

NEW BRAUNFELS UTILITIES GRUENE ROAD WATER RECLAMATION FACILITY

TPDES DISCHARGE PERMIT APPLICATION (RENEWAL)

TPDES Permit No. WQ0010232002

July 2019

Prepared by:



TBPE Firm Registration #F-8632

NEW BRAUNFELS UTILITIES GRUENE ROAD WATER RECLAMATION FACILITY TPDES DISCHARGE PERMIT APPLICATION (RENEWAL)

Table of Contents

APPLICATION DOCUMENTS

Domestic Administrative Report (10053) Domestic Administrative Report Checklist Domestic Administrative Report 1.0 Domestic Administrative Report 1.1 Supplemental Permit Information Form

Domestic Technical Report (10054) Domestic Technical Report 1.0 Domestic Technical Report 1.1 (Not Used) Domestic Technical Report Worksheet 2.0 Worksheet 2.1 (Not Used) Worksheet 3.0 (Not Used) Worksheet 3.1 (Not Used) Worksheet 3.2 (Not Used) Worksheet 3.3 (Not Used) Worksheet 4.0 Worksheet 5.0 Domestic Technical Report Worksheet 6.0 Worksheet 7.0 (Not Used)

ATTACHMENTS

Attachment No. Description

Original USGS Map
 Buffer Zone Map
 Supplemental Permit Information Form USGS Map
 Process Description
 Treatment Unit Dimensions
 Flow Diagrams
 Site Drawing
 Core Data Form

Appendix A Laboratory Reports

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT: <u>New Braunfels Utilities</u>

PERMIT NUMBER: WQ0010232002

Indicate if each of the following items is included in your application.

	Y	Ν		Y	Ν
Administrative Report 1.0	\bowtie		Original USGS Map	\boxtimes	
Administrative Report 1.1	\boxtimes		Affected Landowners Map		\boxtimes
SPIF	\boxtimes		Landowner Disk or Labels		\boxtimes
Core Data Form	\boxtimes		Buffer Zone Map	\boxtimes	
Technical Report 1.0	\boxtimes		Flow Diagram	\boxtimes	
Technical Report 1.1	\boxtimes		Site Drawing	\boxtimes	
Worksheet 2.0	\boxtimes		Original Photographs		\boxtimes
Worksheet 2.1			Design Calculations		\boxtimes
Worksheet 3.0			Solids Management Plan		\boxtimes
Worksheet 3.1			Water Balance		\boxtimes
Worksheet 3.2					
Worksheet 3.3					
Worksheet 4.0					
Worksheet 5.0					
Worksheet 6.0	\boxtimes				
Worksheet 7.0					

For TCEQ Use Only		
Segment Number	County	
Expiration Date	Region	
Permit Number		



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPLICATION FOR A DOMESTIC WASTEWATER PERMIT ADMINISTRATIVE REPORT 1.0

TCEQ If you have questions about completing this form please contact the Applications Review and Processing Team at 512-239-4671.

Section 1. Application Fees (Instructions Page 29)

Indicate the amount submitted for the application fee (check only one).

Flow	New/Major A	mend	ment Renewal
<0.05 MGD	\$350.00 🗆		\$315.00 🗆
≥0.05 but <0.10 M	IGD \$550.00 □		\$515.00 🗆
≥0.10 but <0.25 M	IGD \$850.00 □		\$815.00
≥0.25 but <0.50 M	IGD \$1,250.00 □		\$1,215.00 🗆
$\geq 0.50 \text{ but } < 1.0 \text{ MC}$	GD \$1,650.00 □		\$1,615.00
≥1.0 MGD	\$2,050.00 🗖		\$2,015.00
Minor Amendment	(for any flow) \$150.00		
Payment Informat	ion:		
Mailed	Check/Money Order Numbe	er: Chi	k here to enter text.
	Check/Money Order Amour	nt: <u>\$2,</u>	<u>015.00</u>
	Name Printed on Check:		e to enter text.
EPAY	Voucher Number:		lter text.
Copy of Pay	ment Voucher enclosed?		Yes 🖂
Section 2. Typ	e of Application (Instr	uctio	ons Page 29)
□ New TPDES			New TLAP
□ Major Amendr	nent <u>with</u> Renewal		Minor Amendment <u>with</u> Renewal
□ Major Amendr	nent <u>without</u> Renewal		Minor Amendment <u>without</u> Renewal
⊠ Renewal with	out changes		Minor Modification of permit
For amendments o	r modifications, describe the	propo	osed changes:
For existing permi	its:		
Permit Number: Wo	Q00 <u>10232002</u>		
EPA I.D. (TPDES on	ly): TX <u>0070939</u>		

Section 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 29)

A. The owner of the facility must apply for the permit.

What is the Legal Name of the entity (applicant) applying for this permit?

New Braunfels Utilities

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at <u>http://www15.tceq.texas.gov/crpub/</u>

CN: <u>600522957</u>

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44*.

Prefix (Mr., Ms., Miss): <u>Mr.</u>

First and Last Name: <u>Ryan Kelso</u>

Credential (P.E, P.G., Ph.D., etc.):

Title: <u>Chief Operations Officer</u>

B. Co-applicant information. Complete this section only if another person or entity is required to apply as a co-permittee.

What is the Legal Name of the co-applicant applying for this permit?

(The legal name must be spelled exactly as filed with the TX SOS, with the County, or in the legal documents forming the entity.)

If the co-applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at: <u>http://www15.tceq.texas.gov/crpub/</u>

CN: Click here

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44*.

Prefix (Mr., Ms., Miss):
First and Last Name:
Credential (P.E, P.G., Ph.D., etc.):
Title: Click here to enter text

Provide a brief description of the need for a co-permittee:

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0.

Attachment: 8

Section 4. Application Contact Information (Instructions Page 30)

This is the person(s) TCEQ will contact if additional information is needed about this application. Provide a contact for administrative questions and technical questions.

A.	Prefix (Mr., Ms., Miss): <u>Mr.</u>
	First and Last Name: <u>H. Craig Bell</u>
	Credential (P.E, P.G., Ph.D., etc.): <u>P.E.</u>
	Title: <u>Austin CES Practice Leader</u>
	Organization Name: <u>TRC Engineers, Inc.</u>
	Mailing Address: 505 East Huntland Drive, Suite 250
	City, State, Zip Code: <u>Austin, Texas, 78752</u>
	Phone No.: <u>512-924-4999</u> Ext.: Fax No.: <u>512-454-2433</u>
	E-mail Address: <u>Cbell@trccompanies.com</u>
	Check one or both: Administrative Contact Check one or both: Check on
B.	Prefix (Mr., Ms., Miss): Mr.
	First and Last Name: Brent Lundmark
	Credential (P.E, P.G., Ph.D., etc.):
	Title: <u>Water Treatment & Compliance Manager</u>
	Organization Name: <u>New Braunfels Utilities</u>
	Mailing Address: <u>1922 Kuehler</u>
	City, State, Zip Code: <u>New Braunfels, Texas, 78130</u>
	Phone No.: <u>830-608-8900</u> Ext.: Fax No.:
	E-mail Address: <u>blundmark@nbutexas.com</u>
	Check one or both: 🛛 Administrative Contact 🗆 Technical Contact

