBBOCK	TX	79408-5550
36	MR W FIREWORKS INC	PO BOX 114	SOMERSET	TX	78069-0114
37	NUNEZ ANTONIO & REYNA	6210 E COUNTY ROAD 6450	LUBBOCK	TX	79403
38	ODDIE FREDDRICK II & DARAVION J BONNER JR	904 W LAUREL ST	COMPTON	CA	90220-2907
39	PITTS, ELAINE	140 CR 3051	DECATUR	TX	76234-4610
40	PUCKETT, WILEY ESTATE	ADDRESS UNKNOWN			
41	QUIGLEY, CEDRIC	2636 E CORNELL	LUBBOCK	TX	79403
42	RAMOS, OLGA H	4517 E 4TH ST	LUBBOCK	TX	79403-4829
43	REYES RAMIRO & DEBRA	15916 N COUNTY ROAD 2500	ABERNATHY	TX	79311-5333
44	RICHARDSON LACARL & BERNARD & DALE A & LAFRANCES R A	2939 E COLGATE ST	LUBBOCK	TX	79403
45	RIOS, PEDRO ALFONSO ROJO	1301 FM 40	RALLS	TX	79357
46	RODRIGUEZ AMBER L & JOROMEO J MADDOX	3405 E 19TH ST	LUBBOCK	TX	79403
47	RODRIGUEZ ROGER & MARIA ELENA	8710 GOLDEN PT	SAN ANTONIO	TX	78239
48	RRW LEASING INC	303 30TH ST	LUBBOCK	TX	79404
49	SAMUDIO, CARLOS	4414 82ND ST STE 212	LUBBOCK	TX	79424-3359
50	SCHILLING WAYNE & MARY	16912 COUNTY ROAD 3000	SLATON	TX	79364-7750
51	SIEBER TRUST, E HAYES Attn: PROSPERITY BANK TRUST	1401 AVE Q	LUBBOCK	TX	79401-3819
52	SUMODA REAL ESTATE INVESTMENTS LLC	3604 RAVENHILL LN	ARLINGTON	TX	76016-4831
53	TAYLOR, EDWINA GETAY	3021 E 19TH ST	LUBBOCK	TX	79403-6040
54	THOMPSON JAMES E ET AL	2609 E 19TH ST	LUBBOCK	TX	79403-5829
55	TREVINO, GUADALUPE TIRSO	320 PRIVATE ROAD 2760	LUBBOCK	TX	79403
56	TRIGGS BOYD & ELIZABETH BRAZIEL	4711 E 4TH ST	LUBBOCK	TX	79401
57	VASQUEZ MARK & MERCEDES	10602 DETROIT AVE	LUBBOCK	TX	79423
58	WALTON BONNIE & 'TESSIE ESTATE	ADDRESS UNKNOWN			
59	WYNNE, WILLIE	ADDRESS UNKNOWN			

LUBBOCK CENTRAL APPRAISAL DISTRICT

Property	Owner	Property Address	Tax Year	2022 A
R58691	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	4003 19TH ST, LUBBOCK, TX 79410	2022	CERTIFIED $3

2022 GENERAL INFORMATION

Property Status	Active
Property Type	Commercial and Industrial Vacant Land
Legal Description	BLK O SEC 5 AB 21 TR G2 AC: .396
Neighborhood	0504 - City Of Lubbock
Account	AC56005-90021-00175-000
Map Number	594

2022 OWNER INFORMATION

Owner Name	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC
Owner ID	
Exemptions	Prorated Full Exemption
Percent Ownership	100%
Mailing Address	1500 BROADWAY #STE 600 LUBBOCK, TX 79401-3167
Agent	-

2022 VALUE INFORMATION

Improvement Homesite Value
Improvement Non-Homesite Value
Total Improvement Market Value

Land Homesite Value
Land Non-Homesite Value
Land Agricultural Market Value
Total Land Market Value

Total Market Value
Agricultural Use
Timber Use
Total Appraised Value
Homestead Cap Loss
Total Assessed Value

2022 ENTITIES & EXEMPTIONS

Special Exemptions **PRO - Prorated Full Exemption**

TAXING ENTITY	EXEMPTIONS	EXEMPTIONS AMOUNT	TAXABLE VALUE	TAX RATE PER 100	TAX CEILIN
CLB- City Of Lubbock		$0	$1,619	0.52323	0
GLB- Lubbock County		$0	$1,619	0.35999	0
HSP- Lubb Cnty Hospital		$0	$1,619	0.103164	0
SLB- Lubbock ISD		$0	$1,619	1.1355	0
WHP- Hi Plains Water		$0	$1,619	0.0051	0
TOTALS				**2.126984**	

2022 LAND SEGMENTS

LAND SEGMENT TYPE	STATE CODE	HOMESITE	MARKET VALUE	AG USE	TIM USE	LAND SIZE
1 - Commercial	C1 - Real Property: Vacant Lots and Tracts	No	$3,456	$0	$0	17,280 Sq. ft
TOTALS						**17,280 Sq. ft / 0.396694 acres**

VALUE HISTORY

YEAR	IMPROVEMENT	LAND	MARKET	AG MARKET	AG USE	APPRAISED	HS CAP LOSS	ASSESSED
2021	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2020	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2019	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2018	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3
2017	$0	$3,456	$3,456	$0	$0	$3,456	$0	$3

SALES HISTORY

DEED DATE	SELLER	BUYER	INSTR #	VOLUME/P
7/12/2022	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	-	2022-33840	
6/21/2022	BROWN, BILL W	LUBBOCK ECONOMIC DEVELOPMENT ALLIANCE INC	2022-30337	

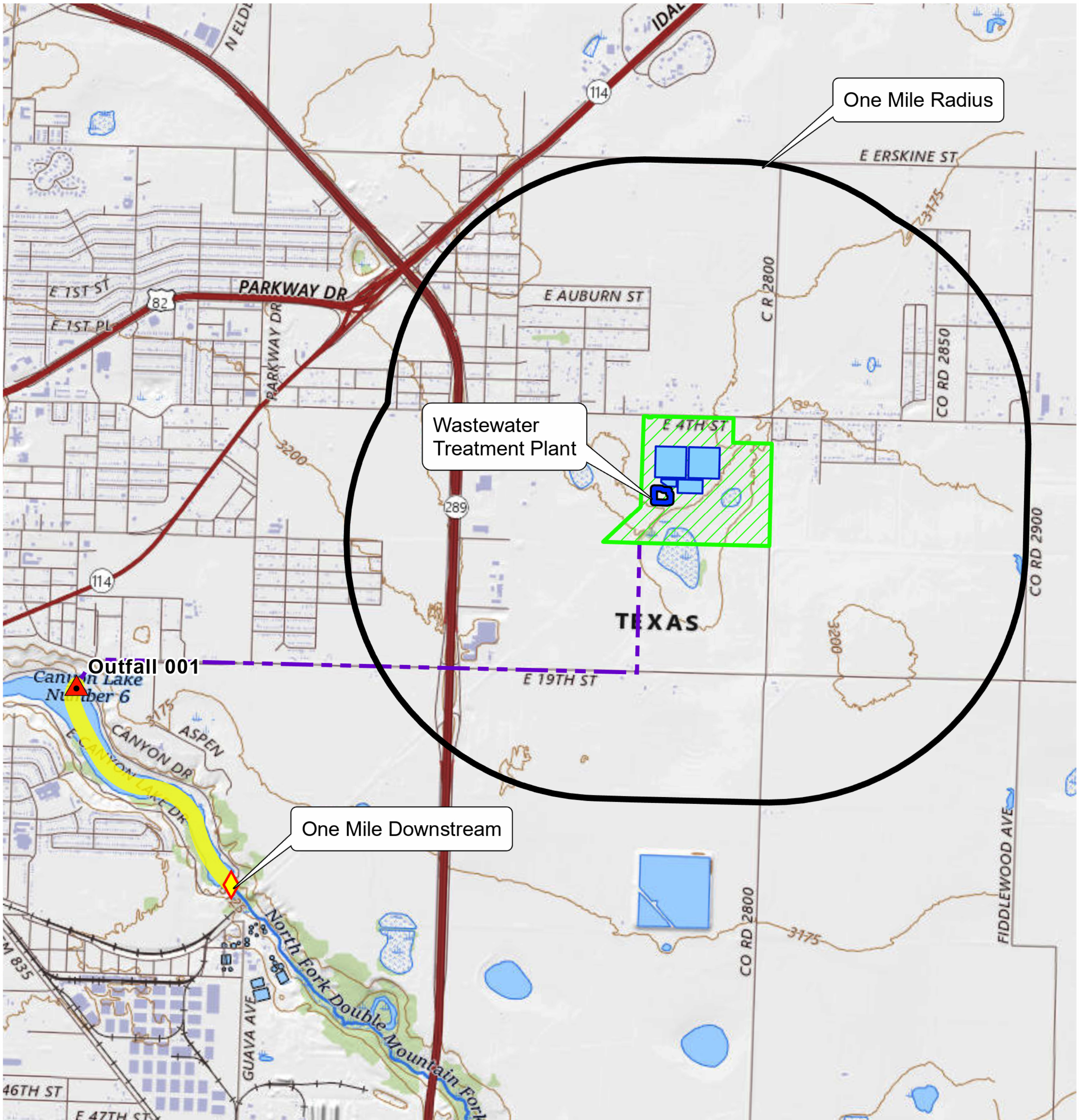
ATTACHMENT G. ORIGINAL PHOTOGRAPHS AND MAPS OF PHOTO LOCATIONS

Admin Report 1.1 Pg. 11, 2.

Photos will be provided upon access to discharge point. As soon as they become available, they will be submitted.

ATTACHMENT H. SPIF INFORMATION

SPIF Pg. 13, 8.



Legend

- Property Boundary
- Wastewater Treatment Plant
- Impoundments
- Proposed 14" HDPE Discharge Pipe
- Outfall Location
- Discharge Route
- Downstream Marker
- One Mile Radius

N

0 1,500 3,000 FEET

1" = 3,000 FEET
1:36,000

Trinity Consultants

LEPRINO FOODS
LUBBOCK, TEXAS

SPIF MAP

DRAWN BY:	L WILSON
APPROVED BY:	A RIENSTRA
PROJECT NO:	TPDES 2022
FILE NO.	Project.mxd
DATE:	AUGUST 2022

J:\Prj\Leprino Foods\TPDES 2022\Project.aprx

LEPRINO_000297

ATTACHMENT I. FACILITY DESCRIPTION

Tech Report 1.0 Pg. 1, 1.a &b
Tech Report 1.0 Pg. 3, 2.a
Tech Report 1.0 Pg. 8, 6.

Leprino Foods Company proposes to construct a new mozzarella cheese and nutrition manufacturing facility in Lubbock, Texas. The facility is located on undeveloped farmland located in Lubbock, Lubbock County, Texas. The facility is located just east of East Loop 289 and is bordered on the north by E. 4th Street, and by E. 19th Street to the south.

The manufactured dairy-based cheese will be for commercial food operators for public consumption. The Facility will be operating under the Primary Standard Industry Code: 2022 (Natural, Processed, and Imitation Cheese) and NAICS Code: 311513. The facility will receive raw potable water supplied by connection to a Lubbock Public Water System owned and operated by the City of Lubbock. The primary use of the water will be for the manufacturing process and make up for the cooling water.

Raw fluid milk is brought into the facility as the main ingredient to the cheesemake process. The milk is reacted to coagulate the proteins and form cheese curds and liquid whey. The liquid whey is separated from the cheese and processed into nutrition products through separation and drying processes which removes the associated water. The associated water (COW water) and potable water used for daily sanitation is discharged to the onsite wastewater treatment plant and then discharged to Outfall 001. The brine used to cool and add salt to the cheese is managed in a separate evaporation system along with other high TDS waters. Cooling water discharges, boiler water, and reverse osmosis reject water will also be sent to the wastewater treatment facility and then discharged to Outfall 001. See Appendix J for more details.

Domestic sewage will be routed via connection to the Southeast Water Reclamation Plant Wastewater Treatment Facility in Lubbock Texas. Domestic sewage will be disposed of by an on-site septic tank and serviced by a registered hauler.

The discharge via pipe to Outfall 001 will consist primarily of process wastewater from the manufacturing process and cooling water blowdown. All waste streams discharged from the facility will be from the wastewater treatment plant located onsite.

Wastewater treatment will use a combination of anaerobic and aerobic activated sludge systems to treat all high strength wastewater (HSW) and low strength wastewater (LSW) generated in production. A divert flow system has been designed to mitigate potential non-compliance waste streams that will allow a high degree of control over wastewater divert to Outfall 001.

Brine water will be kept separate from the LSW and HSW streams and have a dedicated lift station to send brine to two onsite evaporation lagoons. Brine, RO Reject, and non-compliant effluent wastewater streams may be managed as "high TDS water" for evaporation in the High TDS Evaporation Lagoons. Wastewater will be allowed to evaporate while dissolved solids are deposited on the bottom of the lagoons. Removal of solids from the lagoons is anticipated every two years and will be transported by a certified waste hauler. To assist with evaporation, the lagoons will be equipped with splashers.

At the south end of the property there will be a valve manhole that can control whether effluent goes to direct discharge into Lake #6 or if it goes to the City of Lubbock. In the event of an upset in the system, water could be temporarily sent to a 10.5-million-gallon non-compliant lagoon. This volume allows for non-compliant effluent to be contained for seven days operating at full capacity. The plant will also be equipped with an aerated 1.5-million-gallon multipurpose lagoon to serve as storage should any process units need to be taken out of service.

RO reject water will be treated at the wastewater treatment facility, located onsite, and discharged to Outfall 001.

Process wastewater and cooling water discharge will be continuous. All flows will be pumped from the facility through a 14” force main to an energy dissipation structure thence to a 24” HDPE line to the outfall structure (001) located in Canyon Lake #6 – classified segment 1241A.

Tech Report 1.0 Pg. 2, 1.c

Raw Materials	Intermediates	Products
Milk	Permeate	Mozzarella Cheese
Nonfat dry milk	Liquid Whey	Whey Protein Powder
Salt	Cream	Sweet Whey Powder
Cellulose	Skim Milk	Permeate Powder
		Cream

ATTACHMENT K. FACILITY SITE DRAWINGS

Tech Report 1.0 Pg. 2, 1.d

SITE LEGEND:

- SUBJECT PROPERTY LINE
- ROAD RIGHT-OF-WAY
- SECTION LINE
- EASEMENT LINE
- TRAVELED ROAD CENTERLINE
- STORM SEWER
- SANITARY SEWER
- WATER MAIN
- UNDERGROUND GAS
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND TELEPHONE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC LINE
- CHAIN LINK FENCE
- EDGE OF GRAVEL
- CURB AND GUTTER
- 5' CONTOUR
- 1' CONTOUR
- TREE LINE
- FOUND 1" DIAMETER IRON PIPE
- FOUND 3/4" RE-BAR
- STORM SEWER MANHOLE
- CURB INLET CATCH BASIN
- SANITARY SEWER MANHOLE
- HYDRANT
- WATER VALVE
- GAS POST / MARKER
- TELEPHONE PEDESTAL
- CABLE PEDESTAL
- LIGHT POLE
- ELECTRIC PEDESTAL / BOX
- ELECTRIC MANHOLE
- TRAFFIC SIGNAL
- POST
- SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH/SHRUB

COVERAGE LEGEND:

- = ASPHALT PAVEMENT
- = CONCRETE
- = GRASS AREA
- = CRUSHED GRAVEL

SPECIFICATION NOTES:

1.) ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH TEN STATES STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION

2.) ALL UNDERGROUND UTILITIES SHALL INCLUDE INSTALLATION OF MARKING TAPE AND TRACER WIRE.

3.) RESTORE ALL DISTURBED AREAS UTILIZING TXDOT APPROVED SEED MIX UNLESS OTHERWISE REQUESTED BY OWNER.

4.) ALL WORK IN PUBLIC RIGHT OF WAY SHALL BE COORDINATED WITH THE LOCAL REGULATORY AUTHORITY AND PERFORMED ACCORDING AUTHORITIES STANDARD SPECIFICATIONS.

5.) ALL HDPE PIPE SHALL CONFORM TO ASTM D3350 and PLASTIC PIPE INSTITUTE (PPI) TR4 STANDARDS AND THE FOLLOWING PRESSURE CLASSIFICATIONS: 250 PSI (DR11), 125 PSI (DR17), 100 PSI (DR21). ALL JOINTS SHALL BE FUSION WELDED. PRODUCT SHALL BE PE4710 BY JM EAGLE OR APPROVED EQUAL.

6.) ALL PVC PRESSURE PIPE SHALL BE INSTALLED USING OPEN TRENCH METHODS UNLESS SPECIFIED ELSEWHERE. PVC PRESSURE PIPE SHALL CONFORM TO AWWA PRESSURE CLASSES OF 165 PSI (DR25), 235 PSI (DR18), 305 PSI (DR14), 200 PSI (DR21). SHALL BE ANSI/NSF STANDARD 61 APPROVED. PRODUCT SHALL BE BLUE BRUTE BY JM EAGLE OR APPROVED EQAUAL.

7.) CHLORINATED POLYVINYLE CHLORIDE (CPVC) PIPE SHALL CONFORM TO ASTM D-1784 FOR SCHEDULE 80 PIPES. CPVC SHALL MEET CLASS 23447 AS REFERENCED IN ASTM D 1784.

8.) ALL PIPING SHALL BE BEDDED USING MATERIAL IN ACCORDANCE WITH LOCAL PUBLIC WORKS STANDARD SPECIFICATIONS.