Section 5. Permit Contact Information (Instructions Page 30)

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

A. Prefix (Mr., Ms., Miss): Mr.

	First and Last Name: <u>John Harrell</u>
	Credential (P.E, P.G., Ph.D., etc.):
	Title: <u>President</u>
	Organization Name: <u>New Braunfels Utilities</u>
	Mailing Address: <u>263 Main Plaza</u>
	City, State, Zip Code: <u>New Braunfels, Texas, 78130</u>
	Phone No.: <u>830-608-8400</u> Ext.: Fax No.: <u>830-629-2119</u>
	E-mail Address: <u>jharrell@nbutexas.com</u>
B.	Prefix (Mr., Ms., Miss): <u>Mr.</u>
	First and Last Name: <u>Ryan Kelso</u>
	Credential (P.E, P.G., Ph.D., etc.):
	Title: <u>Chief Operations Officer</u>
	Organization Name: <u>New Braunfels Utilities</u>
	Mailing Address: <u>263 Main Plaza</u>
	City, State, Zip Code: <u>New Braunfels, Texas, 78130</u>
	Phone No.: <u>830-629-8416</u> Ext.: Fax No.: <u>830-629-2119</u>
	E-mail Address: rkelso@nbutexas.com

Section 6. Billing Information (Instructions Page 30)

The permittee is responsible for paying the annual fee. The annual fee will be assessed to 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 (using form TCEQ-20029).

Prefix (Mr., Ms., Miss): <u>Mr.</u>	
First and Last Name: <u>Brent Lundmark</u>	
Credential (P.E, P.G., Ph.D., etc.):	
Title: <u>Water Treatment & Compliance Manager</u>	
Organization Name: <u>New Braunfels Utilities</u>	
Mailing Address: <u>1922 Kuehler</u>	
City, State, Zip Code: <u>New Braunfels, Texas, 78130</u>	
Phone No.: <u>830-608-8900</u> Ext.:	Fax No.:
E-mail Address: blundmark@nbutexas.com	

Section 7. DMR/MER Contact Information (Instructions Page 31)

Provide the name and complete mailing address of the person delegated to receive and submit Discharge Monitoring Reports (EPA 3320-1) or maintain Monthly Effluent Reports.

Prefix (Mr., Ms., Miss): <u>Mr.</u>
First and Last Name: <u>Brent Lundmark</u>
Credential (P.E, P.G., Ph.D., etc.):
Title: <u>Water Treatment & Compliance Manager</u>
Organization Name: New Braunfels Utilities
Mailing Address: <u>1922 Kuehler</u>
City, State, Zip Code: <u>New Braunfels, Texas, 78130</u>
Phone No.: <u>830-608-8900</u> Ext.: Fax No.:
E-mail Address: <u>blundmark@nbutexas.com</u>

DMR data is required to be submitted electronically. Create an account at:

https://www.tceq.texas.gov/permitting/netdmr/netdmr.html.

Section 8. Public Notice Information (Instructions Page 31)

A. Individual Publishing the Notices

Prefix (Mr., Ms., Miss): Ms. First and Last Name: Pam Quidley Credential (P.E, P.G., Ph.D., etc.): Title: Communications & External Affairs Manager Organization Name: New Braunfels Utilities Mailing Address: 263 Main Plaza City, State, Zip Code: <u>New Braunfels, Texas, 78130</u> Phone No.: <u>830-312-7940</u> Ext.: Fax No.: 830-629-8345 E-mail Address: pquidley@nbutexas.com

B. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package

Indicate by a check mark the preferred method for receiving the first notice and instructions:

- E-mail Address
- Fax
- \boxtimes **Regular Mail**

C. Contact person to be listed in the Notices

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Brent Lundmark

Credential (P.E, P.G., Ph.D., etc.):

Title: Water Treatment & Compliance Manager

Organization Name: New Braunfels Utilities

Phone No.: <u>830-608-8900</u> Ext.:

E-mail: <u>blundmark@nbutexas.com</u>

D. Public Viewing Information

If the facility or outfall is located in more than one county, a public viewing place for each county must be provided.

Public building name: New Braunfels Utilities Main Office

Location within the building: Inquire at Front Desk

Physical Address of Building: <u>263 Main Plaza</u>

City: <u>New Braunfels</u> County: <u>Comal</u>

Contact Name: <u>Pam Quidley</u>

Phone No.: <u>830-629-8400</u> Ext.:

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

If **no**, publication of an alternative language notice is not required; **skip to** Section 9 below.

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

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

□ Yes ⊠ No

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

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? <u>Spanish</u>

Section 9. Regulated Entity and Permitted Site Information (Instructions Page 33)

A. If the site is currently regulated by TCEQ, provide the Regulated Entity Number (RN) issued to this site. **RN**<u>101700946</u>

Search the TCEQ's Central Registry at <u>http://www15.tceq.texas.gov/crpub/</u> to determine if the site is currently regulated by TCEQ.

B. Name of project or site (the name known by the community where located):

Gruene Road Reclamation Facility

C. Owner of treatment facility: <u>New Braunfels Utilities</u>

D. Owner of land where treatment facility is or will be:

Prefix (Mr., Ms., Miss):

First and Last Name: <u>New Braunfels Utilities</u>

Mailing Address: 263 Main Plaza

City, State, Zip Code: New Braunfels, Texas, 78131

Phone No.: <u>830-629-8400</u> E-mail Address:

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment:

E. Owner of effluent disposal site:

Prefix (Mr., Ms., Miss): <u>N/A</u>	
First and Last Name:	tter text
Mailing Address:	
City, State, Zip Code:	iter text.
Phone No.:	E-mail Address:

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment:

F. Owner of sewage sludge disposal site (if authorization is requested for sludge disposal on property owned or controlled by the applicant):

Prefix (Mr., Ms., Miss): <u>N/A</u>	
First and Last Name:	iter text
Mailing Address:	Text.
City, State, Zip Code:	nter text.
Phone No.:	E-mail Address:

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment:

Section 10. TPDES Discharge Information (Instructions Page 34)

A. Is the wastewater treatment facility location in the existing permit accurate?

🖾 Yes 🗆 No

If **no**, **or a new permit application**, please give an accurate description:

B. Are the point(s) of discharge and the discharge route(s) in the existing permit correct?

🖾 Yes 🗆 No

If **no**, **or a new or amendment permit application**, provide an accurate description of the point of discharge and the discharge route to the nearest classified segment as defined in 30 TAC Chapter 307:

City nearest the outfall(s): <u>New Braunfels</u>

County in which the outfalls(s) is/are located: <u>Comal</u>

Outfall Latitude: Existing - 29.7377 N Interim II/Final-29.7274 NLongitude: Existing -98.1058 W Interim II/Final-98.1121 WExisting -

C. 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, provide copies of letters that show proof of contact and the approval letter upon receipt.