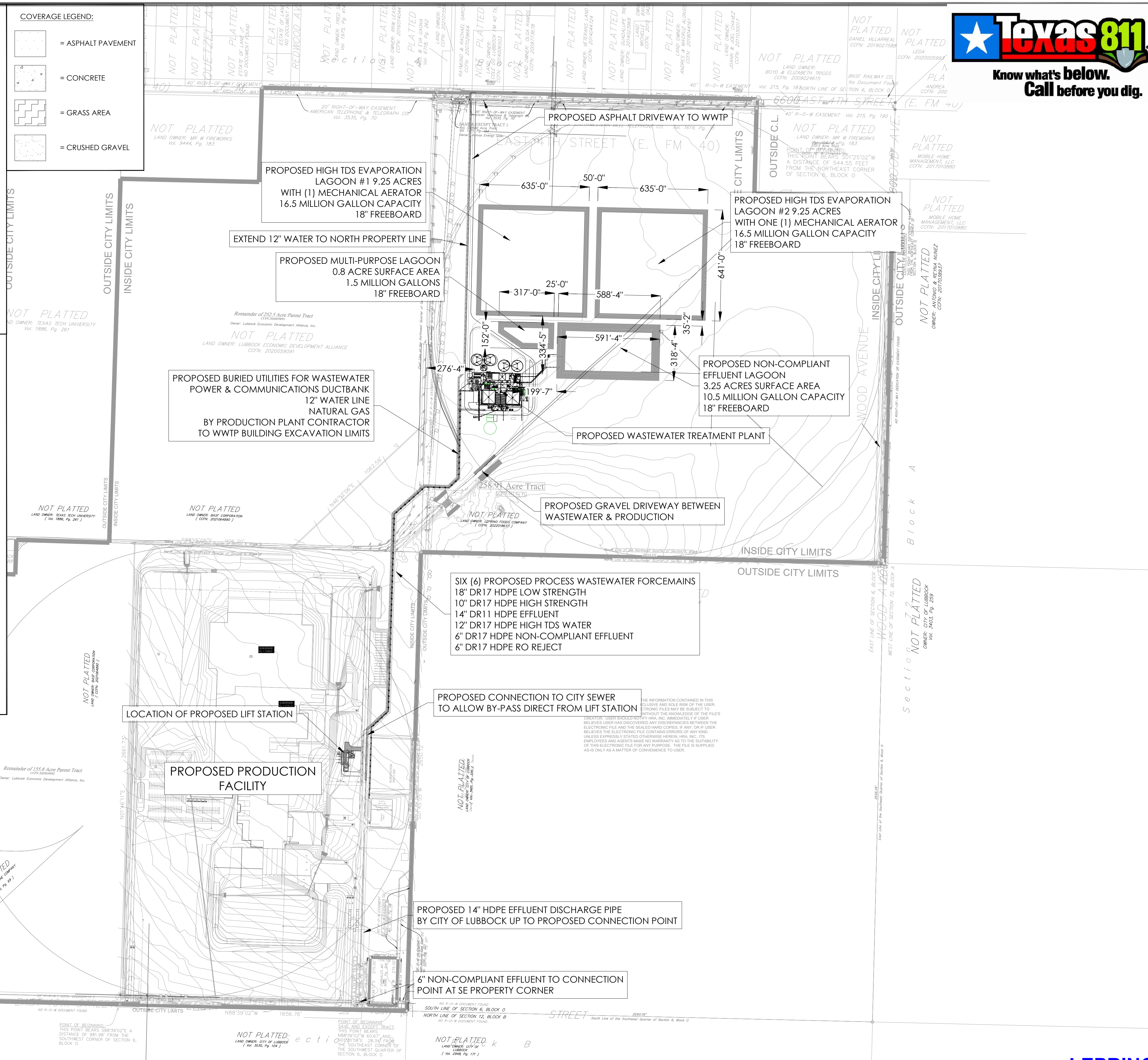
9.) EXCAVATOR SHALL BE SOLEY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL" SYSTEM NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWINGS.

10.) EXCAVATOR IS RESPONSIBLE FOR LOCATING PRIVATE UTILITIES PRIOR TO DIGGING.

11.) EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND DISCREPANCIES REPORTED TO ENGINEER PRIOR TO STARTING WORK. FAILURE TO DO SO DOES RESULTS IN CONTRACTOR BEING SOLEY RESPONSIBLE FOR ANY REWORK OF FIELD MODIFICATIONS REQUIRED.

12.) CONTRACTOR IS RESPONSIBLE FOR SECURING THE JOB SITE TO PROTECT THE PUBLIC AND SITE OWNER THROUGHOUT CONSTRUCTION.

13.) CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH LOCAL ORDINANCES FOR NOISE, WORK HOURS AND DUST CONTROL.



N

OVERALL PROPOSED SITE PLAN

300 0 300 600

1" = 300'

SCALE (11 x 17): 1" = 600'-0"

The Probst Group
17035 W. WISCONSIN AVE.
SUITE 120
BROOKFIELD, WIS. 53005
TEL: (262) 264-5665
FAX: (262) 436-1359

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

LEPRINO FOODS
ARMADILLO, TEXAS
WASTEWATER TREATMENT PLANT
OVERALL PROPOSED SITE PLAN

REVISIONS

NO.	DATE
A	3-24-22
B	4-15-22
C	6-24-22
D	07-29-22
-	-
-	-
-	-
-	-
-	-
-	-

DRAWN BY: CJL
PROJ. ENG.: CJL

PROJECT NUMBER:
6210.01

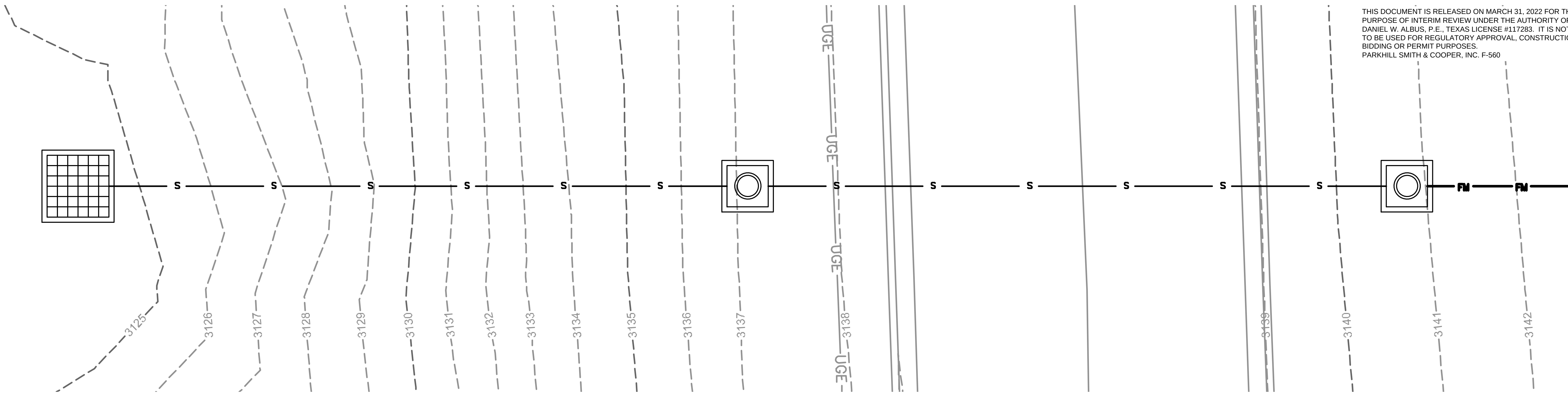
SHEET
C200

30% REVIEW SET

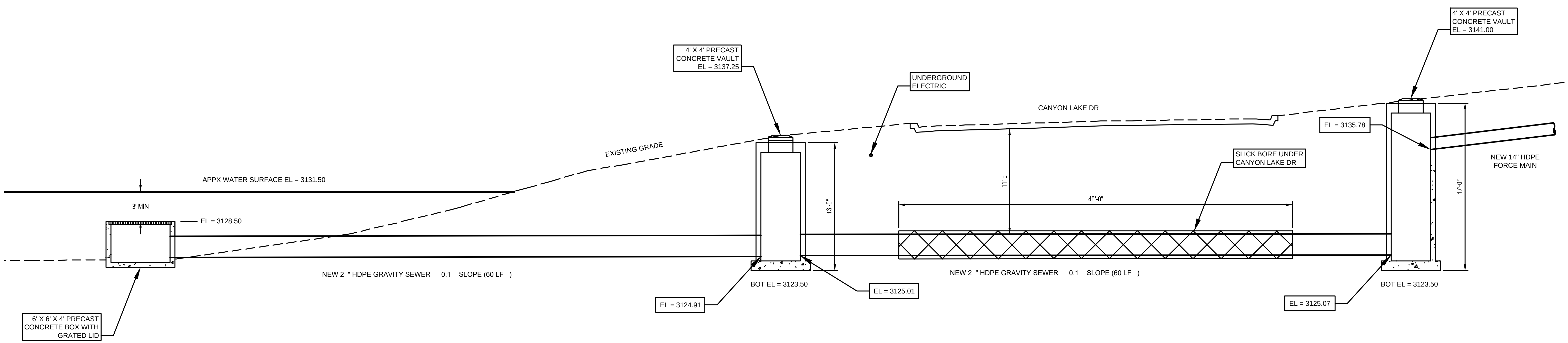
W:\Clients\Leprino Foods\Armadillo - TX\6210_New WWTP\Drawings\Revisions\Leprino\Related Files\C100.dwg

3-22-2023

THIS DOCUMENT IS RELEASED ON MARCH 31, 2022 FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL W. ALBUS, P.E., TEXAS LICENSE #117283. IT IS NOT TO BE USED FOR REGULATORY APPROVAL, CONSTRUCTION, BIDDING OR PERMIT PURPOSES.
PARKHILL SMITH & COOPER, INC. F-560



A1 LAKE SURVEY PLAN VIEW
1" = 10'-0"



A2 DISCHARGE STRUCTURE SECTION
1" = 10'-0"

Leprino Treated Effluent Line

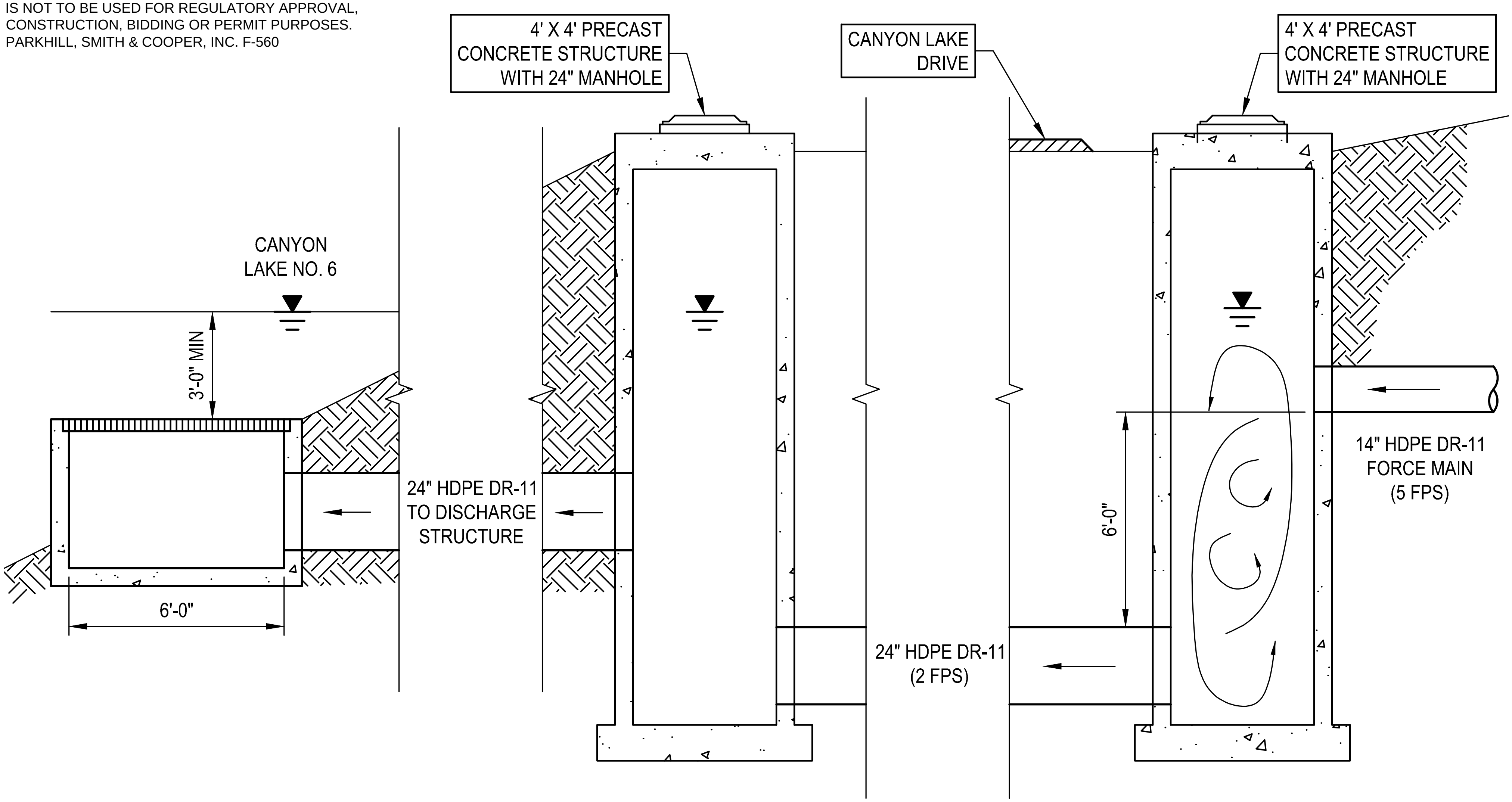
Lubbock Economic Development Alliance
1500 Broadway, Suite 600
Lubbock, TX 79401

Parkhill
Parkhill.com

Lake Survey

Issue: Review
Date: March 2022
Project No: 01.5609.21
Sheet: 1 of 1

LEPRINO_000303



Parkhill

Parkhill.com

Leprino New Effluent Outfall Line

Lubbock Economical Development Alliance
1500 Broadway Street, Suite #6
Lubbock, Texas 79401

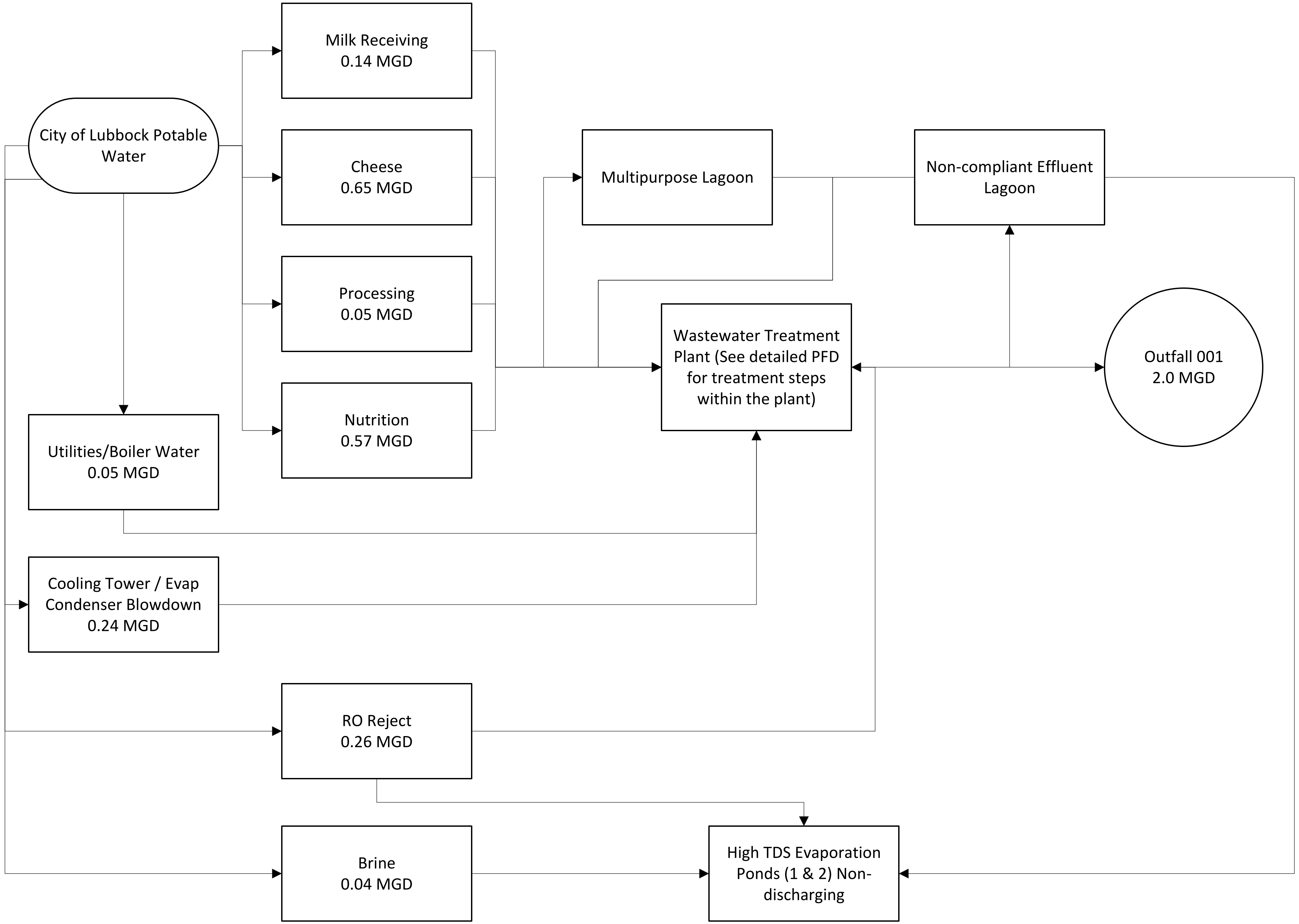
Energy Dissipation Detail - Option No. 1