Attachment:

D. 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.

<u>N/A</u>

Section 11. TLAP Disposal Information (Instructions Page 36)

- A. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?
 - 🗆 Yes 🗆 No

If **no, or a new or amendment permit application**, provide an accurate description of the disposal site location:

<u>N/A</u>

- **B.** City nearest the disposal site:
- **C.** County in which the disposal site is located:
- D. Disposal Site Latitude: Longitude:
- **E.** For **TLAPs**, describe the routing of effluent from the treatment facility to the disposal site:
- **F.** For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained:

Section 12. Miscellaneous Information (Instructions Page 37)

- A. Is the facility located on or does the treated effluent cross American Indian Land?
 - 🗆 Yes 🖾 No
- **B.** If the existing permit contains an onsite sludge disposal authorization, is the location of the sewage sludge disposal site in the existing permit accurate?

Voo	Mo	Not Applicable
168	INC	NOT ADDITCADIE
100	 110	1,0011001010

If No, or if a new onsite sludge disposal authorization is being requested in this permit application, provide an accurate location description of the sewage sludge disposal site.

C.	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 formerly employed by the TCEQ who represented your company and was paid for service regarding the application:
	Click here to enter text.
D.	Do you owe any fees to the TCEQ?
D.	Do you owe any fees to the TCEQ?
D.	Do you owe any fees to the TCEQ? □ Yes ⊠ No If yes , provide the following information:
D.	Do you owe any fees to the TCEQ? □ Yes ⊠ No If yes, provide the following information: Account number: Amount past due:
D. E.	Do you owe any fees to the TCEQ? □ Yes No If yes, provide the following information: Account number: Amount past due: Do you owe any penalties to the TCEQ?
D. E.	Do you owe any fees to the TCEQ? □ Yes No If yes, provide the following information: Account number: Amount past due: Do you owe any penalties to the TCEQ? □ Yes No
D. E.	Do you owe any fees to the TCEQ? □ Yes No If yes, provide the following information: Account number: Amount past due: Do you owe any penalties to the TCEQ? □ Yes No If yes, please provide the following information:

Section 13. Attachments (Instructions Page 38)

Indicate which attachments are included with the Administrative Report. Check all that apply:

- Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.
- Original full-size USGS Topographic Map with the following information:
 - Applicant's property boundary
 - Treatment facility boundary
 - Labeled point of discharge for each discharge point (TPDES only)
 - Highlighted discharge route for each discharge point (TPDES only)
 - Onsite sewage sludge disposal site (if applicable)

- Effluent disposal site boundaries (TLAP only)
- New and future construction (if applicable)
- 1 mile radius information
- 3 miles downstream information (TPDES only)
- All ponds.
- Attachment 1 for Individuals as co-applicants
- □ Other Attachments. Please specify:

Section 14. Signature Page (Instructions Page 39)

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

Permit Number: <u>N/A</u>

Applicant: <u>New Braunfels Utilities</u>

Certification:

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

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): <u>Ryan Kelso</u> Signatory title: <u>Chief Operations Officer</u>

Signature:(Use blue ink)		_Date:	
Subscribed and Sworn to before n	ne by the said		
on this	_day of	, 20	
My commission expires on the	day of	, 20	<u> </u>

Notary Public

[SEAL]

County, Texas

DOMESTIC ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 41)

- **A.** Indicate by a check mark that the landowners map or drawing, with scale, includes the following information, as applicable:
 - □ 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 (for example, irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property
 - □ The property boundaries of all landowners surrounding the effluent disposal site
 - The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners surrounding 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 (for example, sludge surface disposal site or sludge monofill) is located
- **B.** Indicate by a check mark that a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided.
- C. Indicate by a check mark in which format the landowners list is submitted:
 - □ Readable/Writeable CD □ Four sets of labels
- **D.** Provide the source of the landowners' names and mailing addresses:
- **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):
Click here to enter text.

Section 2. Original Photographs (Instructions Page 44)

Provide original ground level photographs. Indicate with checkmarks that the following information is provided.

- □ 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

Section 3. Buffer Zone Map (Instructions Page 44)

- **A.** Buffer zone map. Provide a buffer zone map on 8.5 x 11-inch paper with all of the following information. The applicant's property line and the buffer zone line may be distinguished by using dashes or symbols and appropriate labels.
 - The applicant's property boundary;
 - The required buffer zone; and
 - Each treatment unit; and
 - The distance from each treatment unit to the property boundaries.
- **B.** Buffer zone compliance method. Indicate how the buffer zone requirements will be met. Check all that apply.
 - □ Ownership
 - □ Restrictive easement
 - □ Nuisance odor control
 - □ Variance
- **C.** Unsuitable site characteristics. Does the facility comply with the requirements regarding unsuitable site characteristic found in 30 TAC § 309.13(a) through (d)?

□ Yes □ No

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:								
Application type:RenewalMajor An	nendmentNinor AmendmentNew							
County:	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 53)

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: <u>New Braunfels Utilities</u>

Permit No. WQ00 10232002

EPA ID No. TX <u>0070939</u>

Address of the project (or a location description that includes street/highway, city/vicinity, and county):

The existing treatment facility in operation is located at 1493 Gruene Road, New Braunfels, Texas 78130 in Comal County. The existing facility is .75 miles northeast of the intersection of Hwy 46 and Gruene Rd. The proposed facility will be located at 1835 Gruene Rd, New Braunfels TX 78130 in Comal County. The proposed facility will be constructed on a 30.1 acre located on the northeast corner of the intersection of Hwy 46 (Loop 337) and Gruene Rd, approximately 1.8 miles northwest of IH 35 on Hwy 46. Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Brent Lundmark

Credential (P.E, P.G., Ph.D., etc.):

Title: Water Treatment & Compliance Manager

Mailing Address: 1922 Kuehler

City, State, Zip Code: New Braunfels, Texas, 78130

Phone No.: 830-608-8900 Ext.:

Fax No.: E-mail Address: blundmark@nbutexas.com

- 2. List the county in which the facility is located: Comal
- 3. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property. N/A
- 4. 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.

Segment 1812 of the Guadalupe River Basin. (Guadalupe River below Canyon Dam)

5. Please provide a separate 7.5-minute USGS guadrangle 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).

Provide original photographs of any structures 50 years or older on the property.

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

- \boxtimes Proposed access roads, utility lines, construction easements
- Visual effects that could damage or detract from a historic property's integrity
- \boxtimes Vibration effects during construction or as a result of project design
- Additional phases of development that are planned for the future \boxtimes
- Sealing caves, fractures, sinkholes, other karst features

- Disturbance of vegetation or wetlands
- 6. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

<u>The proposed construction will impact approximately 10 acres with excavation depths of 10-15 feet on average at the structures. The maximum depth will be approximately 60 feet at the raw influent lift station.</u>

 Describe existing disturbances, vegetation, and land use:
 <u>Vegetation is a mixture of wooded and pasture land with periodic agricultural use.</u> <u>Historical land use has been agricultural/residential.</u>

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

- 8. List construction dates of all buildings and structures on the property: <u>Existing Plant: 1989</u> Proposed Plant: 2018-2020
- 9. Provide a brief history of the property, and name of the architect/builder, if known. Existing Plant: WWTP_Proposed Plant: ranch/farm land

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if the mailing the payment.

- 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 BY OVERNIGHT/EXPRESS MAIL Texas Commission on Environmental Quality Texas Commission on Environmental Quality **Financial Administration Division Financial Administration Division** Cashier's Office, MC-214 Cashier's Office, MC-214 P.O. Box 13088 12100 Park 35 Circle Austin, Texas 78711-3088 Austin, Texas 78753 Fee Code: WQP Waste Permit No: 1. Check or Money Order Number: 2. Check or Money Order Amount: 3. Date of Check or Money Order: <u>\$2,015.00</u> 4. Name on Check or Money Order: 5. APPLICATION INFORMATION Name of Project or Site: Physical Address of Project or Site: 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.

Staple Check or Money Order in This Space

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ATTACHMENT 1

INDIVIDUAL INFORMATION

Section 1. Individual Information (Instructions Page 50)

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., Miss):	
Full legal name (first, middle, last):	
Driver's License or State Identification Number:	
Date of Birth:	
Mailing Address:	
City, State, and Zip Code:	
Phone Number: Fax Number:	
E-mail Address:	
CN: Lick here to enter text	
F or Commission Use Only: Customer Number: Regulated Entity Number: Permit Number:	



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY **DOMESTIC WASTEWATER PERMIT APPLICATION**

DOMESTIC TECHNICAL REPORT 1.0

The Following Is Required For All Applications Renewal, New, And Amendment

Section 1. Permitted or Proposed Flows (Instructions Page 51)

A. Existing/Interim I Phase

Design Flow (MGD): <u>1.1</u> 2-Hr Peak Flow (MGD): <u>2.75</u> Estimated construction start date: <u>1988</u> Estimated waste disposal start date: <u>5/1/1990</u>

B. Interim II Phase

Design Flow (MGD): <u>2.5</u> 2-Hr Peak Flow (MGD): <u>10.0</u> Estimated construction start date: <u>11/5/2018</u> Estimated waste disposal start date: <u>12/1/2020</u>

C. Final Phase

Design Flow (MGD): <u>4.9</u> 2-Hr Peak Flow (MGD): <u>19.6</u> Estimated construction start date: <u>2027</u> Estimated waste disposal start date: <u>2029</u>

D. Current operating phase: <u>Interim I</u> Provide the startup date of the facility: <u>05/01/1990</u>

Section 2. Treatment Process (Instructions Page 51)

A. Treatment process description

Provide a detailed description of the treatment process. Include the type of

Page 1 of 81

treatment plant, mode of operation, and all treatment units. Start with the plant's head works and finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed in the permit, a description of** *each phase* **must be provided**. Process description:

Port or pipe diameter at the discharge point, in inches: <u>36</u>

B. Treatment Units

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) **of each treatment unit, accounting for** *all* **phases of operation**.

Treatment Unit Type	Number of	Dimensions (L x W x D)
	Units	
See Attachment 5 –		
Treatment Unit		
Dimensions		

Table 1.0(1) - Treatment Units

C. Process flow diagrams

Provide flow diagrams for the existing facilities and **each** proposed phase of

construction.

Attachment: See Attachment 6 - Flow Diagram

Section 3. Site Drawing (Instructions Page 52)

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or disposal site.

Attachment: <u>See Attachment 7 – Site Drawing</u>

Provide the name and a description of the area served by the treatment facility.

The Facility will serve the City of New Braunfels and surrounding areas within the Guadalupe River drainage basin on the north side of the City.

Section 4. Unbuilt Phases (Instructions Page 52)

Is the application for a renewal of a permit that contains an unbuilt phase or

phases?

Yes 🛛 No 🗆

If yes, does the existing permit contain a phase that has not been constructed within five years of being authorized by the TCEQ?

Yes 🛛 No 🗆

If yes, provide a detailed discussion regarding the continued need for the unbuilt phase. Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases.

<u>The City of New Braunfels is experiencing significant growth. In the area</u> <u>specific to this plant, there is a large planned development (Veramendi) with 6,000 housing units.</u>
Section 5. Closure Plans (Instructions Page 53)
Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years? Yes \boxtimes No \square
If yes, was a closure plan submitted to the TCEQ?
Yes 🗆 No 🖂
If yes, provide a brief description of the closure and the date of plan approval.
<u>A closure plan will be submitted.</u>
Section 6. Permit Specific Requirements (Instructions Page 53)

For applicants with an existing permit, check the *Other Requirements* or

A. Summary transmittal

Special Provisions of the permit.

Have plans and specifications been approved for the existing facilities and each proposed phase?

Yes 🖂 🛛 No 🗆

If yes, provide the date(s) of approval for each phase: <u>November 6, 2014</u>

Provide information, including dates, on any actions taken to meet a requirement or provision pertaining to the submission of a summary transmittal letter. Provide a copy of an approval letter from the TCEQ, if applicable.

B. Buffer zones

Have the buffer zone requirements been met?

Yes 🖂 🛛 No 🗆

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

C. Other actions required by the current permit

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

Yes □ No ⊠

If yes, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision*.

D. Grit and grease treatment

1. Acceptance of grit and grease waste

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

Yes □ No ⊠

If No, stop here and continue with Subsection E. Stormwater Management.

2. Grit and grease processing

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

3. Grit disposal

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit_disposal?

Yes □ No ⊠

If No, contact the TCEQ Municipal Solid Waste team at 512-239-0000. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

4. Grease and decanted liquid disposal

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-0000.

Describe how the decant and grease are treated and disposed of after grit separation.

E. Stormwater management

1. Applicability

Does the facility have a design flow of 1.0 MGD or greater in any phase?

Yes 🖂 🛛 No 🗆

Does the facility have an approved pretreatment program, under 40 CFR Part 403?

Yes □ No ⊠

If no to both of the above, then skip to Subsection F, Other Wastes Received.

2. MSGP coverage

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

Yes 🖂 🛛 No 🗆

If yes, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 <u>TXR15024Q</u> <u>TXR15783K</u> or TXRNE

If no, do you intend to seek coverage under TXR050000?

Yes 🗆 🛛 No 🗆

3. Conditional exclusion

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

Yes 🗆 🛛 No 🗆

If yes, please explain below then proceed to Subsection F, Other Wastes

Received:

<u>k here to enter tex</u>

4. Existing coverage in individual permit

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

Yes 🗆 🛛 No 🗆

If yes, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

5. Zero stormwater discharge

Do you intend to have no discharge of stormwater via use of evaporation or other means?

Yes 🗆 🛛 No 🗆

If yes, explain below then skip to Subsection F. Other Wastes Received.

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

6. Request for coverage in individual permit

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

Yes □ No ⊠

If yes, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you intend to divert stormwater to

the treatment plant headworks and indirectly discharge it to water in the state.

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed? Yes \square No \boxtimes

If yes, a Sewage Sludge Solids Management Plan is required. See Example 5 in the instructions.

G. Other wastes received including sludge from other WWTPs and septic waste

1. Acceptance of sludge from other WWTPs

Does the facility accept or will it accept sludge from other treatment plants at the facility site?

Yes □ No ⊠

If yes, attach sewage sludge solids management plan. See Example 5 of the instructions.

In addition, provide the date that the plant started accepting sludge or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD₅

concentration of the sludge, and the design BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

Yes □ No ⊠

If yes, does the facility have a Type V processing unit?

Yes 🗆 🛛 No 🗆

If yes, does the unit have a Municipal Solid Waste permit?