Issue: TECHNICAL MEMO
Date: DEC 2021
Project No: PENDING
Sheet: 3 OF 9

LEPRINO_000304

ATTACHMENT L. FLOW SCHEMATIC DIAGRAM

Tech Report 1.0 Pg. 3, 2.b



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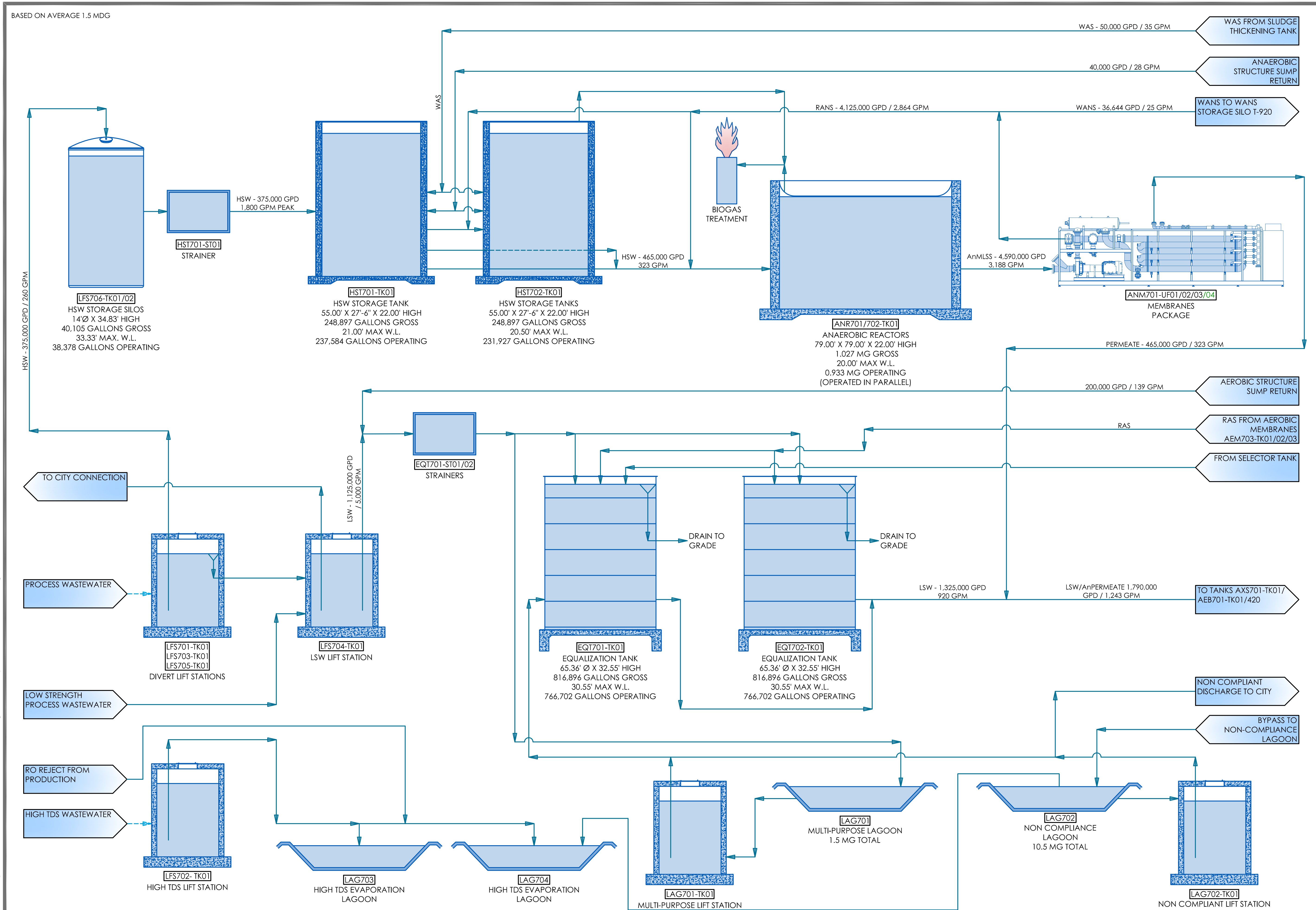

The Probst Group
17035 W. WISCONSIN AVE.
SUITE 120
BROOKFIELD, WIS. 53005
TEL: (262) 264-5665
FAX: (262) 436-1359

VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

LEPRINO FOODS
ARMADILLO, TEXAS
WASTEWATER TREATMENT PLANT
PROCESS FLOW DIAGRAM

ISSUED FOR CONSTRUCTION

REVISIONS

NO.	DATE
0	1-27-23
1	3-3-23
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DRAWN BY: BTR
PROJ. ENG: CJL
PROJECT NUMBER:
6210.01
SHEET
PFD001

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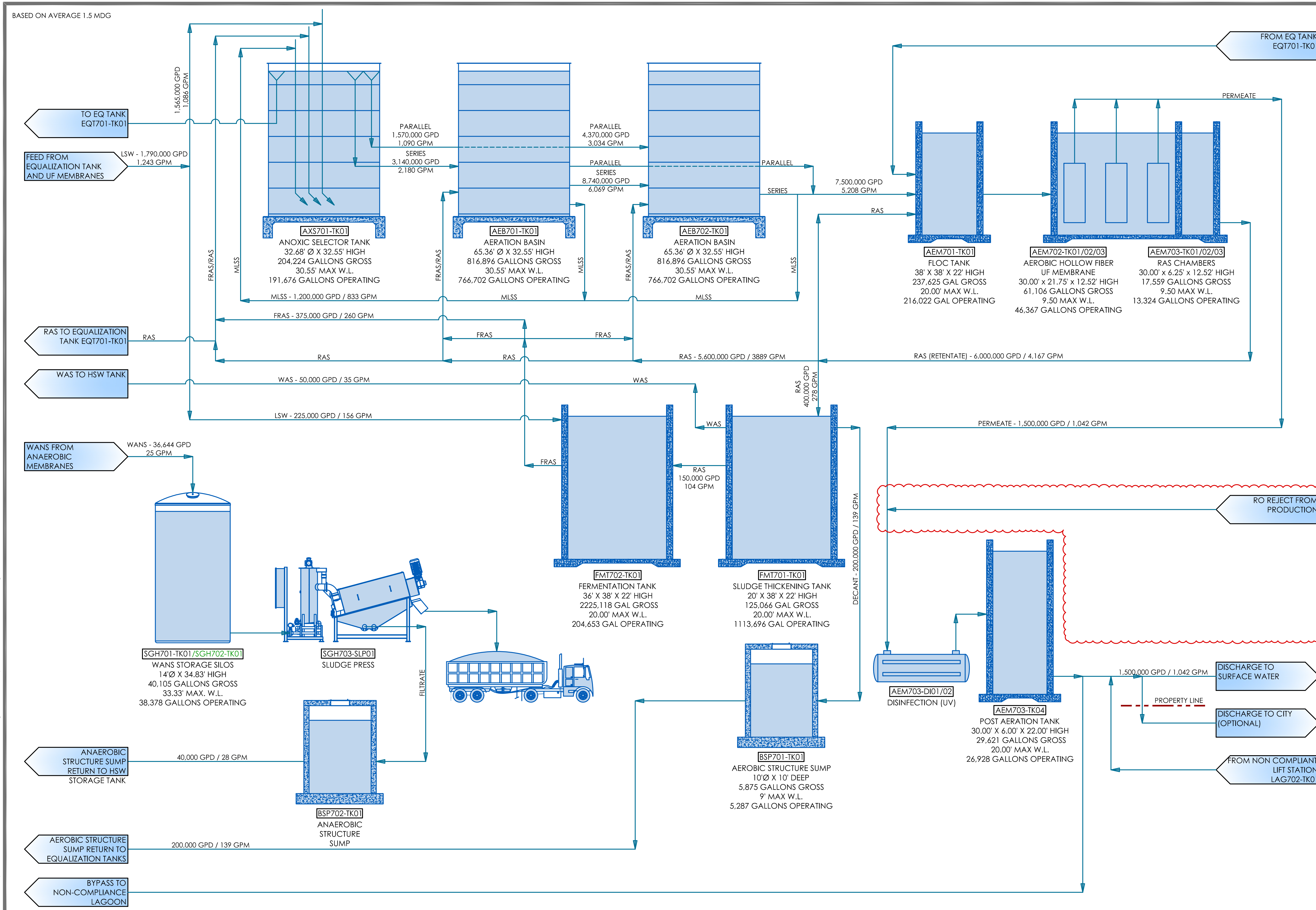
3-22-2023



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VERIFY SCALES
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

LEPRINO FOODS
ARMADILLO, TEXAS
WASTEWATER TREATMENT PLANT
PROCESS FLOW DIAGRAM

ISSUED FOR CONSTRUCTION

REVISIONS

NO.	DATE
0	1-27-23
1	3-3-23
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DRAWN BY: BTR
PROJ. ENG: CJL
PROJECT NUMBER:
6210.01
SHEET
PFD002

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3-22-2023

Tech Report 1.0 Pg. 8, 5.d

Cooling tower additives have not yet been selected. Once the additives are known, SDS for those products will be submitted.

ATTACHMENT N. IMPOUNDMENTS

Tech Report 1.0 Pg. 5, b.i – b.iii, 3.c – 3.e

- ► Impoundment Data
- ► USGS Map - Water Supply and Monitor Wells
- ► State Water Wells and Geotechnical Report
- ► Waste Migration Assessment
- ► Evaporation Calculations

Impoundments Data

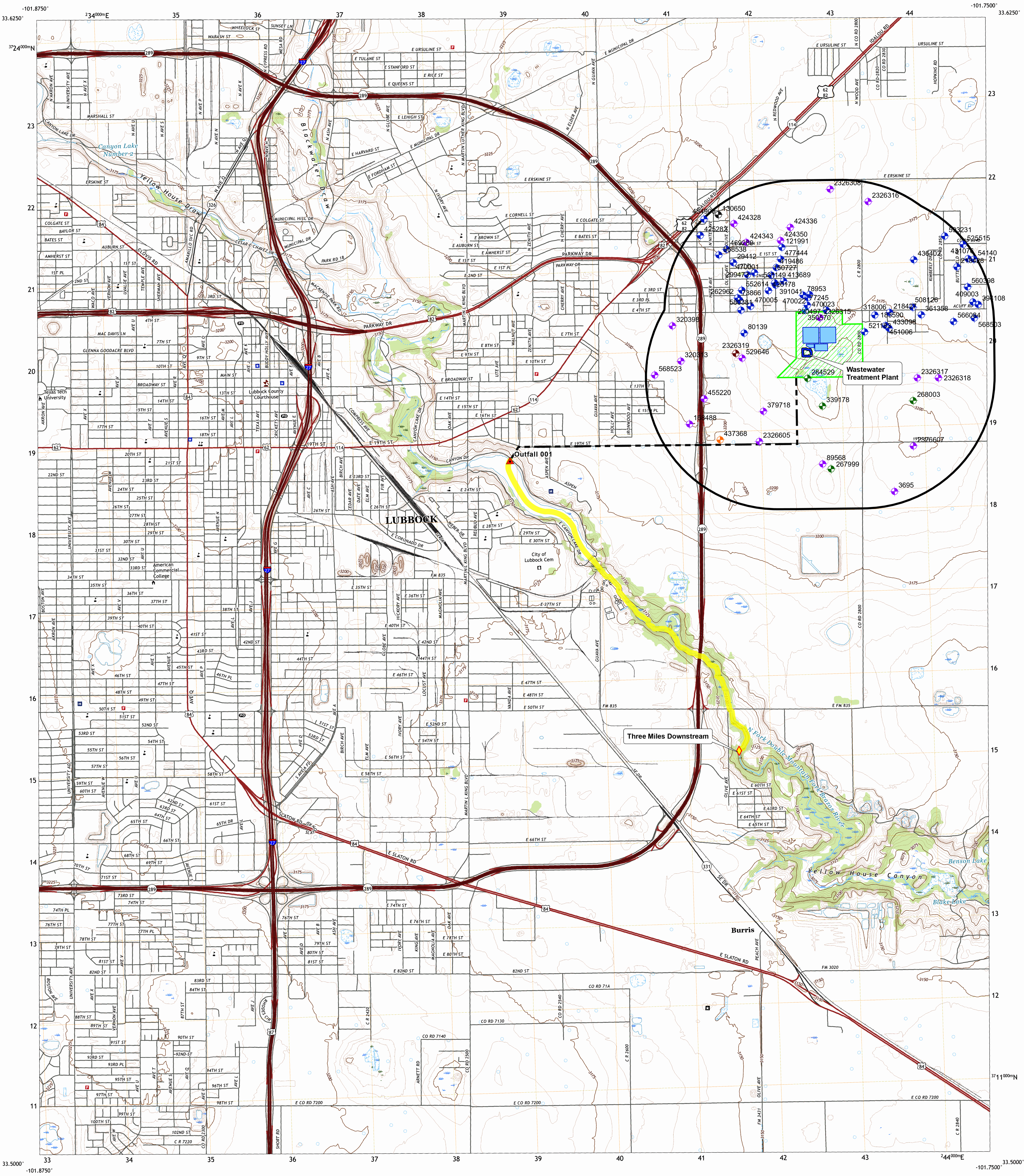
Not yet designed. Engineering data will be submitted when available.

USGS Map – Water Supply and Monitor Wells

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

The National Map US Topo

LUBBOCK EAST QUADRANGLE
TEXAS - LUBBOCK COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14S

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

Imagery............NAIP, September 2016 - November 2016
Roads............U.S. Census Bureau, 2015 - 2018
Names............GNIS, 1979 - 2021
Hydrography............National Hydrography Dataset, 2004 - 2018
Contours............National Elevation Dataset, 2020
Boundaries............Multiple sources; see metadata file 2019 - 2021

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

MN
GN
6°0´
107 MILS
1°33´
28 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
KC
Grid Zone Designation
14S

SCALE 1:24 000

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

CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Shallowater
2 New Deal
3 Idalou
4 Lubbock West
5 Buffalo Springs Lake
6 Slide
7 Woodrow
8 Slaton

ADJOINING QUADRANGLES

ROAD CLASSIFICATION

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

LUBBOCK EAST, TX
2022

Legend

- Property Boundary
- Wastewater Treatment Plant
- Impoundments
- Proposed 14" HDPE Discharge Pipe
- Outfall Location
- Discharge Route
- Downstream Marker
- One Mile Radius

Wells

- Domestic
- Environmental Soil Boring
- Industrial
- Irrigation
- Monitor
- Public Supply
- Test Well

State Water Well and Geotechnical Reports

STATE OF TEXAS WELL REPORT for Tracking #220497

Owner:	**One Builder for Life**	Owner Well #:	**No Data**
Address:	**PO Box 53493 Lubbock, TX 79453**	Grid #:	**23-26-3**
Well Location:	**4615 E. 4th St. Lubbock, TX 79403**	Latitude:	**33° 35' 34" N**
		Longitude:	**101° 46' 16" W**
Well County:	**Lubbock**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **6/23/2010** Drilling End Date: **6/23/2010**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**148**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
95	**148**	**Gravel**	**8/16**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
2	**4**	**cement**
4	**95**	**bentonite**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **15**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **Tape**

Surface Completion: **Pitless Adapter Used**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
118-130	**Fresh**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Estill Drilling**

PO Box 64491
Lubbock, TX 79464

Driller Name: **Geoffrey S. Spencer**

License Number: **58601**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**4**	**Top Soil**
4	**25**	**Brown Sandy Clay**
25	**90**	**Silty Tan Clay/ light layers of Sandstone**
90	**112**	**Sand and Gravel**
112	**118**	**Tan Clay**
118	**130**	**Sand and Gravel**
130	**141**	**Silty Sandy Clay/ Sand**
141	**148**	**Blue Limestone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
5 New PVC surface to 108
5 New PVC Screen 108-148 .035

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #284529

Owner:	**City Of Lubbock**	Owner Well #:	**SBL-01**
Address:	**402 Municipal Drive Lubbock, TX**	Grid #:	**23-26-3**
Well Location:	**City Of Lubbock Land Application Site Lubbock, TX**	Latitude:	**33° 35' 07" N**
		Longitude:	**101° 46' 25" W**
Well County:	**Lubbock**	Elevation:	**No Data**

****Plugged Within 48 Hours****

****This well has been plugged**** **Plugging Report Tracking #135655**

Type of Work: **New Well** Proposed Use: **Environmental Soil Boring**

Drilling Start Date: **3/28/2012** Drilling End Date: **3/28/2012**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**7.875**	**0**	**55**

Drilling Method: **Air Rotary**

Borehole Completion: **Unknown**

Annular Seal Data: **No Data**

Seal Method: **Not Applicable**

Sealed By: **Unknown**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Unknown**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
55-6 Bent HP 22		
6-2 Cement 1		
2-0 Fill		

Water Quality:

Strata Depth (ft.)	*Water Type*
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Straub Corporation**

P O Box 192
Stanton, TX 79782

Driller Name: **Raymond Straub Jr**

License Number: **4456**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	*Bottom (ft.)*	*Description*
0	**3.5**	**Dark Brown Clayey Silt**
3.5	**8**	**Dark Brown Silty Clay**
8	**17**	**Gray/Green Clay**
17	**30.5**	**Calcareous Silty Sand**
30.5	**39**	**Tan Silicious Sandstone**
39	**45**	**Red Silty Sandy Clay**
45	**55**	**Red/Brown Clayey Sand**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	*New/Used*	*Type*	*Setting From/To (ft.)*
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #379718

Owner:	**BAYER CROP SCIENCE**	Owner Well #:	**9680**
Address:	**1301 EAST 50TH STREET LUBBOCK, TX 79404**	Grid #:	**23-26-6**
Well Location:	**No Data**	Latitude:	**33° 34' 54" N**
		Longitude:	**101° 46' 46" W**
Well County:	**Lubbock**	Elevation:	**No Data**

Type of Work: **New Well**

Proposed Use: **Irrigation**

Drilling Start Date: **10/1/2014** Drilling End Date: **10/2/2014**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
18	**0**	**160**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**160**	**Gravel**	**3/8"**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
-1	**10**	**CEMENT**

Seal Method: **Unknown**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

	Strata Depth (ft.)	Water Type
Water Quality:	**No Data**	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **HI PLAINS DRILLING, INC.**

P. O. BOX 730
ABERNATHY, TX 79311

Driller Name: **LEEROY TREVINO** License Number: **54667**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**4**	**TOP SOIL**
4	**17**	**CALICHE AND CLAY**
17	**40**	**SANDY CLAY, SAND, SNDSTONE**
40	**45**	**HARD CAPROCK**
45	**80**	**SANDY CLAY, SAND, SANDSTONE**
80	**144**	**COARSE SAND, GRVL**
144	**155**	**HARD LIMEROCK**
155	**160**	**RED**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.) New/Used Type Setting From/To (ft.)
12 3/4 N BLANK STEEL +1 - 100 .188
12 3/4 N MILLSLOT PERF 48 SPF 100 - 160 .188

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Draft Geotechnical Engineering Report

Armadillo Food Manufacturing Facility
Lubbock, Texas
February 24, 2022
Terracon Project No. AR215097

Prepared for:
E.A. Bonelli + Associates, Inc.
Oakland, CA

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

February 24, 2022

E.A. Bonelli + Associates, Inc.
8450 Edes Avenue
Oakland, CA 94621

Attn: Ms. Lesley S. Marshall, P.E., Vice President
P: (415) 760.0360
E: Lesley.marshall@eabonelli.com

Re: Draft Geotechnical Engineering Report
Armadillo Food Manufacturing Facility
E County Road 6700
Lubbock, Texas
Terracon Project No. AR215097

Dear Ms. Marshall:

We are pleased to submit this Geotechnical Engineering report for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PAR215097 dated December 8, 2021 and E.A. Bonelli's CQC No. 21053-TRCN-001. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and pavements for the proposed project.

We appreciate the opportunity to work with you on this project and look forward to contributing to the ongoing success of this project by providing Materials Testing services during construction. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.
(Firm Registration No. F3272)

Maverick Rubin
Geotechnical Field Engineer

Jerry T. Sayson, P.E.
Geotechnical Department Manager

Reviewed by:

Greg J. Klein, P.E.
Principal

REPORT TOPICS

INTRODUCTION 1
SITE CONDITIONS 1
PROJECT DESCRIPTION 2
GEOTECHNICAL OVERVIEW 2
CORROSIVITY 4
EARTHWORK 5
SHALLOW FOUNDATIONS 9
DEEP FOUNDATIONS 12
FLOOR SLABS 15
LATERAL EARTH PRESSURE 16
SEISMIC CONSIDERATIONS 18
PAVEMENTS 18
GENERAL COMMENTS 22

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the ***GeoReport*** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Draft Geotechnical Engineering Report

Armadillo Food Manufacturing Facility
E County Road 6700
Lubbock, Texas
Terracon Project No. AR215097
February 24, 2022

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the Armadillo Food Manufacturing Facility to be located approximately one-half mile west of CR 2800, north of and E County Road 6700 in Lubbock, Texas. The purposes of these services are to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Site preparation and earthwork
- Floor slab design and construction
- Pavement design and construction
- Groundwater conditions
- Foundation design and construction
- Seismic site classification per IBC

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plans** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The main building is located 0.45 miles east and 0.25 miles north of the intersection of Loop 289 and E County Road 6700. The water treatment plant is located at the southwest corner of E County Road 6600 and Wood avenue. The coordinates of the approximate center of the proposed building area are 33.5818N, 101.7794W. The coordinates of the approximate center of the proposed water treatment plant and detention pond are 33.5889N, 101.7708W. See **Site Location.**

Item	Description
Existing Improvements	The project site has been predominately developed as agricultural fields with small portions of the southwest corner of the northeast parcel uncultivated. Structures include small equipment sheds and tanks associated near the center of each parcel associated with the field irrigation systems. Travelled roads through the site are unsurfaced dirt paths.
Current Ground Cover	Exposed soils and vegetation.

PROJECT DESCRIPTION

Our understanding of the project conditions are as follows:

Item	Description
Project Description	The proposed project is a food manufacturing facility.: ■ Main processing building will be single story precast building approximately 40 feet high with anticipated column loads of 350 to 500 kip, wall loads of 12 to 15 kip/ft and floor loads of 800 psf ■ Warehouse area and office building with anticipated column loads of 50 to 100 kip and wall loads of 5 to 10 kip/ft ■ Dryer equipment area is anticipated to be precast structure about 140 feet to 150 feet high from finish grade. The anticipated column loads are 1500 to 1800 kip and wall load of 18 kip/ft ■ Silo area is anticipated to have capacities of 20,000 to 75,000 gallons ■ Loading docks ■ Associated pavement areas. ■ Water treatment plant will be a single-story building with detention ponds
Site Topography	Gently sloping from the southwest to the northeast.
Pavements	Pavement will consist of hot mix asphaltic concrete for pavement subject to regular passenger car traffic and portland cement concrete pavement will be used for pavement subject to heavy-duty traffic. Heavy duty traffic loads were provided by the Client as 200 tractor-trailers per day, 6 days operation per week and 20-year design life.
Finished Floor Elevation	Elevation information is not available at the time of this report.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at

LEPRINO_000325

each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	**Upper Sandy Lean Clay**	Medium stiff to hard
2	**Upper Clayey Sand**	Loose to very dense
3	**Lower Sandy Lean Clay**	Medium stiff to hard
4	**Fat Clay**	Hard
5	**Lower Clayey Sand**	Dense to very dense

The borings were advanced in the dry using an air rotary drilling technique that allow short term groundwater observations to be made while drilling. Groundwater seepage was not encountered within the maximum drilling depth at the time of our field exploration. Groundwater conditions may be different at the time of construction. Groundwater conditions may change because of seasonal variations in rainfall, runoff and other conditions not apparent at the time of drilling.

GEOTECHNICAL OVERVIEW

The near surface clay soils could become unstable with typical earthwork and construction traffic, especially after precipitation events. Effective drainage should be completed early in the construction sequence and maintained after construction to avoid potential issues. If possible, the grading should be performed during the warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist.

The warehouse building, office building, silos and the wastewater treatment plant building may be supported by shallow foundations provided the foundation areas are prepared in accordance with the requirements in the **Earthwork** section. Refer to **Shallow Foundations** section for detailed recommendations. Shallow foundations for the dryer equipment area and the main processing building will require ground improvement in order to improve load-settlement relationships for the higher structure loadings associated with these features.

Alternatively, drilled pier foundations can be considered for the processing and dryer equipment area or other features where bearing capacity concerns lead to oversized foundations. Refer to **Deep Foundations** section for detailed recommendations.

The **Floor Slabs** section includes recommendations for subgrade preparation associated with performance expectations of our assumed slab loads.

Hot mix asphaltic concrete (HMAC) or portland cement concrete (PCC) pavement sections are provided herein for light-duty and heavy-duty roadways, respectively. The **Pavements** section provides additional recommendations for the design of new pavement systems.

CORROSIVITY

Tests for pH, chloride content, sulfate content, sulfide content, total salts, red-ox potential, and laboratory electrical resistivity were performed on two samples from the borings to provide an indication of the corrosion potential of the on-site materials. This limited testing program should not be interpreted as a comprehensive assessment of the site, but only provides an indication of conditions at the sampled location.

Laboratory resisitivity test results were performed using a Miller Box. The results of the resistivity tests and pH tests are summarized in the following table:

pH and Electrical Resistivity Test Results			
Boring Number	**Sample Depth[1] (feet)**	**Electrical Resistivity (Ω-cm)**	**pH**
BP6	2.5	1,859	7.70
BP7	5	1,239	7.38

1. Approximate depth below existing grade at the time of our field program.

Mapping by the Natural Resources Conservation Service (NRCS) indicates that the potential for corrosion of steel predominantly varies from “moderate” to “high” at the site. Borings BP6 and BP7 from which the samples were selected for resistivity are mapped in an area of “moderate” corrosion potential. Numerous publications exist that assess corrosion potential with varying qualitative descriptions for the measured results. Values of electrical resistivity less than 2000 ohm-cm are commonly noted as having increased corrosion potential.

Additional chemical analyses testing results are tabulated in the following table.

Chemical Test Results						
Boring Number	**Sample Depth[1] (feet)**	**Chlorides (mg/kg)**	**Water-Soluble Sulfate (SO_4) in Soil (%)**	**Water Soluble Sulfides**	**Total Salts (mg/kg)**	**Red-Ox (mV)**
BP6	2.5	50	0.005	Nil	410	+447
BP7	5	50	0.025	Nil	603	+441

1. Approximate depth below existing grade at the time of our field program.

The NRCS mapping indicates “low” concrete corrosion for the entire site. ACI 318-14 assigns Exposure Class S0 where water soluble sulfates in soil are less than 0.2 percent.

EARTHWORK

Site Preparation

Remove existing vegetation, brush, and other deleterious materials from proposed building/structure and pavement areas. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction. The stripped materials consisting of vegetation and organic materials should be wasted from the site or used to revegetate landscaped areas or exposed slopes after completion of grading operations. Building pad preparation should be conducted as described in the section below. In the remaining areas, excessively wet or dry material should either be removed, or moisture conditioned and recompacted. After removal of deleterious materials and performing required cuts, the subgrade should be proof-rolled where possible to aid in locating loose or soft areas. Proof-rolling can be performed with a 20-ton roller or fully loaded dump truck. Soils that are observed to rut or deflect excessively (typically greater than 1-inch) under the moving load should be undercut and replaced with properly compacted on-site soils. The proof-rolling and undercutting activities should be witnessed by a representative of the geotechnical engineer and should be performed during a period of dry weather.

Demolition Considerations

The project site is partially developed with an existing irrigation system. As a result, these irrigation systems may be present within the footprint area of the building area and planned pavements. The irrigation system and associated backfill and granular bedding material (if used) can provide avenues for groundwater to enter under the pavement subgrade. We recommend that all irrigation lines be completely removed from the proposed structure areas. Abandoned pipes which remain underground should be grouted.

Structures removed during demolition can create subsurface voids. It is important that all subsurface voids formed from the removal of the foundation system be backfilled completely with moisture conditioned, compacted, on-site soils/structural fill as described in this report. It is our experience that improperly backfilled excavations can cause significant differential settlement under and around the proposed structure. As an alternative to compact soil backfill, a flowable fill material may be considered. Flowable fill, or slurry, when properly designed provides a competent subgrade and can still be readily excavated if the utilities require repair or maintenance. In addition, flowable fill does not need to be placed in lifts, compacted, or tested for as-placed density.

Anticipated Borrow Areas

Borings SB25, P1 and P2 were explored in the areas where excavations are anticipated to evaluate the on-site materials as structural fill. The materials encountered in these borings are clayey sand to sandy lean with liquid limit in the range of 23 to 34 and plasticity index in the range of 10 to 18. It is our opinion that these materials are acceptable as structural fill material.

Fill Material Types

Structural fill is material used below, within 5 feet of structures, or for constructed slopes. Earthen materials used as structural fill material and on-site soils should meet the following material property requirements:

Soil Type [1]	USCS Classification	Required Parameters (for Structural Fill)
Structural Fill	CL, SC	Structural Building Pads and Pavement Locations: Clean soil (free of deleterious material and debris) without rock greater than 4 inches in maximum dimension and with liquid limits (LL) less than 35, plasticity index (PI) less than 20. Site materials encountered in the borings generally meet these requirements.

1. Soils should consist of approved materials free of organic matter, debris and rocks greater than 4 inches in maximum dimensions. Frozen material should not be used, and fill should not be placed on a frozen subgrade. The sample of structural fill type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

Fill Compaction Requirements

The recommended compaction criteria are presented in the following table. We recommend that all fills be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.

Item	Compaction Criteria
Subgrade preparation to receive fill	Surface scarified to a minimum depth of 6 inches and compacted to criteria below
Lift thickness	Loose lift thickness of 9-inch or less
Building and Pavement Areas: On-site soils or Structural Fill	A minimum of 95% of the maximum standard Proctor dry density (ASTM D 698) and within 2 percent of optimum moisture content.
Asphaltic Concrete Pavement Locations: Aggregate Base	A minimum of 95% of the maximum standard Proctor dry density (ASTM D 698) and within 2 percent of optimum moisture content.

Building Pad Area Subgrade Preparation

We recommend that onsite soils or approved structural fill materials are utilized and processed in accordance with **Fill Compaction Requirements** section. The following subgrade preparation recommendations should be performed for the proposed structures prior to foundation construction:

- After completing stripping operations, excavate at least 1 foot of the on-site soil below existing grades within the building areas. Organic and inorganic soils should be stockpiled separately for potential reuse. The building area is defined as the area that extends at least 5 feet (horizontal) beyond the perimeter of the foundation.

- After removing 1 foot of on-site soil, the exposed subgrade should be proof-rolled with a minimum 20-ton roller to evidence any weak yielding zones. A Terracon geotechnical engineer or their representative should be present to observe proof-rolling operations.

- Over-excavate any confirmed weak yielding zones, both vertically and horizontally, to expose competent soil. The upper 12 inches of the exposed competent soil should be moisture conditioned within 2 percentage points of the optimum moisture content and then compacted to at least 95 percent of the maximum dry density determined in accordance with ASTM D 698.

- Moisture condition and compact the on-site soils or structural fill material to achieve design grade within building pad areas.

Grading and Drainage

All grades must provide effective drainage away from the structures during and after construction and should be maintained throughout the life of the structure. The roof should have gutters/drains with downspouts that discharge into stormwater collection system or onto splash blocks at a distance of at least 10 feet from the structures.

Exposed ground should be sloped and maintained at a minimum 5% away from the structures for at least 10 feet beyond the perimeter of the structures. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After structures construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Planters located adjacent to the structure should preferably be self-contained, or at least designed to drain away from the building. Sprinkler mains should be located a minimum of 5 feet away from the building lines. If heads must be located adjacent to the structure, then service lines off the main should be provided. Roof drains should discharge on pavement or be extended away from the structure.

Care should be taken that utility trenches are not left open for extended periods and they are properly backfilled. Backfilling should be accomplished with properly compacted on-site soils, rather than granular materials. A positive cut-off at the building line is recommended to help prevent water from migrating in the utility trench backfill.

Earthwork Construction Considerations

It is anticipated that excavations in the overburden soils for the proposed construction can be accomplished with conventional earthmoving equipment. Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively stable. However, the stability of the subgrade may be affected by precipitation, repetitive construction traffic, closeness to the groundwater seepage or other factors. If unstable conditions develop, workability may be improved by scarifying and drying.

As a minimum, all temporary excavations should be sloped or braced as required by Occupational Health and Safety Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will probably be required during grading operations. The grading contractor, by his contract, is responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required, to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction of floor slabs and pavements. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become frozen, desiccated, saturated, or disturbed, the affected material should be removed, or these materials should be scarified, moisture conditioned, and compacted again prior to floor slab and pavement construction.

The geotechnical engineer or a representative should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proof-rolling; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction of building floor slabs.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proof-rolling, and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements specified in **Earthwork**, section, the following design parameters are applicable for the proposed project.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing pressure [1, 2]	2,000 psf
Minimum Foundation Dimensions	Columns: 30 inches Continuous: 18 inches
Ultimate Coefficient of Sliding Friction	0.35
Minimum Embedment Below Finished Grade [3]	24 inches
Estimated Total Movements from Structural Loads [2]	1 inch or less
Ultimate Passive Pressure [4]	275 psf/ft (triangular distribution)

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Item	Description
1.	The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2.	Values provided are for maximum 100-kips column load or 10 kip per linear foot continuous footing load.
3.	Unsuitable or soft soils should be over-excavated and replaced per the recommendations presented in the **Earthwork**.
4.	The sides of the excavation for the spread footings must be nearly vertical and the concrete should be placed neat against these vertical faces for the passive earth pressure values to be valid. If the loaded side is sloped or benched, and then backfilled, the allowable passive pressure will be reduced. Passive resistance in the upper 2 feet of the soil profile should be neglected.

Ground Improvement

In order to mobilize higher bearing capacity and maintain settlement to acceptable levels, use of ground improvement methods may be considered. Design of ground improvement system is typically proprietary to a specialty design-build contractor to provide a cost-effective foundation solution to support settlement sensitive structures while providing increased allowable bearing. Design of the RAP system should be performed by the specialty contractor using the soils information collected during the course of this investigation. The use of ground improvement systems can commonly increase bearing capacity to above 5,000 psf.

Uplift Considerations

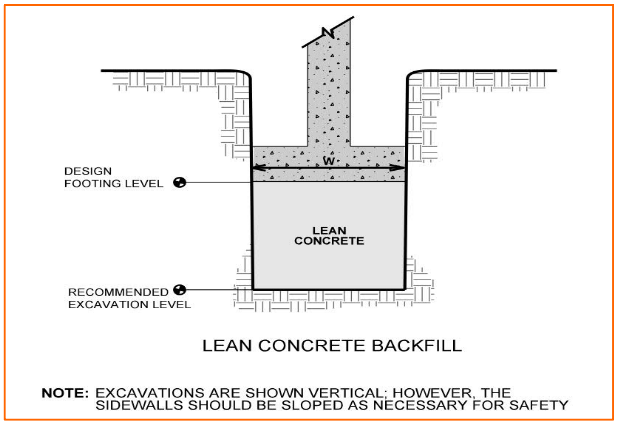
Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils. The effective weight of the soil prism defined by diagonal planes extending up from the top of the perimeter of the foundation to the ground surface at an angle of 20 degrees from the vertical can be included in uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety. A maximum total unit weight of 120 pcf could be used for compacted granular backfill at this site, respectively. This unit weight should be reduced to 55 pcf for portions of the backfill or natural soils below the design groundwater elevation (although not anticipated for this project).

Foundations subjected to overturning loads should be proportioned such that the resultant eccentricity is maintained in the center-third of the foundation (e.g., $e < b/6$). This requirement is intended to keep the entire foundation area in compression during the extreme lateral/overturning load event. Foundation oversizing could be necessary to satisfy this requirement.

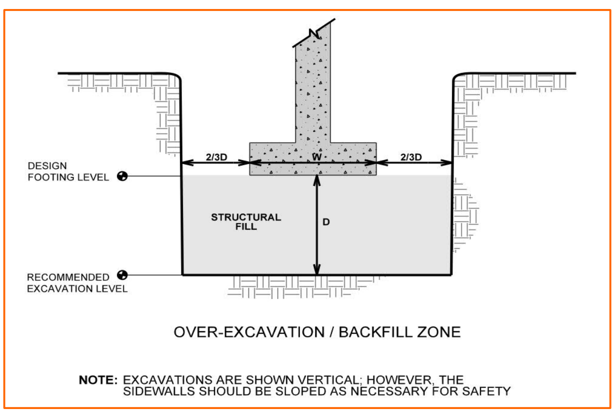
Foundation Construction Considerations

As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations represent unsuitable conditions and should be corrected before foundation concrete is placed.

If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below. Lean concrete used as excavation replacement material should not be included as part of the foundation mass to estimate eccentricity/overturning resistance.



Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation, with approved on-site soils or imported fill, as recommended in the **Earthwork** section.



DEEP FOUNDATIONS

Drilled Shaft Design Parameters

As an alternative to shallow foundations bearing on rammed aggregate piers, the main processing and dryer building structures can be supported by drilled straight shafts. The drilled, straight-shaft foundation system should be designed to resist both horizontal and vertical forces. Vertical downward forces can be resisted by the allowable end bearing pressure of the soils at the bottom of the drilled straight shaft. Vertical uplift forces can be resisted by the skin resistance, dead weight of the structure and its foundation. When foundation concrete is cast in direct contact with excavation sides, an allowable side friction value can also be used to resist vertical loads.

The allowable design criteria for utilization of a drilled straight-shaft foundation system for the proposed structure is presented in the tables below. The tables include the effective soil unit weights, the shear strength parameters, allowable end bearing pressure, and side friction values. Care should be exercised to utilize an appropriate loading condition in the analyses. The design parameters presented in the table below are applicable for the natural undisturbed soils. The capacities within the upper 4 feet of the on-site soils should be disregarded to account for surface effects and anticipated disturbance during foundation installation. Drilled straight-shaft foundations should extend at least 2 feet or one-half the shaft diameter, whichever is greater, into the desired bearing stratum in order to use the recommended allowable end bearing pressures. Drilled shafts should extend a minimum 10 feet.

Long-term settlement of the drilled straight-shaft foundation system, designed and constructed in accordance with the recommendations presented in this report, should be about one-half inch or less.

Table 1. Drilled Shaft Axial Design Summary for Dryer Building [1]

Depth Below Existing Grade, ft	Allowable Side Friction, psf [2]	Net Allowable End Bearing, ksf [3]
0-4	Ignore	Ignore
4-15	560	5
15-30	720	13
30-55	1,500	20
55-75	1,500	25
75-100	1,500	30

1. Design capacities are dependent upon the method of installation, and quality control parameters. The values provided are estimates and should be verified when installation protocols have been finalized.
2. Applicable for compressive loading only. Reduce to 2/3 of values shown for uplift loading. Effective weight of shaft can be added to uplift load capacity. The allowable skin friction values contain a safety factor of 2.
3. Shafts should extend at least one diameter into the bearing stratum for end bearing to be considered. The allowable end bearing pressure values contain a safety factor of 3.