Yes 🗆 🛛 No 🗆

If yes to any of the above, provide a the date that the plant started accepting septic waste, or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD₅ concentration of the septic waste, and the design

BOD₅ concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

3. Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)

Is the facility accepting or will it accept wastes that are not domestic in nature excluding the categories listed above?

Yes 🗆 🛛 No 🖂

If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or other physical characteristic of the waste. Also

note if this information has or has not changed since the last permit action.

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 58)

Is the facility in operation? Yes \boxtimes No \square

If no, this section is not applicable. Proceed to Section 8.

If yes, provide effluent analysis data for the listed pollutants. *Wastewater treatment facilities* complete Table 1.0(2). *Water treatment facilities* discharging filter backwash water, complete Table 1.0(3).

Note: The sample date must be within 1 year of application submission.

Dollutant	Average	Max	No. of	Sample	Sample
ronutant	Conc.	Conc.	Samples	Туре	Date/Time
CBOD ₅ , mg/l	6.53	11.64	95	Comp	8-1-18 TO 6-
					26-19 @ 0800
Total Suspended Solids, mg/l	4.88	12.4	94	Comp	8-1-18 TO 6-
					26-19 @ 0800
Ammonia Nitrogen, mg/l	0.79	14.7	89	Comp	8-1-18 TO 6-
					26-19 @ 0800
Nitrate Nitrogen, mg/l	29.6	29.6	1	Comp	4-15-19 @
					0800
Total Kjeldahl Nitrogen, mg/l	3.0	3.0	1	Comp	4-15-19 @
					0800
Sulfate, mg/l	131.0	131.0	1	Comp	4-15-19 @
					0800
Chloride, mg/l	243.0	243.0	1	Comp	4-15-19 @
					0800
Total Phosphorus, mg/l	4.0	5.3	35	Comp	8-1-18 TO 6-
					26-19 @ 0800

Table 1.0(2) - Pollutant Analysis for Wastewater Treatment Facilities

Pollutant	Average	Max	No. of	Sample	Sample
ronutant	Conc.	Conc.	Samples	Туре	Date/Time
pH, standard units	6.93	6.93	1	Grab	6-13-19 @
					0845
Dissolved Oxygen*, mg/l	7.83	9.03	94	Grab	8-1-18 TO 6-
					26-19 @ 0800
Chlorine Residual, mg/l	.01	.07	330	Grab	8-1-18 TO 6-
					26-19 @ 0800
<i>E.coli</i> (CFU/100ml) freshwater	15.2	186	95	Grab	8-1-18 TO 6-
					26-19 @ 0800
Entercocci (CFU/100ml)					
saltwater					
Total Dissolved Solids, mg/l	554	554	1	Grab	6-19-19 @
					0800
Electrical Conductivity,	1146	1146	1	Grab	6-19-19 @
µmohs/cm, †					0800
Oil & Grease, mg/l	<5.0	<5.0	1	Grab	4-15-19 @
					0915
Alkalinity (CaCO ₃)*, mg/l	134.0	134.0	1	Comp	4-15-19 @
					0800

*TPDES permits only

†TLAP permits only

Table 1.0(3) - Pollutant Analysis for Water Treatment Facilities

Pollutant	Average	Max	No. of	Sample	Sample
	Conc.	Conc.	Samples	Туре	Date/Time
Total Suspended Solids, mg/l					
Total Dissolved Solids, mg/l					
pH, standard units					
Fluoride, mg/l					
Aluminum, mg/l					

Pollutant	Average	Max	No. of	Sample	Sample
	Conc.	Conc.	Samples	Type	Date/Time
Alkalinity (CaCO ₃), mg/l					

Section 8. Facility Operator (Instructions Page 60)

Facility Operator Name: Orlando Pena

Facility Operator's License Classification and Level: TCEQ Class A Wastewater

Operations

Facility Operator's License Number: <u>WW0004005</u>

Section 9. Sewage Sludge Management and Disposal (Instructions Page 60)

A. Sludge disposal method

Identify the current or anticipated sludge disposal method or methods from the following list. Check all that apply.

- ☑ Permitted landfill
- Permitted or Registered land application site for beneficial use
- □ Land application for beneficial use authorized in the wastewater permit
- Permitted sludge processing facility
- □ Marketing and distribution as authorized in the wastewater permit
- Composting as authorized in the wastewater permit
- Permitted surface disposal site (sludge monofill)
- Surface disposal site (sludge monofill) authorized in the wastewater permit
- Transported to another permitted wastewater treatment plant or permitted sludge processing facility. If you selected this method, a written statement or contractual agreement from the wastewater treatment plant or permitted sludge processing facility accepting the
sludge must be included with this application.

 \Box Other:

B. Sludge disposal site

Disposal site name: <u>Mesquite Creek Landfill</u>

TCEQ permit or registration number: <u>MSW-66B</u>

County where disposal site is located: <u>Comal and Guadalupe</u>

C. Sludge transportation method

Method of transportation (truck, train, pipe, other): <u>Truck</u>

Name of the hauler: <u>Residuals Transport Co.</u>

Hauler registration number: <u>24346</u>

Sludge is transported as a:

Liquid 🗆	semi-liquid 🗆	semi-solid 🗆	solid 🖂
	<u>▲</u>		

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

Yes □ No ⊠

If yes, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

Yes 🗆 🛛 No 🗆

If yes, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

Yes 🗆 🛛 No 🗆

B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting	Yes 🗆	No 🖂
Marketing and Distribution of sludge	Yes □	No 🖂

Page 14 of 81

Sludge Surface Disposal or Sludge Monofill Yes □ No ⊠

Temporary storage in sludge lagoons $Yes \square$ No \boxtimes

If yes to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

Yes 🗆 No 🗆

Section 11. Sewage Sludge Lagoons (Instructions Page 61)

```
Does this facility include sewage sludge lagoons?
```

Yes 🗆 🛛 No 🖾

If yes, complete the remainder of this section. If no, proceed to Section 12.

A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

• Original General Highway (County) Map:

Attachment:

• USDA Natural Resources Conservation Service Soil Map:

```
Attachment:
```

• Federal Emergency Management Map:

Attachment:

• Site map:

Attachment:

Discuss in a description if any of the following exist within the lagoon area. Check all that apply.

- Overlap a designated 100-year frequency flood plain
- □ Soils with flooding classification
- Overlap an unstable area
- □ Wetlands
- □ Located less than 60 meters from a fault
- \Box None of the above

Attachment:

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

B. Temporary storage information

Total Kjeldahl Nitrogen, mg/kg:

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in Section 7 of Technical Report 1.0.

Nitrate Nitrogen, mg/kg:

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg:

Phosphorus, mg/kg:

Potassium, mg/kg:

pH, standard units:

Ammonia Nitrogen mg/kg:

Arsenic:

Cadmium:

Chromium:

Copper:

Lead:

Mercury:

Molybdenum:

Nickel:

Selenium:

Zinc:

Total PCBs:

Provide the following information:

Volume and frequency of sludge to the lagoon(s):

Total dry tons stored in the lagoons(s) per 365-day period:

Page 16 of 81

<u>enter text.</u>

Total dry tons stored in the lagoons(s) over the life of the unit:

k here to

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of 1×10^{-7} cm/sec?

Yes 🗆 🛛 No 🗆

If yes, describe the liner below. Please note that a liner is required.