Table 2. Drilled Shaft Axial Design Summary for Main Processing Building [1]		
Depth Below Existing Grade, ft	**Allowable Side Friction, psf [2]**	**Net Allowable End Bearing, ksf [3]**
0-4	Ignore	Ignore
4-10	520	4.4
10-20	680	8
20-35	1,300	20

1. Design capacities are dependent upon the method of installation, and quality control parameters. The values provided are estimates and should be verified when installation protocols have been finalized.
2. Applicable for compressive loading only. Reduce to 2/3 of values shown for uplift loading. Effective weight of shaft can be added to uplift load capacity. The allowable skin friction values contain a safety factor of 2.
3. Shafts should extend at least one diameter into the bearing stratum for end bearing to be considered. The allowable end bearing pressure values contain a safety factor of 3.

Drilled Shaft Lateral Loading

L-Pile parameters for lateral load analysis are shown in the following table. Default values of Strain Factor E50 and modulus, k can be used; our Geotechnical Engineer can provide these inputs if older versions of the analysis program are used by the design team.

Table 3. Drilled Shaft Lateral Design Summary for Dryer Building					
Depth Below Existing Grade, ft	**Layer Description[1]**	**L-Pile Soil Model**	**Effective Unit Weight, pcf[2]**	**Cohesion, psf**	**Angle of Internal Friction, degrees**
0-4	Lean Clay	Stiff Clay w/o free water	120	2,000	-
4-15	Lean Clay	Stiff Clay w/o free water	125	2,400	-
15-30	Lean Clay	Stiff Clay w/o free water	130	4,000	-
30-55	Clayey Sand	Sand	130	-	36
55-75	Clayey Sand	Sand	130	-	38
75-100	Clayey Sand	Sand	130	-	38

1. See **Subsurface Profile** in **Geotechnical Characterization** for more details on Layer Description.
2. Groundwater was not observed during our exploration and the effective unit weights provided are equal to the total unit weight.

Table 4. Drilled Shaft Lateral Design Summary for Main Processing Building

Depth Below Existing Grade, ft	Layer Description[1]	L-Pile Soil Model	Effective Unit Weight, pcf[2]	Cohesion, psf	Angle of Internal Friction, degrees
0-4	Lean Clay	Stiff Clay w/o free water	120	2,000	-
4-10	Lean Clay	Stiff Clay w/o free water	120	2,400	-
10-20	Lean Clay	Stiff Clay w/o free water	130	4,000	-
20-35	Clayey Sand	Sand	130	-	38

1. See **Subsurface Profile** in **Geotechnical Characterization** for more details on Layer Description.
2. Groundwater was not observed during our exploration and the effective unit weights provided are equal to the total unit weight.

Drilled Shaft Construction Considerations

The drilling contractor should be experienced in the subsurface conditions observed at the site, and the excavations should be performed with equipment capable of providing a clean bearing surface. The drilled straight-shaft foundation system should be installed in general accordance with the procedures presented in "Drilled Shafts: Construction Procedures and Design Methods," by Reese, L. C. and O'Neill, M. W., FHA Publication No. FHWA-IF-99-025, 1999 and "Standard Specification for the Construction of Drilled Piers", ACI Publication No. 336.1-01, 2001.

Drilling to design depths should be possible with a conventional heavy-duty single flight power auger. Temporary steel casing or drilling slurry may be required to properly drill and clean piers due to the granular nature of the subsurface soils. Drilled shaft concrete should be placed soon after completion of drilling and cleaning. Due to potential sloughing and raveling, foundation concrete quantities may exceed calculated geometric volumes. If casing is used for shaft construction, it should be withdrawn in a slow continuous manner maintaining a sufficient head of concrete to prevent the creation of voids in shaft concrete.

The successful completion of the drilled straight shafts will depend to a large extent on the suitability of the equipment and the operator's skills. The operation sequence should be scheduled so that the shaft excavation can be completed, reinforcing steel placed, and the concrete poured in a continuous, rapid, and orderly manner to minimize the time the excavation is open. Concrete should be placed as soon as practical and in all instances should be placed within the same day in order to use the side friction values recommended in this report.

The drilled shaft installation process should be performed under the direction of the Geotechnical Engineer. The Geotechnical Engineer should document the shaft installation process including soil and groundwater conditions encountered, consistency with expected conditions, and details of the installed shaft.

FLOOR SLABS

For the light slab loads assumed, the slab performance will largely be a function of the onsite soils or fill materials quality, and the modulus of subgrade reaction is provided in the table below for materials selected and compacted as noted in **Earthwork** section. Slab deflection can be estimated based on the load. If anticipated loads result in excess settlement that are not tolerable, our Engineer can provide recommendations for improvement to the uppermost portion of the site subgrade or more strict control of site grading fill materials and compaction requirements.

Floor Slab Design Parameters

Floor Slab Support [1]	Estimated Modulus of Subgrade Reaction [2]
Pad prepared with a minimum of 12 inch of approved on-site or imported soils placed and compacted in accordance with **Earthwork** section.	100 pounds per square inch per inch (psi/in) for point loads
Pad Prepared with a minimum of 3 feet of properly compacted structural fill and 8 inches of aggregate base	150 pounds per square inch per inch (psi/in) for point loads

1. Floor slabs should be structurally independent of building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation.
2. Modulus of subgrade reaction is an estimated value based upon our experience with the subgrade condition, the requirements noted in **Earthwork** section and the floor slab support as noted in this table. It is provided for point loads. For distributed slab loads on the clay soils at this site, the modulus of subgrade reaction can be estimates as:

   k=150/b with units of psi/in, where b is the width of the loaded area measured in feet. Our engineer can provide refined estimates of k if provided the dimensions of the loaded area to calculate settlement.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, when the project has humidity controlled areas, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels. The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

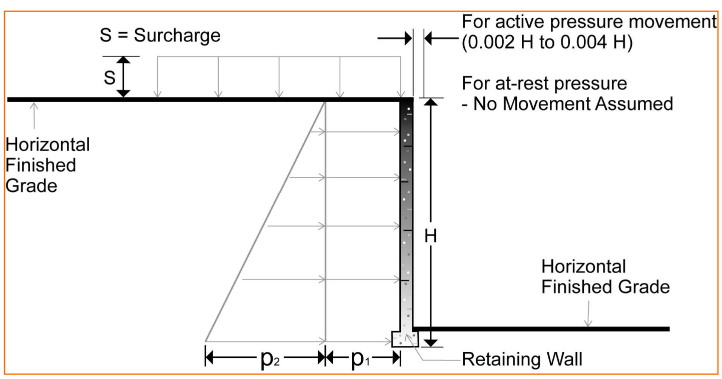
Floor Slab Construction Considerations

Finished subgrade, within and at least 5 feet beyond the floor slab, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed, and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should approve the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

LATERAL EARTH PRESSURE

Structures with unbalanced backfill levels on opposite sides should be designed for earth pressures at least equal to values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction and the strength of the materials being restrained. Two wall restraint conditions are shown. Active earth pressure is commonly used for design of free-standing cantilever retaining walls and assumes wall movement. The "at-rest" condition assumes no wall movement and is commonly used for basement walls, loading dock walls, or other walls restrained at the top. The recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls (unless stated).



Lateral Earth Pressure Design Parameters				
Earth Pressure Condition [1]	Coefficient for Backfill Type [2]	Surcharge Pressure [3, 4, 5] p_1 (psf)	Effective Fluid Pressures (psf) [2, 4, 5]	
			Unsaturated [6]	Submerged [6]
Active (Ka)	Granular - 0.31	(0.31)S	(40)H	(80)H
	Fine Grained - 0.42	(0.42)S	(50)H	(85)H
At-Rest (Ko)	Granular - 0.47	(0.47)S	(55)H	(90)H
	Fine Grained - 0.58	(0.58)S	(70)H	(95)H

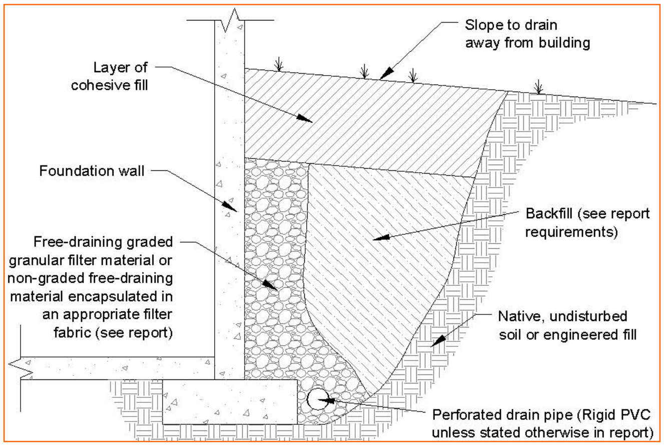
Lateral Earth Pressure Design Parameters				
Earth Pressure Condition [1]	**Coefficient for Backfill Type** [2]	**Surcharge Pressure** [3, 4, 5] **p_1 (psf)**	**Effective Fluid Pressures (psf)** [2, 4, 5]	
			Unsaturated [6]	**Submerged** [6]
Passive (Kp)	Granular - 3.25	---	(390)H	(250)H
	Fine Grained - 2.29	---	(275)H	(205)H

1. For active earth pressure, wall must rotate about base, with top lateral movements 0.002 H to 0.004 H, where H is wall height. For passive earth pressure, wall must move horizontally to mobilize resistance.
2. Uniform, horizontal backfill, compacted to at least 95 percent of the ASTM D 698 maximum dry density, rendering a maximum unit weight of 120 pcf.
3. Uniform surcharge, where S is surcharge pressure.
4. Loading from heavy compaction equipment is not included.
5. No safety factor is included in these values.
6. In order to achieve "Unsaturated" conditions, follow guidelines in **Subsurface Drainage for Below Grade Walls** below. "Submerged" conditions are recommended when drainage behind walls is not incorporated into the design.

Backfill placed against structures should consist of granular soils or low plasticity cohesive soils. For the granular values to be valid, the granular backfill must extend out and up from the base of the wall at an angle of at least 45 and 60 degrees from vertical for the active and passive cases, respectively.

Subsurface Drainage for Below Grade Walls

A perforated rigid plastic drain line installed behind the base of walls and extends below adjacent grade is recommended to prevent hydrostatic loading on the walls. The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining granular material having less than 5 percent passing the No. 200 sieve, such as No. 57 aggregate (ASTM C33). The free-draining aggregate should be encapsulated in a filter fabric. The granular fill should extend to within 2 feet of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system.



As an alternative to free-draining granular fill, a pre-fabricated drainage structure may be used. A pre-fabricated drainage structure is a plastic drainage core or mesh which is covered with filter fabric to prevent soil intrusion and is fastened to the wall prior to placing backfill.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties encountered at the site and as described on the exploration logs and results, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 100 feet.

PAVEMENTS

Both concrete and asphalt pavement design sections are anticipated to be required for the proposed project. Pavement thickness design is dependent upon:

- the anticipated traffic conditions during the life of the pavement
- subgrade and paving material characteristics

Pavement Subgrades

Pavement subgrade should be prepared in accordance with the requirements in the **Earthwork** section. A soil sample from boring BP15 was collected from 0.5 to 1.5 feet below ground surface and tested for the CBR-Value. Results indicated that the CBR-Value of the tested sample is 3.1.

This value corresponds to a subgrade Resilient Modulus (Mr) of about 5,275 psi (pounds per square inch) for use for flexible pavement design and k value of 110 pci for use in the rigid pavement design.

Site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, or rainfall. As a result, the pavement subgrade may not be suitable for pavement construction and corrective action will be required. The subgrade should be carefully evaluated at the time of pavement construction for signs of disturbance or excessive rutting. If disturbance has occurred, pavement subgrade areas should be reworked, moisture conditioned, and properly compacted to the recommendations in this report immediately prior to paving.

If actual subgrade conditions differ from the soil conditions and characteristics described herein, we should be contacted to assess the construction conditions and review the pavement design recommendations.

Design Traffic

The "Light-Duty" pavement section noted below is intended for passenger car parking area. The section labeled "Pavements Subjected to Occasional Truck Traffic" should be used in fire lanes.

Traffic levels provided by the client were converted into flexible AASHTO pavement 18-kip equivalent single axle loads (ESALs) for use in Portland Cement Concrete (PCC) design using AASHTO procedures. Traffic estimates were not provided for lower volume roadways; our analysis has assumed traffic levels associated with passenger vehicles and limited truck traffic. These traffic assumptions should be verified by the design team.

Pavement Section Thicknesses

The following tables provide options for HMAC and PCC Sections:

Hot Mix Asphaltic Concrete Design		
Layer	Minimum Thickness (inches)	
	Light Duty (30,000 ESALs)	Pavements Subjected to Occasional Truck Traffic (50,000 ESALs)
Hot Mix Asphaltic Concrete [1,2]	3	4
Aggregate Base Course [1,3]	8	6
Subgrade or Structural Fill [3]	12	12

1. All materials should meet the TxDOT 2014 Standard Specifications for Highway Construction. Aggregate base should meet Grade 1, 2 or 3, Type A, B or C Item 247 specifications.
2. A minimum 2-inch surface course should be used on HMAC pavements.

Hot Mix Asphaltic Concrete Design		
Layer	Minimum Thickness (inches)	
	Light Duty (30,000 ESALs)	Pavements Subjected to Occasional Truck Traffic (50,000 ESALs)

3. Aggregate base, subgrade and structural fill should be prepared in accordance with the requirements in the **Earthwork** section.

Portland Cement Concrete Design	
Layer	Minimum Thickness (inches)
	Heavy Duty (5.3 Million ESALs)
Portland Cement Concrete [1]	10
Subgrade or Structural Fill [2]	12

1. All materials should meet the TxDOT 2014 Standard Specifications for Highway Construction.
2. Subgrade or structural fill should be prepared in accordance with the requirements in the **Earthwork** section.

Edge restraints (i.e. concrete curbs or aggregate shoulders) should be planned along curves and areas of maneuvering vehicles. A maintenance program including surface sealing, joint cleaning and sealing, and timely repair of cracks and deteriorated areas will increase the pavement's service life. As an option, thicker sections could be constructed to decrease future maintenance.

Openings in pavements, such as decorative landscaped areas, are sources for water infiltration into surrounding pavement systems. Water can collect in the islands and migrate into the surrounding subgrade soils thereby degrading support of the pavement. This is especially applicable for islands with raised concrete curbs, irrigated foliage, and low permeability near-surface soils. The civil design for the pavements with these conditions should include features to restrict or collect and discharge excess water from the islands. Examples of features are edge drains connected to the storm water collection system, longitudinal subdrains, or other suitable outlets and impermeable barriers preventing lateral migration of water such as a cutoff wall installed to a depth below the pavement structure.

Dishing in parking lots surfaced with HMAC is usually observed in frequently-used parking stalls (such as near the front of buildings) and occurs under the wheel footprint in these stalls. The use of higher-grade asphaltic cement, or surfacing these areas with PCC, should be considered. The dishing is exacerbated by factors such as irrigated islands or planter areas, sheet surface drainage to the front of structures, and placing the HMAC directly on a compacted clay subgrade.

PCC pavement details for joint spacing, joint reinforcement, and joint sealing should be prepared in accordance with ACI 330 and ACI 325. PCC pavements should be provided with mechanically reinforced joints in accordance with ACI 330.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

Based on the possibility of shallow and/or perched groundwater, we recommend installing a pavement subdrain system to control groundwater, improve stability, and improve long-term pavement performance.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made. Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet) [1]	Location
2	98.5	Proposed Dryer Area
7	34 to 34.5	Proposed Warehouse, Office, and Processing Areas
4	33.5 to 34.5	Proposed Silos Area
4	34 to 35	Proposed Wastewater Treatment Plant Area
1	34	Proposed Lift Station Area
6	10.5 to 11.5	Proposed Pavement areas
3	10 to 11.5	Proposed Detention Pond Area
7	21.5	Proposed Pavement Area

1. Below ground surface.

Boring Layout: Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet).

Subsurface Exploration Procedures: Our soil sampling was conducted in general accordance with the Standard Method for Penetration Test and Split-Barrel Sampling of Soils (ASTM D1586). In the split-barrel sampling procedure, a standard, 2-inch O.D., split-barrel sampling spoon is driven into the boring with a 140-pound automatic SPT (Standard Penetration Test) hammer falling 30 inches. Our field personnel recorded the number of hammer blows required to advance the sampling spoon the last 12 inches of an 18-inch sampling interval as the SPT N-value. The N-values are recorded on the field boring logs. The soil samples obtained from the split-barrel sampler were visually classified and packaged for transportation to our laboratory. A 3-inch O.D. thin-walled tube was also used for sampling in various depth and boring locations as indicated in the boring logs.

The sampling depths and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. The exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

Samples retrieved during the field exploration were taken to the laboratory for further observation by the project geotechnical engineer and were classified in accordance with the Unified Soil Classification System (USCS). At that time, the field descriptions were confirmed or modified as necessary and an applicable laboratory testing program was formulated to determine engineering properties of the subsurface materials.

Laboratory tests were conducted on selected soil samples and the test results are presented in the attachments. The laboratory test results were used for the development of foundation and earthwork recommendations. Laboratory tests were performed in general accordance with the applicable ASTM, local or other accepted standards.

Selected soil samples obtained from the site were tested for the following engineering properties:

- Water content
- Atterberg limits
- Grain size analysis
- Standard Proctor
- California Bearing Value (CBR)
- Corrosivity Analyses

Final boring logs that were prepared represented the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

SITE LOCATION

Armadillo Food Manufacturing Facility ■ Lubbock, Texas
February 24, 2022 ■ Terracon Project No. AR215097

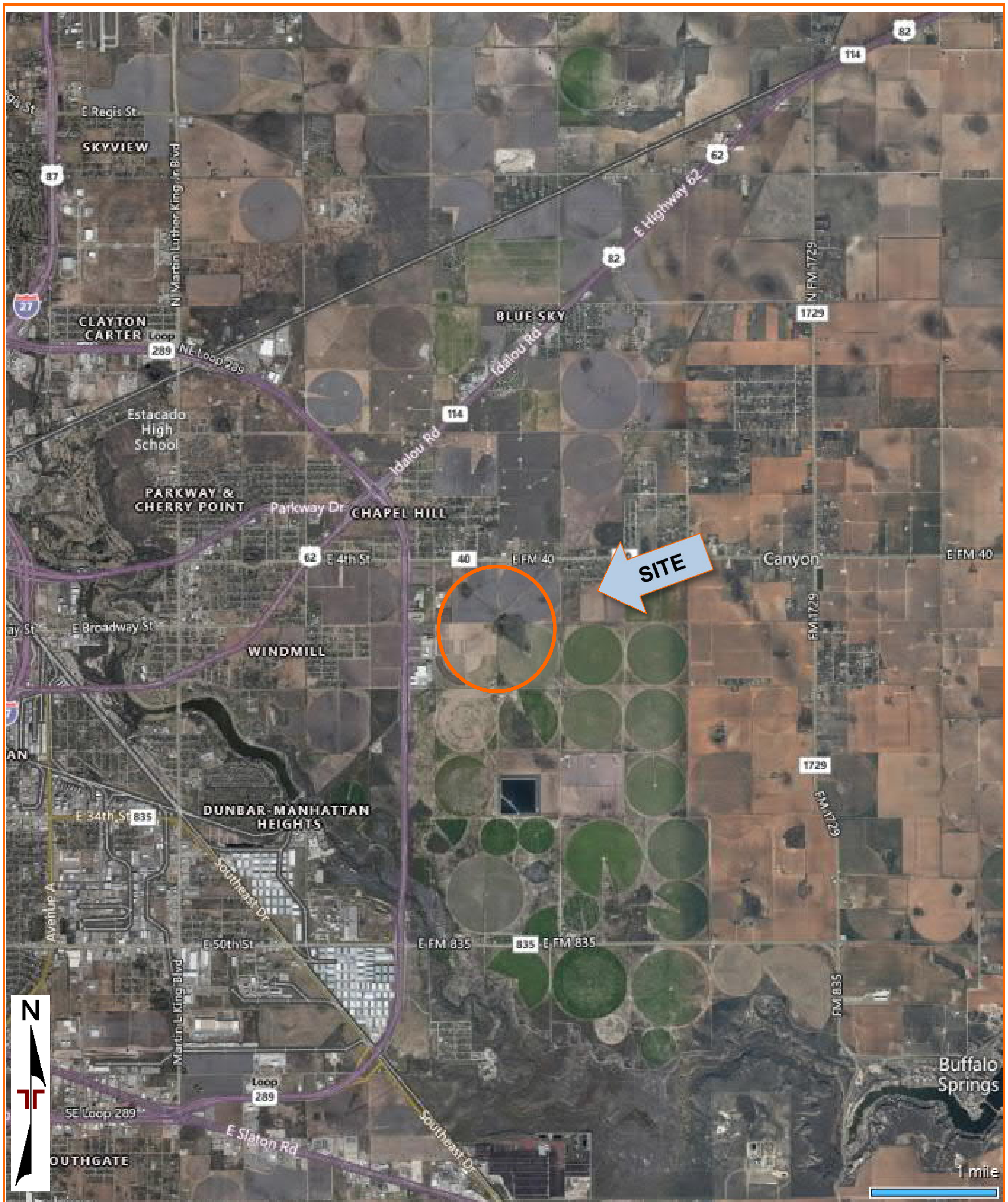


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

Boring Logs

Note: All attachments are one page unless noted above.

SUPPORTING INFORMATION

Contents:

Unified Soil Classification System
General Notes to Log Terms

Note: All attachments are one page unless noted above.

Terracon GeoReport

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification: Group Symbol	Soil Classification: Group Name[B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines[C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$[E]	GW	Well-graded gravel[F]
			$Cu < 4$ and/or [$Cc<1$ or $Cc>3.0$][E]	GP	Poorly graded gravel[F]
		Gravels with Fines: More than 12% fines[C]	Fines classify as ML or MH	GM	Silty gravel[F, G, H]
			Fines classify as CL or CH	GC	Clayey gravel[F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines[D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$[E]	SW	Well-graded sand[I]
			$Cu < 6$ and/or [$Cc<1$ or $Cc>3.0$][E]	SP	Poorly graded sand[I]
		Sands with Fines: More than 12% fines[D]	Fines classify as ML or MH	SM	Silty sand[G, H, I]
			Fines classify as CL or CH	SC	Clayey sand[G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above “A” line[J]	CL	Lean clay[K, L, M]
			PI < 4 or plots below “A” line[J]	ML	Silt[K, L, M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OL	Organic clay[K, L, M, N]
					Organic silt[K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above “A” line	CH	Fat clay[K, L, M]
			PI plots below “A” line	MH	Elastic Silt[K, L, M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OH	Organic clay[K, L, M, P]
					Organic silt[K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add “with cobbles or boulders, or both” to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add “with sand” to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add “with organic fines” to group name.

[I] If soil contains ≥ 15% gravel, add “with gravel” to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add “with sand” or “with gravel,” whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add “sandy” to group name.

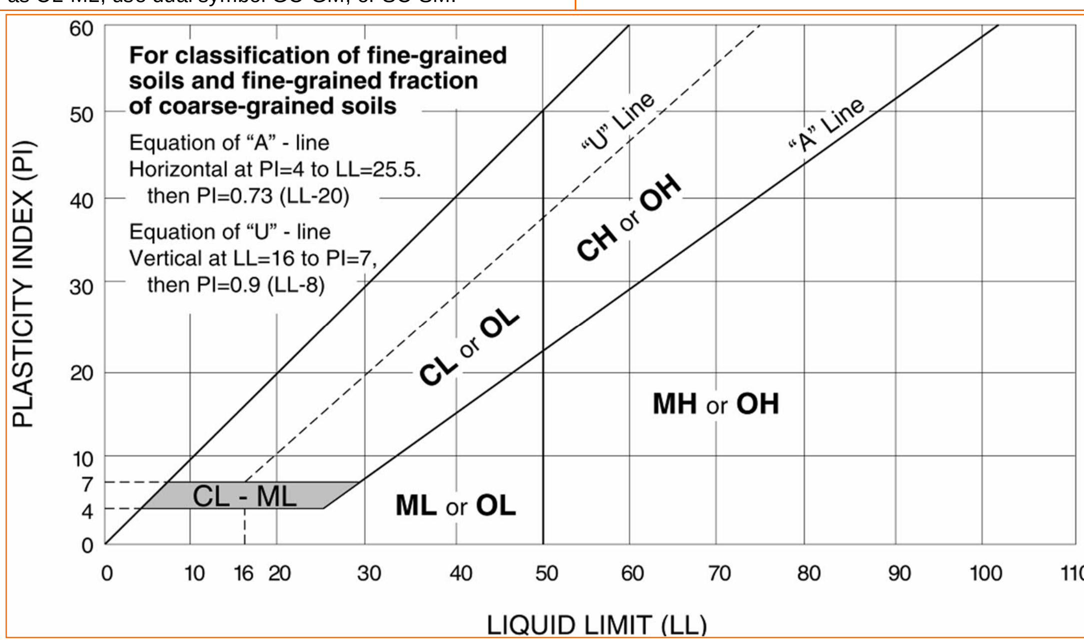
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add “gravelly” to group name.

[N] PI ≥ 4 and plots on or above “A” line.

[O] PI < 4 or plots below “A” line.

[P] PI plots on or above “A” line.

[Q] PI plots below “A” line.



GENERAL NOTES TO LOG TERMS

SAMPLING

- Auger Cuttings
- Rock Core
- Grab Sample
- Shelby Tube
- Standard Penetration Test
- Texas Cone Penetrometer
- CA Ring Sampler

WATER LEVEL

- Water Initially Encountered
- Water Level After a Specified Period of Time
- Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination for groundwater levels is not possible with short term water level observations.

FIELD TESTS

N	**Standard Penetration Test Resistance (Blows/Ft)**
(HP)	**Hand Penetrometer**

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel, or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-value Blows/Ft.**
Very Loose	0 - 3	Very Soft	Less than 0.25	0 – 1
Loose	4 - 9	Soft	0.25 to 0.5	2 – 4
Medium Dense	10 – 29	Medium Stiff	0.5 to 1.00	4 – 8
Dense	30 – 50	Stiff	1.00 to 2.00	8 – 15
Very Dense	>50	Very Stiff	2.00 to 4.00	15 – 30
		Hard	>4.00	>30

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	**Percent of Dry Weight**	**Descriptive Term(s) of other constituents**	**Percent of Dry Weight**
Trace	<15	Trace	<5
With	15 – 29	With	5 – 12
Modifier	>30	Modifier	>12

GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	**Particle Size**	**Term**	**Plasticity Index**
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300 mm to 75 mm)	Low	1 – 10
Gravel	3 in. to #4 sieve (75mm to 4.75mm)	Medium	11 – 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm)	High	>30
Silt or Clay	Passing #200 sieve (0.075mm)		

Waste Migration Assessment

Geologic Setting
The Leprino Foods processing facility impoundments are in Lubbock, Lubbock County, Texas, in the High Plain's Level III Ecoregion. The climate in these areas is characterized by dry, arid conditions with a mean average temperature of 57 to 63 degrees F and mean annual precipitation of 16 to 21 inches. The project will be developed on an agricultural field composed primarily of Lofton clay loam. The parental material makeup of Lofton is clayey lacustrine deposits profiled with moderately well drained clay loams, clays and silty clays.

Surface elevations are approximately 3175 above sea level and the topographic gradient is to the north, northwest.

Groundwater
A review of the two closest groundwater well drilling logs (#379718 and #220497) provided by the Texas Water Development Board (TWDB, 2022) indicated the uppermost water bearing unit is the Ogallala Formation approximately 80 feet below ground level. Upper lithology indicated approximately 4 feet of topsoil underlaid with caliche and clay 4 to 17 feet, sandy clay-sand-sandstone 17 to 40 feet. Hard caprock was encountered 40 to 45 feet presenting an additional restrictive layer before reaching the water bearing unit.

Migration of Wastes and Contamination Potential

The evaporation lagoons are lined with proposed 60 mil HDPE. A geomembrane is proposed below the liner to protect the liner from underlaying soils and rocks. An earthen berm has been constructed along the perimeter of the lagoons and a leak detection system has been installed. If there is a loss of containment of effluent wastewater and an impact on native soil, the upper 4 feet of topsoil coupled with the caliche and clay layers underneath, would drastically slow downward migration of effluent. Since the nearest surface water body is Canyon Lake #6, approximately 2 miles to the southwest it is unlikely that a release of effluent from the lagoons would reach this area.

Block 23-26-6

Citations

Texas Commission on Environmental Quality. Water Well Report Viewer. Accessed on 08/12/2022 at the following website:
https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=aed10178f0434f2781daff19eb326fe2

Texas Water Development Board. Plotted Water Wells. Accessed on 08/12/2022 at the following website:
https://gisweb.tceq.texas.gov/waterwellpublicAGO/search.html?type=LR&wellGrid=23-26-3#

Evaporation Calculations

Tech Report, Worksheet 3.1, 3a-3b, p. 40

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Leprino Foods Project Armadillo – Evaporation Pond Sizing

Leprino Foods Company (LFC) is planning to construct a dairy products processing plant in Lubbock, TX. As part of the production process, high total dissolved solids (TDS) process wastewater is anticipated to be generated. The proposed ponds have the ability to evaporate an average of 62,636 gallons/day based on the surface area of the pond and the annual average net evaporation rate for quadrant 406. In a worst case scenario, the ponds could handle a daily average of 105,550 gallons per day in the "critical year" before reaching freeboard capacity.

LFC plans to send the high TDS flow to two (2) evaporation lagoons, where the water will be evaporated off leaving the salts behind as a solid. Two high TDS lagoons are planned for the site, each with the surface area and volume as shown below.

Table 1.

Lagoon Sizing Information

High TDS Evaporation Lagoon (EACH)						
Stage	Elevation	Area (sf)	Volume (cy)	Volume (gal)	Cumulative Volume (CY)	Cumulative Volume (gal)
1	3171	344,568	0	0	0	0
2	3172	354,025	9,431,006	2,577,369	9,431,006	2,577,369
3	3173	363,609	9,688,059	2,648,107	19,119,065	5,225,476
4	3174	373,321	9,948,555	2,719,795	29,067,620	7,945,271
5	3175	383,161	10,212,507	2,792,441	39,280,127	10,737,712
6	3176	393,129	10,479,915	2,866,044	49,760,042	13,603,756
7	3177	403,225	10,750,779	2,978,364	60,510,821	16,582,120

Based on these criteria, the lagoons were evaluated for evaporation capacity and storage in an average and critical scenario. Evaporation data was obtained from the Texas Water Development Board database, for section 406 which contains Lubbock.

Table 2.

Critical Sizing Evaluation

CRITICAL EVAPORATION EVALUATION								
Month	# of Days	Max Daily Flow (Gallons)	Monthly Flow (Gallons)	Min Monthly Natural Evaporation (in)	Min Monthly Natural Evaporation (Gallons)	Min Monthly Mechanical Evaporatio n (Gallons)	Monthly Net Storage Required (Gallons)	Accumulated Storage (Gallons)
JAN	31	105,500	3,270,500	0.00	0	0	3,270,500	3,270,500
FEB	28	105,500	2,954,000	0.27	135,726	0	2,818,274	6,088,774
MAR	31	105,500	3,270,500	1.24	623,332	0	2,647,168	8,735,942
APR	30	105,500	3,165,000	2.04	1,025,482	0	2,139,518	10,875,461
MAY	31	105,500	3,270,500	-0.08	-40,215	0	3,310,715	14,186,176
JUN	30	105,500	3,165,000	1.61	809,326	0	2,355,674	16,541,849
JUL	31	105,500	3,270,500	3.31	1,663,895	0	1,606,605	18,148,455
AUG	31	105,500	3,270,500	2.59	1,301,960	0	1,968,540	20,116,995
SEP	30	105,500	3,165,000	0.07	35,188	0	3,129,812	23,246,807
OCT	31	105,500	3,270,500	-0.85	-427,284	0	3,697,784	26,944,591
NOV	30	105,500	3,165,000	0.54	271,451	0	2,893,549	29,838,140
DEC	31	105,500	3,270,500	0.18	90,484	0	3,180,016	33,018,156
TOTAL				10.92			33,018,156	
				Required Storage (gallons)				33,018,156
Mechanical aeration assumes 8 hours per/day operation								
				Storage Provided				33,164,240

The critical calculations show that in the event of a "wet" year, there is adequate storage capacity to handle up to 105,500 gallons/day of flow in a worse case scenario.

Table 3.

Average Sizing Evaluation

AVERAGE EVAPORATION EVALUATION					
Month	# of Days	Monthly Flow (Gallons)	Avg Monthly Natural Evaporation (in)	Avg Monthly Natural Evaporation (Gallons)	Avg Daily Natural Evaporation (Gallons)
JAN	31	2,480,000	1.66	834,461	26,918
FEB	28	2,240,000	2.11	1,060,670	37,881
MAR	31	2,480,000	3.92	1,970,534	63,566
APR	30	2,400,000	4.9	2,463,167	82,106
MAY	31	2,480,000	3.83	1,925,292	62,106
JUN	30	2,400,000	5.26	2,644,134	88,138
JUL	31	2,480,000	6.49	3,262,440	105,240
AUG	31	2,480,000	5.73	2,880,397	92,916
SEP	30	2,400,000	3.61	1,814,701	60,490
OCT	31	2,480,000	3.39	1,704,109	54,971
NOV	30	2,400,000	2.75	1,382,390	46,080
DEC	31	2,480,000	1.83	919,918	29,675
TOTAL		29,200,000	45.48	22,862,212	62,636

The average design calculations show that there is enough surface area to evaporate 62,636 gallons per year by natural means without requiring enhanced evaporation.

	precip_mean	precip_median	precip_min	precip_max	precip_10%	precip_90%	gross_evap_mean	gross_evap_median	gross_evap_min	gross_evap_max	gross_evap_10%	gross_evap_90%	net_evap_mean	net_evap_median	net_evap_min	net_evap_max	net_evap_10%	net_evap_90%
JAN	1.06	1.1	0	5.44	0.07	2.07	2.67	2.47	1.13	5.88	1.63	4.08	1.66	1.32	-2.02	5.87	0	3.74
FEB	1.13	0.94	0.01	4.16	0.19	2.23	3.2	3.19	1.67	5.45	2.04	4.76	2.11	2.1	-0.69	5.36	0.26	4.14
MAR	1.29	1.09	0.05	5.09	0.24	2.56	5.23	5.33	2.11	7.16	3.37	6.58	3.92	4.38	-1.07	6.89	1.2	6.06
APR	1.68	1.45	0	6.4	0.3	3.3	6.53	6.52	3.03	11.31	4.94	8.14	4.9	5.14	-1.47	11.31	1.99	7.79
MAY	3.04	2.89	0.26	10.84	1.02	5.02	6.8	6.62	2.56	10.65	5.14	9.03	3.83	3.98	-4.92	10.38	0.14	7.94
JUN	2.85	2.58	0.29	6.31	1.08	5.25	8.27	8.37	3.25	14.11	6.48	10.41	5.27	5.49	-2.17	13.36	1.59	8.22
JUL	2.45	2.21	0.12	9.97	0.72	4.02	8.93	8.91	4.18	13.98	6.95	10.65	6.5	6.97	-4.34	13.49	3.27	9.3
AUG	2.19	1.9	0.09	6.49	0.8	4.01	7.98	7.77	5.28	13.37	6.53	9.8	5.74	5.88	0.05	13.02	2.59	8.84
SEP	2.67	2.44	0.01	7.59	0.54	5.42	6.29	6.19	3.78	9.72	4.66	8.11	3.61	3.47	-2.29	9.17	-0.03	7.35
OCT	2.06	1.36	0	7.84	0.32	4.9	5.38	5.5	2.54	7.9	3.67	7.04	3.4	4.42	-2.71	6.81	-0.86	6.48
NOV	1.19	0.9	0	6.74	0.17	2.37	3.93	3.99	2.04	6.6	2.84	5.04	2.76	2.58	-3.83	6.49	0.51	4.92
DEC	1.08	0.89	0	3.25	0.18	2.22	2.89	2.89	0	6.2	1.83	4.19	1.83	1.88	-1.02	6.17	0.17	3.75

ATTACHMENT O. PRELIMINARY MODELING

Tech Report, Worksheet 1.0, 2(a)

- TEXTOX – Menu 4
- Screening Calculations for TDS, Chloride, and Sulfate
- Categorical Effluent Limits Analysis

TEXTOX MENU #4 - LAKE OR RESERVOIR

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 2, 2018 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	Leprino Foods
TPDES Permit No:	New
Outfall No:	001
Prepared by:	L. Tischler
Date:	5/24/2022

DISCHARGE INFORMATION

Receiving Waterbody:	Canyon Lake - North Double Mountain Fork Brazos River
Segment No.:	1241A
TSS (mg/L):	9.9
pH (Standard Units):	7.7
Hardness (mg/L as $CaCO_3$):	473
Chloride (mg/L):	1400
Effluent Flow for Aquatic Life (MGD):	2
% Effluent for Chronic Aquatic Life (Mixing Zone):	15
% Effluent for Acute Aquatic Life (ZID):	60
Effluent Flow for Human Health (MGD):	2
% Effluent for Human Health:	8
Human Health Criterion (select: PWS, FISH, or INC)	**PWS**