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):

Attach the following documents to the application.

• Plan view and cross-section of the sludge lagoon(s)

Attachment:

• Copy of the closure plan

Attachment:

• Copy of deed recordation for the site

Attachment:

• Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

Attachment:

• Description of the method of controlling infiltration of groundwater and surface water from entering the site

Attachment:

• Procedures to prevent the occurrence of nuisance conditions

Attachment:

E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

Yes 🗆 🛛 No 🗆

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

Attachment:

Section 12. Authorizations/Compliance/Enforcement (Instructions Page 63)

A. Additional authorizations

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

Yes 🛛 No 🗆

If yes, provide the TCEQ authorization number and description of the authorization:

TCEQ Reclaimed Water Authorization No. R10232-002

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

Yes □ No ⊠

Is the permittee required to meet an implementation schedule for compliance or enforcement?

Yes □ No ⊠

If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

Section 13. RCRA/CERCLA Wastes (Instructions Page 63)

A. RCRA hazardous wastes

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

Yes □ No ⊠

B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

Yes 🗆 🛛 No 🖾

C. Details about wastes received

If yes to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment:

Section 14. Laboratory Accreditation (Instructions Page 64)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
 - periodically inspected by the TCEQ; or
 - located in another state and is accredited or inspected by that state; or
 - performing work for another company with a unit located in the same site; or
 - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review *30 TAC Chapter 25* for specific requirements.

The following certification statement shall be signed and submitted with every application. See the *Signature Page* section in the Instructions, for a list of designated representatives who may sign the certification.

CERTIFICATION:

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

Printed Name: <u>Ryan Kelso</u>

Title: <u>Chief Operations Officer</u>

Signatura		
Signature.		

Date: _____

DOMESTIC TECHNICAL REPORT 1.1

The following is required for new and amendment applications

Section 1. Justification for Permit (Instructions Page 66)

A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

N/A

B. Regionalization of facilities

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

1. Municipally incorporated areas

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

Yes 🗆 🛛 No 🗆 Not Applicable 🗆

If yes, within the city limits of:

If yes, attach correspondence from the city.

Attachment:

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment:

2. Utility CCN areas

Is any portion of the proposed service area located inside another utility's CCN area?

Yes 🗆 No 🗆

If yes, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.

Attachment:

3. Nearby WWTPs or collection systems

Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?

Yes 🗆 🛛 No 🗆

If yes, attach a list of these facilities that includes the permittee's name and permit number, and an area map showing the location of these facilities.

Attachment:

If yes, attach copies of your certified letters to these facilities **and** their response letters concerning connection with their system.

Attachment:

Does a permitted domestic wastewater treatment facility or a collection system located within three (3) miles of the proposed facility currently have the capacity to accept or is willing to expand to accept the volume of wastewater proposed in this application?

Yes 🗆 🛛 No 🗆

If yes, attach an analysis of expenditures required to connect to a permitted wastewater treatment facility or collection system located within 3 miles versus the cost of the proposed facility or expansion.

Attachment:

Section 2. Organic Loading (Instructions Page 67)

Is this facility in operation?

Yes 🗆 🛛 No 🗆

If no, proceed to Item B, Proposed Organic Loading.

If yes, provide organic loading information in Item A, Current Organic Loading

A. Current organic loading

Facility Design Flow (flow being requested in application):

Average Influent Organic Strength or BOD₅ Concentration in mg/l:

Average Influent Loading (lbs/day = total average flow X average BOD₅ conc. X 8.34):

Provide the source of the average organic strength or BOD₅ concentration.

B. Proposed organic loading

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

Source	Total Average Flow (MGD)	Influent BOD ₅ Concentration (mg/l)
Municipality		
Subdivision		
Trailer park - transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria,		

 Table 1.1(1) - Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD ₅ Concentration (mg/l)
no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or		
factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all		
sources		
AVERAGE BOD ₅ from all sources		

Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 68)

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l:

Total Suspended Solids, mg/l:

Ammonia Nitrogen, mg/l:

Total Phosphorus, mg/l:

Dissolved Oxygen, mg/l:

Page 24 of 81

Other: lick here to enter text.

B. Interim II Phase Design Effluent Quality	
Biochemical Oxygen Demand (5-day), mg/l:	
Total Suspended Solids, mg/l:	

Ammonia Nitrogen, mg/l:

Total Phosphorus, mg/l:

Dissolved Oxygen, mg/l:

Other:

C. Final Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l:
Total Suspended Solids, mg/l:
Ammonia Nitrogen, mg/l:
Total Phosphorus, mg/l:
Dissolved Oxygen, mg/l:
Other:

D. Disinfection Method

Identify the proposed method of disinfection.

Chlorine: mg/l after minutes detention time at peak flow
Dechlorination process:
Ultraviolet Light: seconds contact time at peak flow
Other:

Section 4. Design Calculations (Instructions Page 68)

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

Attachment:

Section 5. Facility Site (Instructions Page 68)

A. 100-year floodplain

Will the proposed facilities be located <u>above</u> the 100-year frequency flood level?

Yes 🗆 🛛 No 🗆

If no, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

Provide the source(s) used to determine 100-year frequency flood plain.

For a new or expansion of a facility, will a wetland or part of a wetland be filled?

Yes 🗆 🛛 No 🗆

If yes, has the applicant applied for a US Corps of Engineers 404 Dredge and Fill Permit?

Yes 🗆 No 🗆

If yes, provide the permit number:

If no, provide the approximate date you anticipate submitting your application to the Corps:

B. Wind rose

Attach a wind rose. Attachment:

Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 69)

A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit? Yes □ No □

If yes, attach the completed Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)

Attachment:

B. Sludge processing authorization

Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:

- □ Sludge Composting
- □ Marketing and Distribution of sludge
- □ Sludge Surface Disposal or Sludge Monofill

If any of the above sludge options are selected, attach a completed DOMESTIC WASTEWATER PERMIT APPLICATION: SEWAGE SLUDGE TECHNICAL REPORT (TCEQ Form No. 10056).

Attachment:

Section 7. Sewage Sludge Solids Management Plan (Instructions Page 69)

Attach a solids management plan to the application. Attachment:

The sewage sludge solids management plan must contain the following information:

- Treatment units and processes dimensions and capacities
- Solids generated at 100, 75, 50, and 25 percent of design flow
- Mixed liquor suspended solids operating range at design and projected actual flow
- Quantity of solids to be removed and a schedule for solids removal
- Identification and ownership of the ultimate sludge disposal site
- For facultative lagoons, design life calculations, monitoring well locations and depths, and the ultimate disposal method for the sludge from the facultative lagoon

An example of a sewage sludge solids management plan has been included as Example 5 of the instructions.

DOMESTIC TECHNICAL REPORT WORKSHEET 2.0

RECEIVING WATERS

The following is required for all TPDES permit applications

Section 1. Domestic Drinking Water Supply (Instructions Page 73)

Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge? Yes ⊠ No □

If yes, provide the following:

Owner of the drinking water supply: <u>New Braunfels Utilities</u>

Distance and direction to the intake: 4,000 feet south

Attach a USGS map that identifies the location of the intake.

Attachment: <u>Attachment 1</u>

Section 2. Discharge into Tidally Affected Waters (Instructions Page 73)

Does the facility discharge into tidally affected waters?