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Lake/Reservoir Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	89781.39	0.529		1.00	Assumed
Cadmium	6.55	-0.92	430542.10	0.190		1.00	Assumed
Chromium (total)	6.34	-0.27	1178090.08	0.079		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1178090.08	0.079		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	358037.34	0.220		1.00	Assumed
Lead	6.31	-0.53	605777.79	0.143		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	383104.50	0.209		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	226201.64	0.309		1.00	Assumed
Zinc	6.52	-0.68	696575.30	0.127		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*FW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	N/A	5.00	N/A	1.60	N/A	2.35	4.97
Aluminum	991	N/A	1652	N/A	529	N/A	776	1643
Arsenic	340	150	1070	1889	343	1152	503	1065
Cadmium	38.79	0.722	340	25.3	109	15.5	22.7	48.0
Carbaryl	2.0	N/A	3.33	N/A	1.07	N/A	1.56	3.31
Chlordane	2.4	0.004	4.00	0.0267	1.28	0.0163	0.0239	0.0505
Chlorpyrifos	0.083	0.041	0.138	0.273	0.0443	0.167	0.0650	0.137
Chromium (trivalent)	2034	264.6	42933	22339	13739	13627	20031	42379
Chromium (hexavalent)	15.7	10.6	26.2	70.7	8.37	43.1	12.3	26.0
Copper	61.40	35.72	465	1082	149	660	218	462
Cyanide (free)	45.8	10.7	76.3	71.3	24.4	43.5	35.9	75.9
4,4'-DDT	1.1	0.001	1.83	0.00667	0.587	0.00407	0.00597	0.0126
Demeton	N/A	0.1	N/A	0.667	N/A	0.407	0.597	1.26
Diazinon	0.17	0.17	0.283	1.13	0.0907	0.691	0.133	0.281
Dicofol [Kelthane]	59.3	19.8	98.8	132	31.6	80.5	46.4	98.3

Dieldrin	0.24	0.002	0.400	0.0133	0.128	0.00813	0.0119	0.0252
Diuron	210	70	350	467	112	285	164	348
Endosulfan I (*alpha*)	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endosulfan II (*beta*)	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endosulfan sulfate	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endrin	0.086	0.002	0.143	0.0133	0.0459	0.00813	0.0119	0.0252
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0667	N/A	0.0407	0.0597	0.126
Heptachlor	0.52	0.004	0.867	0.0267	0.277	0.0163	0.0239	0.0505
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.88	0.533	0.601	0.325	0.478	1.01
Lead	333.2	12.99	3886	606	1244	370	543	1149
Malathion	N/A	0.01	N/A	0.0667	N/A	0.0407	0.0597	0.126
Mercury	2.4	1.3	4.00	8.67	1.28	5.29	1.88	3.98
Methoxychlor	N/A	0.03	N/A	0.200	N/A	0.122	0.179	0.379
Mirex	N/A	0.001	N/A	0.00667	N/A	0.00407	0.00597	0.0126
Nickel	1743	193.6	13926	6187	4456	3774	5547	11737
Nonylphenol	28	6.6	46.7	44.0	14.9	26.8	21.9	46.4
Parathion (ethyl)	0.065	0.013	0.108	0.0867	0.0347	0.0529	0.0509	0.107
Pentachlorophenol	17.6	13.52	29.4	90.2	9.40	55.0	13.8	29.2
Phenanthrene	30	30	50.0	200	16.0	122	23.5	49.7
Polychlorinated Biphenyls [PCBs]	2.0	0.014	3.33	0.0933	1.07	0.0569	0.0836	0.177
Selenium	20	5	33.3	33.3	10.7	20.3	15.6	33.1
Silver	0.8	N/A	48.1	N/A	15.4	N/A	22.6	47.8
Toxaphene	0.78	0.0002	1.30	0.00133	0.416	0.000813	0.00119	0.00252
Tributyltin [TBT]	0.13	0.024	0.217	0.160	0.0693	0.0976	0.101	0.215
2,4,5 Trichlorophenol	136	64	227	427	72.5	260	106	225
Zinc	437.2	440.8	5753	23202	1841	14153	2706	5725

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	***Water and Fish Criterion (µg/L)***	***Fish Only Criterion (µg/L)***	***Incidental Fish Criterion (µg/L)***	***WLAh (µg/L)***	***LTAh (µg/L)***	***Daily Avg. (µg/L)***	***Daily Max. (µg/L)***
Acrylonitrile	1.0	115	1150	12.5	11.6	17.0	36.1
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.000143	0.000133	0.000195	0.000414
Anthracene	1109	1317	13170	13863	12892	18951	40094
Antimony	6	1071	10710	75.0	69.8	102	216
Arsenic	10	N/A	N/A	236	220	322	682
Barium	2000	N/A	N/A	25000	23250	34177	72307
Benzene	5	581	5810	62.5	58.1	85.4	180
Benzidine	0.0015	0.107	1.07	0.0188	0.0174	0.0256	0.0542
Benzo(*a*)anthracene	0.024	0.025	0.25	0.300	0.279	0.410	0.867
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.0313	0.0291	0.0427	0.0903
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.0300	0.0279	0.0410	0.0867
Bis(2-chloroethyl)ether	0.60	42.83	428.3	7.50	6.98	10.2	21.6
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55	75.5	75.0	69.8	102	216
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	128	119	174	368
Bromoform [Tribromomethane]	66.9	1060	10600	836	778	1143	2418
Cadmium	5	N/A	N/A	329	306	449	951
Carbon Tetrachloride	4.5	46	460	56.3	52.3	76.8	162
Chlordane	0.0025	0.0025	0.025	0.0313	0.0291	0.0427	0.0903
Chlorobenzene	100	2737	27370	1250	1163	1708	3615
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	93.8	87.2	128	271
Chloroform [Trichloromethane]	70	7697	76970	875	814	1196	2530
Chromium (hexavalent)	62	502	5020	775	721	1059	2241
Chrysene	2.45	2.52	25.2	30.6	28.5	41.8	88.5
Cresols [Methylphenols]	1041	9301	93010	13013	12102	17789	37636
Cyanide (free)	200	N/A	N/A	2500	2325	3417	7230
4,4'-DDD	0.002	0.002	0.02	0.0250	0.0233	0.0341	0.0723
4,4'-DDE	0.00013	0.00013	0.0013	0.00163	0.00151	0.00222	0.00469
4,4'-DDT	0.0004	0.0004	0.004	0.00500	0.00465	0.00683	0.0144
2,4'-D	70	N/A	N/A	875	814	1196	2530
Danitol [Fenpropathrin]	262	473	4730	3275	3046	4477	9472
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	2.13	1.98	2.90	6.14
m -Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	4025	3743	5502	11641
o -Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	7500	6975	10253	21692
p -Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	938	872	1281	2711

3,3'-Dichlorobenzidine	0.79	2.24	22.4	9.88	9.18	13.5	28.5
1,2-Dichloroethane	5	364	3640	62.5	58.1	85.4	180
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	87.5	81.4	119	253
Dichloromethane [Methylene Chloride]	5	13333	133330	62.5	58.1	85.4	180
1,2-Dichloropropane	5	259	2590	62.5	58.1	85.4	180
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	35.0	32.6	47.8	101
Dicofol [Kelthane]	0.30	0.30	3	3.75	3.49	5.12	10.8
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.000250	0.000233	0.000341	0.000723
2,4-Dimethylphenol	444	8436	84360	5550	5162	7587	16052
Di-*n* -Butyl Phthalate	88.9	92.4	924	1111	1033	1519	3214
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	9.75E-07	9.07E-07	0.0000013	0.0000028
Endrin	0.02	0.02	0.2	0.250	0.233	0.341	0.723
Epichlorohydrin	53.5	2013	20130	669	622	914	1934
Ethylbenzene	700	1867	18670	8750	8138	11962	25307
Ethylene Glycol	46744	1.68E+07	1.68E+08	584300	543399	798796	1689970
Fluoride	4000	N/A	N/A	50000	46500	68355	144615
Heptachlor	8.0E-05	0.0001	0.001	0.00100	0.000930	0.00136	0.00289
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.00363	0.00337	0.00495	0.0104
Hexachlorobenzene	0.00068	0.00068	0.0068	0.00850	0.00791	0.0116	0.0245
Hexachlorobutadiene	0.21	0.22	2.2	2.63	2.44	3.58	7.59
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.0975	0.0907	0.133	0.281
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	1.88	1.74	2.56	5.42
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	2.50	2.33	3.41	7.23
Hexachlorocyclopentadiene	10.7	11.6	116	134	124	182	386
Hexachloroethane	1.84	2.33	23.3	23.0	21.4	31.4	66.5
Hexachlorophene	2.05	2.90	29	25.6	23.8	35.0	74.1
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	13650	12695	18660	39479
Lead	1.15	3.83	38.3	101	93.5	137	290
Mercury	0.0122	0.0122	0.122	0.153	0.142	0.208	0.441
Methoxychlor	2.92	3.0	30	36.5	33.9	49.8	105
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	173313	161181	236935	501271
Methyl *tert* -butyl ether [MTBE]	15	10482	104820	188	174	256	542
Nickel	332	1140	11400	19890	18498	27191	57527
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	125000	116250	170887	361537
Nitrobenzene	45.7	1873	18730	571	531	780	1652
N-Nitrosodiethylamine	0.0037	2.1	21	0.0463	0.0430	0.0632	0.133
N-Nitroso-di-*n* -Butylamine	0.119	4.2	42	1.49	1.38	2.03	4.30
Pentachlorobenzene	0.348	0.355	3.55	4.35	4.05	5.94	12.5
Pentachlorophenol	0.22	0.29	2.9	2.75	2.56	3.75	7.95
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.00800	0.00744	0.0109	0.0231
Pyridine	23	947	9470	288	267	393	831
Selenium	50	N/A	N/A	625	581	854	1807
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	2.88	2.67	3.93	8.31
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	20.5	19.1	28.0	59.2
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	62.5	58.1	85.4	180
Thallium	0.12	0.23	2.3	1.50	1.40	2.05	4.33
Toluene	1000	N/A	N/A	12500	11625	17088	36153
Toxaphene	0.011	0.011	0.11	0.138	0.128	0.187	0.397
2,4,5-TP [Silvex]	50	369	3690	625	581	854	1807
1,1,1-Trichloroethane	200	784354	7843540	2500	2325	3417	7230
1,1,2-Trichloroethane	5	166	1660	62.5	58.1	85.4	180
Trichloroethylene [Trichloroethene]	5	71.9	719	62.5	58.1	85.4	180
2,4,5-Trichlorophenol	1039	1867	18670	12988	12078	17755	37563
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	1000	930	1367	2892
Vinyl Chloride	0.23	16.5	165	2.88	2.67	3.93	8.31

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Aldrin	1.64	1.99
Aluminum	543	660
Arsenic	352	427
Cadmium	15.9	19.3
Carbaryl	1.09	1.33

Chlordane	0.0167	0.0203
Chlorpyrifos	0.0455	0.0553
Chromium (trivalent)	14021	17026
Chromium (hexavalent)	8.61	10.4
Copper	153	185
Cyanide (free)	25.1	30.5
4,4'-DDT	0.00418	0.00508
Demeton	0.418	0.508
Diazinon	0.0932	0.113
Dicofol [Kelthane]	32.5	39.5
Dieldrin	0.00836	0.0101
Diuron	115	139
Endosulfan I (*alpha*)	0.120	0.146
Endosulfan II (*beta*)	0.120	0.146
Endosulfan sulfate	0.120	0.146
Endrin	0.00836	0.0101
Guthion [Azinphos Methyl]	0.0418	0.0508
Heptachlor	0.0167	0.0203
Hexachlorocyclohexane (*gamma*) [Lindane]	0.334	0.406
Lead	380	461
Malathion	0.0418	0.0508
Mercury	1.31	1.59
Methoxychlor	0.125	0.152
Mirex	0.00418	0.00508
Nickel	3883	4715
Nonylphenol	15.3	18.6
Parathion (ethyl)	0.0356	0.0433
Pentachlorophenol	9.67	11.7
Phenanthrene	16.4	19.9
Polychlorinated Biphenyls [PCBs]	0.0585	0.0711
Selenium	10.9	13.3
Silver	15.8	19.2
Toxaphene	0.000836	0.00101
Tributyltin [TBT]	0.0713	0.0866
2,4,5 Trichlorophenol	74.6	90.6
Zinc	1894	2300

Human Health ***Parameter***	***70% of Daily Avg. (µg/L)***	***85% of Daily Avg. (µg/L)***
Acrylonitrile	11.9	14.5
Aldrin	0.000137	0.000166
Anthracene	13265	16108
Antimony	71.7	87.1
Arsenic	225	274
Barium	23924	29050
Benzene	59.8	72.6
Benzidine	0.0179	0.0217
Benzo(*a*)anthracene	0.287	0.348
Benzo(*a*)pyrene	0.0299	0.0363
Bis(chloromethyl)ether	0.0287	0.0348
Bis(2-chloroethyl)ether	7.17	8.71
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	71.7	87.1
Bromodichloromethane [Dichlorobromomethane]	122	148
Bromoform [Tribromomethane]	800	971
Cadmium	314	382
Carbon Tetrachloride	53.8	65.3
Chlordane	0.0299	0.0363
Chlorobenzene	1196	1452
Chlorodibromomethane [Dibromochloromethane]	89.7	108
Chloroform [Trichloromethane]	837	1016
Chromium (hexavalent)	741	900
Chrysene	29.3	35.5
Cresols [Methylphenols]	12452	15120
Cyanide (free)	2392	2905
4,4'-DDD	0.0239	0.0290

4,4'-DDE	0.00155	0.00188
4,4'-DDT	0.00478	0.00581
2,4'-D	837	1016
Danitol [Fenpropathrin]	3134	3805
1,2-Dibromoethane [Ethylene Dibromide]	2.03	2.46
m -Dichlorobenzene [1,3-Dichlorobenzene]	3851	4677
o -Dichlorobenzene [1,2-Dichlorobenzene]	7177	8715
p -Dichlorobenzene [1,4-Dichlorobenzene]	897	1089
3,3'-Dichlorobenzidine	9.45	11.4
1,2-Dichloroethane	59.8	72.6
1,1-Dichloroethylene [1,1-Dichloroethene]	83.7	101
Dichloromethane [Methylene Chloride]	59.8	72.6
1,2-Dichloropropane	59.8	72.6
1,3-Dichloropropene [1,3-Dichloropropylene]	33.4	40.6
Dicofol [Kelthane]	3.58	4.35
Dieldrin	0.000239	0.000290
2,4-Dimethylphenol	5311	6449
Di-*n* -Butyl Phthalate	1063	1291
Dioxins/Furans [TCDD Equivalents]	9.33E-07	0.0000011
Endrin	0.239	0.290
Epichlorohydrin	639	777
Ethylbenzene	8373	10167
Ethylene Glycol	559157	678977
Fluoride	47848	58101
Heptachlor	0.000956	0.00116
Heptachlor Epoxide	0.00346	0.00421
Hexachlorobenzene	0.00813	0.00987
Hexachlorobutadiene	2.51	3.05
Hexachlorocyclohexane (*alpha*)	0.0933	0.113
Hexachlorocyclohexane (*beta*)	1.79	2.17
Hexachlorocyclohexane (*gamma*) [Lindane]	2.39	2.90
Hexachlorocyclopentadiene	127	155
Hexachloroethane	22.0	26.7
Hexachlorophene	24.5	29.7
4,4'-Isopropylidenediphenol [Bisphenol A]	13062	15861
Lead	96.2	116
Mercury	0.145	0.177
Methoxychlor	34.9	42.4
Methyl Ethyl Ketone	165854	201395
Methyl *tert* -butyl ether [MTBE]	179	217
Nickel	19033	23112
Nitrate-Nitrogen (as Total Nitrogen)	119621	145254
Nitrobenzene	546	663
N-Nitrosodiethylamine	0.0442	0.0537
N-Nitroso-di-*n* -Butylamine	1.42	1.72
Pentachlorobenzene	4.16	5.05
Pentachlorophenol	2.63	3.19
Polychlorinated Biphenyls [PCBs]	0.00765	0.00929
Pyridine	275	334
Selenium	598	726
1,2,4,5-Tetrachlorobenzene	2.75	3.34
1,1,2,2-Tetrachloroethane	19.6	23.8
Tetrachloroethylene [Tetrachloroethylene]	59.8	72.6
Thallium	1.43	1.74
Toluene	11962	14525
Toxaphene	0.131	0.159
2,4,5-TP [Silvex]	598	726
1,1,1-Trichloroethane	2392	2905
1,1,2-Trichloroethane	59.8	72.6
Trichloroethylene [Trichloroethene]	59.8	72.6
2,4,5-Trichlorophenol	12428	15091
TTHM [Sum of Total Trihalomethanes]	956	1162
Vinyl Chloride	2.75	3.34

Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate
Menu 4 - Discharge to a Lake

Applicant Name:	**Leprino Foods**
Permit Number, Outfall:	**New**
Segment Number:	**1241A**

Enter values needed for screening:			**Data Source (edit if different)**
EF - Effluent fraction at edge of human health MZ	**0.08**	decimal fraction	Critical conditions memo
CA - TDS - ambient segment concentration	**4325**	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	**1400**	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	**1340**	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	**5500**	mg/L	2010 TSWQS, Appendix A
CC - chloride - segment criterion	**2630**	mg/L	2010 TSWQS, Appendix A
CC - sulfate - segment criterion	**2400**	mg/L	2010 TSWQS, Appendix A
CE - TDS - average effluent concentration	**6000**	mg/L	Permit application
CE - chloride - average effluent concentration	**4000**	mg/L	Permit application
CE - sulfate - average effluent concentration	**4000**	mg/L	Permit application

Screening Equation

CC ≥ (EF)(CE)+(1-EF)(CA)

Preliminary Calculations **Parameter**	**Effluent Load (EF)(CE)**	**Load in Lake (1-EF)(CA)**	**New Concentration Equation 3**	**% Change in Ambient**	**% Change in Assim. Capacity**
TDS	480	3979	4459.00	3.1	11.4
Chloride	320	1288	1608.00	14.9	16.9
Sulfate	320	1232.8	1552.80	15.9	20.1

Permit Limit Calculations

TDS

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	19012.50
Calculate the LTA	LTA = WLA * 0.93	17681.63
Calculate the daily average	Daily Avg. = LTA * 1.47	**25991.99**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**54989.85**
Calculate 70% of the daily average	70% of Daily Avg. =	18194.39
Calculate 85% of the daily average	85% of Daily Avg. =	22093.19

No permit limitations needed if:	**6000**	≤	**18194.39**		
Reporting needed if:	**6000**	>	**18194.39**	**but ≤**	**22093.19**
Permit limits may be needed if:	**6000**	>	**22093.19**		