Yes 🗆 🛛 No 🖾

If yes, complete the remainder of this section. If no, proceed to Section 3.

A. Receiving water outfall

Width of the receiving water at the outfall, in feet:

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

Yes 🗆 No 🗆

If yes, provide the distance and direction from outfall(s).

C. Sea grasses

Are there any sea grasses within the vicinity of the point of discharge?

Yes 🗆 🛛 No 🗆

If yes, provide the distance and direction from the outfall(s).

Section 3. Classified Segments (Instructions Page 73)

Is the discharge directly into (or within 300 feet of) a classified segment?

Yes ⊠ No □

If yes, this Worksheet is complete.

If no, complete Sections 4 and 5 of this Worksheet.

Section 4. Description of Immediate Receiving Waters (Instructions Page 75)

Name of the immediate receiving waters:

A. Receiving water type

Identify the appropriate description of the receiving waters.

- □ Stream
- □ Freshwater Swamp or Marsh
- □ Lake or Pond

Surface area, in acres:

Average depth of the entire water body, in feet:

Average depth of water body within a 500-foot radius of discharge point, in feet:

□ Man-made Channel or Ditch

Open Bay

□ Tidal Stream, Bayou, or Marsh

□ Other, specify:

B. Flow characteristics

If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area *downstream* of the discharge (check one).

□ Intermittent - dry for at least one week during most years

Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses



Check the method used to characterize the area upstream (or downstream for new dischargers).

□ USGS flow records

Historical observation by adjacent landowners



 \Box Other, specify:

C. Downstream perennial confluences

List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.



D. Downstream characteristics

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

If yes, discuss how.

Click here t	o enter text		

E. Normal dry weather characteristics

Provide general observations of the water body during normal dry weather conditions.

Date and time of observation:

Was the water body influenced by stormwater runoff during observations?

Yes 🗆 🛛 No 🗆

Section 5. General Characteristics of the Waterbody (Instructions Page 74)

A. Upstream influences

Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.

- Oil field activities
 Urban runoff
- □ Upstream discharges □ Agricultural runoff
- □ Septic tanks

 \Box Other(s), specify

B. Waterbody uses

Observed or evidences of the following uses. Check all that apply.



Domestic water supply	Industrial water supply
Park activities	Other(s), specify

C. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the receiving water and the surrounding area.

- Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- □ Natural Area: trees and/or native vegetation; 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

DOMESTIC WORKSHEET 2.1

STREAM PHYSICAL CHARACTERISTICS

Required for new applications, major facilities, and applications adding an outfall

Worksheet 2.1 is not required for discharges to intermittent streams or discharges directly to (or within 300 feet of) a classified segment.

Section 1. General Information (Instructions Page 75)	
Date of study: Time of study:	
Stream name: Chick here to enter text	
Location: Lick here to enter text	
Type of stream upstream of existing discharge or downstream of proposed discharge (check one).	
Section 2. Data Collection (Instructions Page 75)	
Number of stream bends that are well defined:	
Number of stream bends that are moderately defined:	
Number of stream bends that are poorly defined:	
Number of riffles: The here to enter text	
Evidence of flow fluctuations (check one):	
□ Minor □ moderate □ sever	e
Indicate the observed stream uses and if there is evidence of flow fluctuations or channel obstruction/modification.	3

Stream transects

In the table below, provide the following information for each transect downstream of the existing or proposed discharges. Use a separate row for each transect.

Stream type			Stream depths (ft)
at transect Select riffle, run, glide, or pool. See Instructions, Definitions section.	Transect location	Water surface width (ft)	at 4 to 10 points along each transect from the channel bed to the water surface. Separate the measurements with commas.
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			
Choose an			
item.			

Table 2.1(1) - Stream Transect Records

Section 3. Summarize Measurements (Instructions Page 76)

Streambed slope of entire reach, from USGS map in feet/feet:

<u>enter text</u>

Approximate drainage area above the most downstream transect (from USGS map or county highway map, in square miles):

Length of stream evaluated, in feet:
Number of lateral transects made:
Average stream width, in feet:
Average stream depth, in feet:
Average stream velocity, in feet/second:
Instantaneous stream flow, in cubic feet/second:
Indicate flow measurement method (type of meter, floating chip timed over fixed distance, etc.):

Size of pools (large, small, moderate, none):

Maximum pool depth, in feet:

а

DOMESTIC WORKSHEET 3.0

LAND DISPOSAL OF EFFLUENT

The following is required for all permit applications

Renewal, New, and Amendments

Section 1. Type of Disposal System (Instructions Page 77)

Identify the method of land disposal:

- Surface application
 Subsurface application
 Irrigation
 Subsurface soils absorption
 Drip irrigation system
 Subsurface area drip dispersal system
- Evaporation
- Evapotranspiration beds
- \Box Other (describe in detail): <u>N/A</u>

NOTE: All applicants without authorization or proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number:

Section 2. Land Application Site(s) (Instructions Page 77)

In table 3.0(1), provide the requested information for the land application sites. Include the agricultural or cover crop type (wheat, cotton, alfalfa, bermuda grass, native grasses, etc.), land use (golf course, hayland, pastureland, park, row crop, etc.), irrigation area, amount of effluent applied, and whether or not the public has access to the area. Specify the amount of land area and the amount of effluent that will be allotted to each agricultural or cover crop, if more than one crop will be used.

	Irrigation	Effluent	Public
Crop Type & Land Use	Area	Application	Access?
	(acres)	(GPD)	Y/N

Table 3.0(1) - Land Application Site Crops

	Irrigation	Effluent	Public
Crop Type & Land Use	Area	Application	Access?
	(acres)	(GPD)	Y/N

Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 77)

Table 3.0(2) - Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment:

Section 4. Flood and Runoff Protection (Instructions Page 77)

Is the land application site within the 100-year frequency flood level?

Yes 🗆 🛛 No 🗆

If yes, describe how the site will be protected from inundation.

Provide the source used to determine the 100-year frequency flood level:

Page **37** of **81**

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

Section 5. Annual Cropping Plan (Instructions Page 77)

Attach an Annual Cropping Plan which includes a discussion of each of the following items. If not applicable, provide a detailed explanation indicating why.

Attachment:

- Soils map with crops
- Cool and warm season plant species
- Crop yield goals
- Crop growing season
- Crop nutrient requirements
- Additional fertilizer requirements
- Minimum/maximum harvest height (for grass crops)
- Supplemental watering requirements
- Crop salt tolerances
- Harvesting method/number of harvests
- Justification for not removing existing vegetation to be irrigated

Section 6. Well and Map Information (Instructions Page 78)

Attach a USGS map with the following information shown and labeled. If not applicable, provide a detailed explanation (on a separate page) indicating why.

Attachment:

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)

- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1 mile of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
			Choose an item.	

Table 3.0(3) – Water Well Data

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment:

Section 7. Groundwater Quality (Instructions Page 79)

Attach a Groundwater Quality Technical Report which assesses the impact of the wastewater disposal system on groundwater. This report shall include an evaluation of the water wells (including the information in the well table provided in Item 6. above), the wastewater application rate, and pond liners. Indicate by a check mark that this report is provided.