No permit limitations needed for TDS

Chloride

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	16775.00
Calculate the LTA	LTA = WLA * 0.93	15600.75
Calculate the daily average	Daily Avg. = LTA * 1.47	**22933.10**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**48518.33**
Calculate 70% of the daily average	70% of Daily Avg. =	16053.17
Calculate 85% of the daily average	85% of Daily Avg. =	19493.14

No permit limitations needed if:	**4000**	≤	**16053.17**		
Reporting needed if:	**4000**	>	**16053.17**	**but ≤**	**19493.14**
Permit limits may be needed if:	**4000**	>	**19493.14**		

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	14590.00
Calculate the LTA	LTA = WLA * 0.93	13568.70
Calculate the daily average	Daily Avg. = LTA * 1.47	**19945.99**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**42198.66**
Calculate 70% of the daily average	70% of Daily Avg. =	13962.19
Calculate 85% of the daily average	85% of Daily Avg. =	16954.09

No permit limitations needed if:	**4000**	≤	**13962.19**		
Reporting needed if:	**4000**	>	**13962.19**	**but ≤**	**16954.09**
Permit limits may be needed if:	**4000**	>	**16954.09**		

No permit limitations needed for sulfate

LEPRINO FOODS COMPANY

LUBBOCK WASTEWATER TREATMENT PLANT

DETAILED PROCESS PRODUCTION ANALYSIS FOR FINAL EFFLUENT LIMITS ESTIMATION - 8.911 MPPD OF MILK

FEDERAL FACTORS USED	
FATS	0.89
PROTEIN	1.031
CARBOHYDRATES	0.691

RAW MATERIAL	BOD OF DAIRY PRODUCT MATERIALS: FAT %	PROTEIN %	CARBOHYDRATES %	RAW MATERIAL QUANTITY PROCESSED (lbs)	PRODUCT PRODUCED	BOD_5 Input Factor (lbs of BOD_5 / 100 lbs of Raw Material Processed)	BOD_5 Input (lbs of BOD_5 / day)	Federal Effluent Standards (40 CFR 405.65/405.125) (lbs/100 lbs of BOD_5)				Discharge Limit (lbs/day)			
								Monthly Average		Daily Max		Monthly Average		Daily Max	
								BOD_5	TSS	BOD_5	TSS	BOD_5	TSS	BOD_5	TSS
MILK	4.2	3.25	4.9	8,911,000	SKIM, CREAM	10.47	933,396	0.037	0.046	0.074	0.093	345	429	691	868
P2	6	30	15	95,409	CHEESE	46.64	44,494	0.008	0.01	0.016	0.02	4	4	7	9
GRD	20.5	21	4	79,507	CHEESE	42.66	33,918	0.008	0.01	0.016	0.02	3	3	5	7
SKIM	1	3.25	4.9	6,161,453	CHEESE	7.63	469,912	0.008	0.01	0.016	0.02	38	47	75	94
SKIM	1	3.25	4.9	2,069,803	MILK UF CONCENTRATED SKIM, MILK UF PERMEATE, CHEESE, CHEESE LIQUID WHEY	7.63	157,857	0.037	0.046	0.074	0.093	58	73	117	147
CREAM	42	3.8	2.85	580,102	CHEESE, CHEESE LIQUID WHEY	43.27	250,993	0.008	0.01	0.016	0.02	20	25	40	50
CREAM	42	3.8	2.85	176,145	PRODUCT PRODUCED										
MILK UF CONCENTRATED SKIM	3	9.75	4.9	689,934	CHEESE, CHEESE LIQUID WHEY	16.11	111,136	0.008	0.01	0.016	0.02	9	11	18	22
MILK UF PERMEATE	0	0.013	4.9	1,380,091	UF PERM RO CONC MILK PERMEATE LACTOSE, WASTEWATER	3.40	46,913	0.011	0.014	0.022	0.028	5	7	10	13
CHEESE	22.7	21	4	1,716,741	PRODUCT PRODUCED										
CHEESE LIQUID WHEY	0.35	1.044	5.1	7,721,382	WHEY RETENTATE, PERMEATE	4.91	379,271	0.011	0.014	0.022	0.028	42	53	83	106
WHEY RETENTATE	0.51	8.3	3.94	507,727	WPC, PERMEATE	11.73	59,575	0.011	0.014	0.022	0.028	7	8	13	17
WPC	0.94	15.24	2.63	275,938	WPC POWDER	18.37	50,680	0.011	0.014	0.022	0.028	6	7	11	14
UF PERM RO CONC MILK PERMEATE LACTOSE	0	0.04	15.73	411,911	CONDENSED PERMEATE, WATER	10.91	44,942	0.011	0.014	0.022	0.028	5	6	10	13
PERMEATE	0	2.31	12.1	2,264,881	CONDENSED PERMEATE, WATER	10.74	243,310	0.011	0.014	0.022	0.028	27	34	54	68
CONDENSED PERMEATE	0	2.19	52.86	756,684	PERMEATE POWDER	38.78	293,474	0.011	0.014	0.022	0.028	32	41	65	82
PERMEATE POWDER	0	2.19	8185	488,691	PRODUCT PRODUCED										
WPC POWDER	4.61	82.35	10.53	56,394	PRODUCT PRODUCED										
								Total				600	750	1199	1510

EFFLUENT LIMITS IN CONCENTRATION FOR ULTIMATE BUILDOUT				
	Average Flowrate (MGD)		Max Flow rate (MGD)	
	2.31		2.94	
	Monthly Average	Daily Max	Monthly Average	Daily Max
BOD_5 (mg/L)	31.12	62	24	49
TSS (mg/L)	38.91	78	31	62
pH s.u		6.5-9 s.u		

LEPRINO_000367

ATTACHMENT P. WASTEWATER TREATMENT PLANT DETAILED PROCESS DESCRIPTION

The Probst Group
Technology-Driven Wastewater Solutions.
Your Partner. Today and Tomorrow.

262.264.5665
Main Line
www.probstgroup.com
info@probstgroup.com
17035 W. Wisconsin Ave., Suite 120
Brookfield, WI 53005

MEMO

To: Hannah Bradish

From: Chris Lewis

cc: Kelly Hawkins, Joseph Herrud, James Frazier, Tim Sprengel, Srinath Devaraj

Date: Monday, July 18, 2022

Re: Detailed Process Description for Project Armadillo

Hannah:

We have prepared the following process description to assist with your wastewater permit application.

To treat the process wastewater from the Leprino production facility for discharge to surface water, the proposed new wastewater treatment plant (WWTP) will use a combination of anaerobic and aerobic activated sludge systems to treat all high strength wastewater (HSW) and low strength wastewater (LSW) generated in production. This technology was selected to reduce energy and sludge handling costs as compared to other treatment options evaluated.

The treatment process utilizes a HSW divert system at the influent lift station. The divert system segregates the flow into HSW stream and low-strength waste stream. Due to this aspect of the process design, not all process wastewater from production travels through the anaerobic unit processes. A feature specific to this application is that each area of production (raw milk, cheese processing, nutrition) will have a dedicated divert lift station. This will allow a higher degree of control over divert because one area might have concentrated loading while another has clean water going down the drain. It will also allow loss tracking and monitoring from each department.

Brine will be kept separate from LSW and HSW streams in production and have a dedicated lift station to send brine to two evaporation lagoons, each with 9.25 acres of surface area. Water will be allowed to evaporate while dissolved solids are deposited on the bottom of the lagoon. Due to their large size, solids collection from the brine lagoon will not be required for several years. The lagoons will also be equipped with splashers to improve evaporation efficiency.

HSW and LSW sent to the WWTP each flow through dedicated influent strainer systems before entering the treatment process. The LSW is strained via two rotary screen drums then allowed to drain directly to the equalization tanks. Diverted HSW flows through an automatic in-line strainer to the HSW equalization tanks. Influent straining is important because it protects downstream process (i.e., slot mix aeration, membranes) from issues with solids such as clogging. It can also remove some particulate organic loading in a relatively simple process.

The design concept for the high-strength equalization tanks is to serve as a place to balance the flow and characteristics of the wastewater prior to sending to downstream treatment processes (in this case the anaerobic reactors). The two equalization tanks can also be operated in a series mode of operation, with second HSW equalization tank acting as a pre-acidification tank. When operating in this mode, the pre-acidification tank will be used to acidify raw high-strength wastewater to make it easier for digestion.

This system is designed with two anaerobic digester tanks. The primary design concept for anaerobic digestion is to send as much load and as little flow to the digesters as possible. The digesters perform best with a concentrated waste stream. By digesting as much COD in the digester as possible, it creates the most biogas and uses much less energy than all aerobic treatment systems. In preliminary design calculations it was estimated that on average 35,000 lbs/day of COD will be sent to the anaerobic treatment system, which is 70% of total influent COD digested by the anaerobic digesters.

The digester covers will be kept at a slight vacuum, as biogas is extracted from the headspace via a pair of hermetically sealed fans. Recovered biogas will travel through a complete biogas handling system consisting of condensate traps, drip traps, manometers, flame traps, pressure regulating valves, isolation valves, flame checks, and an automatic waste gas burner system. To account for potentially toxic fumes, the design includes a gas scrubber and monitoring system for control of H2S. The biogas generated from anaerobic digestion possesses energy value and will be sent to the boiler/heat exchangers to heat the anaerobic reactor recirculation lines. Excess biogas will simply be flared off.

Tubular crossflow ultrafiltration (UF) membranes will be used to perform solid/liquid separation (SLS) on anaerobic mixed liquor suspended solids (MLSS) from the digesters. The UF membranes will serve as a physical barrier to separate the bacteria cell mass from the stream. This will eliminate the risk of sending wastewater with a high suspended solids concentration to aerobic treatment. The final removal of the biosolids from the treated effluent eliminates the nutrients associated with the bacteria cell mass. The effluent from the anaerobic reactor (membrane permeate) will be sent to the aerobic treatment system for further processing.

The low strength process wastewater and anaerobic effluent will be treated through the activated sludge aerobic treatment process. This aerobic treatment system is designed with two equalization tanks, an anoxic selector tank, a sludge thickening tank, a fermentation tank, two aeration basins, and UF membrane solid-liquid separator. Influent LSW and anaerobic permeate combine in the equalization tanks to balance the flow and characteristics of wastewater sent to the aerobic treatment processes. Wastewater from the equalization tanks is pumped into the anoxic selector tank.

The biological anoxic selector is designed to remove nitrate (NO_3-N) concentration, aid in promoting floc forming bacteria for better settling and, when operated under anaerobic conditions, promote enhanced biological phosphorus removal. The anoxic selector is sized so that nitrate is completely removed in the anoxic basin and organic substrate is completely uptaken. Oxygen reduction potential (ORP) is controlled in the tank to maintain an anoxic environment. ORP control regulates the amount of RAS (return activated sludge) or MLSS, which have residual dissolve oxygen (DO) to maintain an anoxic environment with the raw wastewater. In normal operation the selector tank overflows via gravity into the aeration basins.

The aerobic MBR treatment technology was selected to provide a high amount of certainty related to effluent quality. The aeration basins are mixed and aerated via a slot aeration mixing system, fed by two dedicated blowers for each basin. Maintaining an adequate DO concentration in the basins allows for the biological destruction of COD in the wastewater. The aeration basins are designed with the ability to operate in either parallel or series modes of operation, providing operational flexibility. The aeration basins will also be provided with two surface aerators per basin, mounted on three-post mooring stands. The surface aerators serve three purposes: temperature control, foam control, and supplemental dissolved oxygen.

Waste activated sludge (WAS) from the aerobic process will be thickened in the sludge thickening tank, then sent to the fermentation tank to improve biological phosphorus removal or wasted to the anaerobic treatment process for digestion. The goal of the fermentation process is to boost the production of volatile fatty acids (VFAs). By introducing VFAs back into the waste stream, it supercharges the phosphorous accumulation of the micro-organisms, significantly increasing the % of TP they will uptake, and therefore reducing the reliance on chemical phosphorous removal. Waste anaerobic sludge (WANS) from the anaerobic MBR will be sent to the sludge storage tank before being mechanically dewatered and hauled off site for disposal.

Hybrid flat sheet / hollow-fiber UF membranes will be used to perform solid/liquid separation (SLS) on aerobic MLSS. The membrane will serve as a physical barrier to separate the bacteria cell mass from the stream. Permeate from the aerobic UF membranes will be sent through final ultraviolet (UV) light disinfection process to a post aeration tank which provides supplemental oxygen to the disinfected effluent. Disinfected effluent is pumped from the post aeration tank to the city's force main connection, which carries water directly to Lake #6 for discharge. An automatic sampler will collect flow proportional samples of effluent to ensure compliance with the permit is being maintained.

At the south end of the property there will be a valve manhole that can control whether effluent goes to direct discharge into Lake #6 or if it goes to the City of Lubbock, which would only happen in an emergency. In the event of an upset condition, rather than going to the City of Lubbock and paying the financial penalty, water could temporarily be sent to the

10.5-million-gallon non-compliant lagoon. This volume allows for non-compliant effluent to be contained for seven days operating at full capacity. The plant will also be equipped with an aerated 1.5-million-gallon calamity lagoon to serve as calamity storage should any process units need to be temporarily taken out of service.

Chemical dosing systems necessary for pH adjustment, phosphorous removal, coagulation, and other process controls are included in the design of the WWTP. The list of chemicals to be used on site include citric acid, sanitizer, nitric acid, membrane soak solution, SBS, ferric, micronutrients, and acid. Ferric, caustic, and SBS will be stored in 5,500-gallon bulk tanks. All other chemicals will be kept in totes or drums, with containment skids acting as secondary containment to prevent any spills from reaching the floor drains. The three bulk tanks will each be equipped with secondary containment, leak detection, level sensors, fill catches, and alarm relays.

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA.

Attachment: N/A

10. OFF-SITE/THIRD PARTY WASTES (Instructions, Page 45)

a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

☐ Yes ☒ No

If **yes**, provide responses to Items 10.b through 10.d below.

If **no**, proceed to Item 11.

b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility's activities.

Attachment: See end of this section.

c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility's wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

☐ Yes ☒ No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

Attachment: Click to enter text.

d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

☐ Yes ☒ No

If **yes**, **Worksheet 6.0** of this application **is required**.

11. RADIOACTIVE MATERIALS (Instructions, Pages 46)

a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material	Concentration (pCi/L)
N/A	N/A

b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

Radioactive Materials Present in the Discharge

Radioactive Material	Concentration (pCi/L)
N/A	N/A

12. COOLING WATER (Instructions, Pages 46-47)

a. Does the facility use or propose to use water for cooling purposes?

☒ Yes ☐ No

If **no**, stop here. If **yes**, complete Items 12.b thru 12.f.

b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

☐ Yes ☒ No

If **yes**, stop here. If **no**, continue.

c. Cooling Water Supplier

i. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

Cooling Water Intake Structure(s) Owner(s) and Operator(s)

CWIS ID	LUBBOCK PUBLIC WATER SYSTEM			
Owner	City of Lubbock			
Operator	City of Lubbock			

ii. Cooling water is/will be obtained from a Public Water Supplier (PWS)

☒ Yes ☐ No

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here: PWS No. 1520002

iii. Cooling water is/will be obtained from a reclaimed water source?

☐ Yes ☐ No

If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here: N/A

iv. Cooling water is/will be obtained from an Independent Supplier

☐ Yes ☐ No

If **yes**, provide the actual intake flow of the Independent Supplier's CWIS that is/will be used to provide water for cooling purposes to the facility and proceed: N/A

If **no**, proceed to Item 12.d.

d. 316(b) General Criteria

i. The CWIS(s) used to provide water for cooling purposes to the facility has or will have a cumulative design intake flow of 2 MGD or greater.

☐ Yes ☐ No

ii. At least 25% of the total water withdrawn by the CWIS is/will be used at the facility exclusively for cooling purposes on an annual average basis.

☐ Yes ☐ No

iii. The CWIS(s) withdraw(s)/propose(s) to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

☐ Yes ☐ No

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*: Click to enter text.

If **yes** to all three questions in Item 12.d, the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to **Item 12.f**.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however, a determination is required based upon BPJ. Proceed to **Item 12.e**.

e. The facility does not meet the minimum requirements to be subject to the fill requirements of Section 316(b) **and uses/proposes to use cooling towers**.

☐ Yes ☐ No

If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ.

f. Oil and Gas Exploration and Production

i. The facility is subject to requirements at 40 CFR Part 435, Subparts A or D.

☐ Yes ☐ No

If **yes**, continue. If **no**, skip to Item 12.g.

ii. The facility is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u).

☐ Yes ☐ No

If **yes**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ. If **no**, skip to Item 12.g.iii.

g. Compliance Phase and Track Selection

i. Phase I – New facility subject to 40 CFR Part 125, Subpart I

☐ Yes ☐ No

If **yes**, check the box next to the facility's compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – AIF greater than 2 MGD, but less than 10 MGD
- Attach information required by *40 CFR §§ 125.86(b)(2)-(4)*.

☐ Track I – AIF greater than 10 MGD
- Attach information required by *40 CFR § 125.86(b)*.

☐ Track II
- Attach information required by *40 CFR § 125.86(c)*.

Attachment: Click to enter text.

ii. Phase II – Existing facility subject to 40 CFR Part 125, Subpart J

☐ Yes ☐ No

If **yes**, complete Worksheets 11.0 through 11.3, as applicable.

iii. Phase III – New facility subject to 40 CFR Part 125, Subpart N

☐ Yes ☐ No

If **yes**, check the box next to the facility's compliance track selection and provide the requested information.

☐ Track I – Fixed facility
- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – Not a fixed facility
- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except the CWIS latitude and longitude under Item 2.a).

☐ Track II – Fixed facility
- Attach information required by 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

Attachment: Click to enter text.

NOTE: Item 13 is required only for existing permitted facilities.

13. PERMIT CHANGE REQUESTS (Instructions, Pages 49-50)

a. Is the facility requesting a **major amendment** of an existing permit?

☐ Yes ☒ No

If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

N/A

b. Is the facility requesting any **minor amendments** to the permit?

☐ Yes ☒ No

If **yes**, list and discuss the requested changes.

N/A

c. Is the facility requesting any **minor modifications** to the permit?

☐ Yes ☒ No

If **yes**, list and discuss the requested changes.

N/A

Attachment for 10b.

- List of wastes received (including volumes, characterization, and capability with on-site wastes). **Wastewater identical in quality to the on-site generated wastewater including, process wastewater and high TDS water, will be received. Volumes are unknown, but the facility will only accept volumes that are allowed by the current permit limits to be maintained.**

- Identify the sources of wastes received (including the legal name and addresses of the generators). **Legal Name: Leprino Foods Company**
  Addresses: All US operations

- Description of the relationship of waste source(s) with the facility's activities. **Waste source will be from processes at other Leprino sites in the U.S.**