Attachment:

Are groundwater monitoring wells available onsite? Yes \Box No \Box

Do you plan to install ground water monitoring wells or lysimeters around the land application site? Yes 🗖 No 🗖

If yes, then provide the proposed location of the monitoring wells or lysimeters on a site map.

Attachment:

Section 8. Soil Map and Soil Analyses (Instructions Page 79)

A. Soil map

Attach a USDA Soil Survey map that shows the area to be used for effluent disposal.

Attachment:

B. Soil analyses

Attach the laboratory results sheets from the soil analyses. **Note**: for renewal applications, the current annual soil analyses required by the permit are acceptable as long as the test date is less than one year prior to the submission of the application.

Attachment:

List all USDA designated soil series on the proposed land application site. Attach additional pages as necessary.

Table 3.0(4) - Soil Data

	Depth		Available	Curve
Soil Series	from	Permeability	Water	Number
	Surface		Capacity	

	Depth		Available	Curve
Soil Series	from Permeability Surface		Water	Number
			Capacity	

Section 9. Effluent Monitoring Data (Instructions Page 80)

Is the facility in operation?

Yes 🗆 🛛 No 🗆

If no, this section is not applicable and the worksheet is complete.

If yes, provide the effluent monitoring data for the parameters regulated in the existing permit. If a parameter is not regulated in the existing permit, enter N/A.

Date	30 Day Avg Flow MGD	BOD5 mg/l	TSS mg/l	рН	Chlorine Residual mg/l	Acres irrigated

Table 3.0(5) - Effluent Monitoring Data

Date	30 Day Avg Flow MGD	BOD ₅ mg/l	TSS mg/l	рН	Chlorine Residual mg/l	Acres irrigated

Provide a discussion of all persistent excursions above the permitted limits and any corrective actions taken.

DOMESTIC WORKSHEET 3.1

SURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

Section 1. Surface Disposal (Instructions Page 81)

Complete the item that applies for the method of disposal being used.

A. Irrigation

Area under irrigation, in acres:

Design application frequency:

hours/day And days/week

Land grade (slope):

average percent (%):

maximum percent (%):

Design application rate in acre-feet/acre/year:

Design total nitrogen loading rate, in lbs N/acre/year:

Soil conductivity (mmhos/cm):

Method of application:

Attach a separate engineering report with the water balance and storage volume calculations, method of application, irrigation efficiency, and nitrogen balance.

Attachment:

B. Evaporation ponds

Daily average effluent flow into ponds, in gallons per day:

Attach a separate engineering report with the water balance and storage volume calculations.

Attachment:

C. Evapotranspiration beds

Number of beds:

Area of bed(s), in acres:

Depth of bed(s), in feet:

Void ratio of soil in the beds:

Storage volume within the beds, in acre-feet:

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

Attachment:

D. Overland flow

Area used for application, in acres:

Slopes for application area, percent (%):

Design application rate, in gpm/foot of slope width:

Slope length, in feet:

Design BOD₅ loading rate, in lbs BOD₅/acre/day:

Design application frequency:

hours/day: And days/week:

Attach a separate engineering report with the method of application and design requirements according to *30 TAC Chapter 217*.

Attachment:

Section 2. Edwards Aquifer (Instructions Page 82)

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

Yes 🗆 No 🗆

Page 44 of 81

If yes, attach a report concerning the recharge zone.

Attachment:

DOMESTIC WORKSHEET 3.2

SUBSURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment applications.

Renewal and minor amendments may require the worksheet on a case by

case basis.

NOTE: All applicants proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that does not meet the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Subsurface Application (Instructions Page 83)

Identify the type of system:

- Conventional Gravity Drainfield, Beds, or Trenches (new systems must be less than 5,000 GPD)
- □ Low Pressure Dosing
- \Box Other, specify:

Application area, in acres:

Area of drainfield, in square feet:

Application rate, in gal/square foot/day:

Depth to groundwater, in feet:

Area of trench, in square feet:

Dosing duration per area, in hours:

Number of beds:

Dosing amount per area, in inches/day:

Infiltration rate, in inches/hour:

Storage volume, in gallons:

Area of bed(s), in square feet:

Soil Classification:

Attach a separate engineering report with the information required in 30 *TAC § 309.20*, excluding the requirements of § 309.20 b(3)(A) and (B) design analysis which may be asked for on a case by case basis. Include a description of the schedule of dosing basin rotation.

Attachment:

Section 2. Edwards Aquifer (Instructions Page 83)

Is the subsurface system located on the Edwards Aquifer Recharge Zone as mapped by the TCEQ?

Yes 🗆 No 🗆

Is the subsurface system located on the Edwards Aquifer Transition Zone as mapped by the TCEQ?

Yes 🗆 No 🗆

If yes to either question, the subsurface system may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team, at 512-239-4671, to schedule a pre-application meeting.

DOMESTIC WORKSHEET 3.3

SUBSURFACE AREA DRIP DISPERSAL SYSTEM (SADDS) LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment subsurface area drip dispersal system applications. Renewal and minor amendments may

require the worksheet on a case by case basis.

NOTE: All applicants proposing new or amended subsurface disposal MUST complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that meets the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System.*

Section 1. Administrative Information (Instructions Page 84)

- A. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility.
- **B.** Is the owner of the land where the treatment facility is located the same as the owner of the treatment facility?
 - Yes 🗆 No 🗆

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the treatment facility is located.

- **C.** Owner of the subsurface area drip dispersal system:
- **D.** Is the owner of the subsurface area drip dispersal system the same as the owner of the wastewater treatment facility or the site where the wastewater treatment facility is located?

Yes □ No □

If **no**, identify the names of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.C.

- **E.** Owner of the land where the subsurface area drip dispersal system is located:
- **F.** Is the owner of the land where the subsurface area drip dispersal system is located the same as owner of the wastewater treatment facility, the site where the wastewater treatment facility is located, or the owner of the subsurface area drip dispersal system?

Yes 🗆 🛛 No 🗆

If **no**, identify the name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.E.

Section 2. Subsurface Area Drip Dispersal System (Instructions Page 84)

A. Type of system

	Subsurface Drip Irrigation
--	----------------------------

□ Surface Drip Irrigation

□ Other, specify:

B. Irrigation operations

Application area, in acres:

Infiltration Rate, in inches/hour:

Average slope of the application area, percent (%):

Maximum slope of the application area, percent (%):

Storage volume, in gallons:

Major soil series:

Depth to groundwater, in feet:

C. Application rate

Is the facility located **west** of the boundary shown in *30 TAC § 222.83* **and** also using a vegetative cover of non-native grasses over seeded with cool

Page 49 of 81
season grasses during the winter months (October-March)? Yes 🔲 No 🗖

If yes, then the facility may propose a hydraulic application rate not to exceed 0.1 gal/square foot/day.

Is the facility located **east** of the boundary shown in *30 TAC § 222.83* **or** in any part of the state when the vegetative cover is any crop other than non-native grasses?

Yes □ No □

If **yes**, the facility must use the formula in *30 TAC §222.83* to calculate the maximum hydraulic application rate.

Do you plan to submit an alternative method to calculate the hydraulic application rate for approval by the executive director?

Yes 🗆 🛛 No 🗆

Hydraulic application rate, in gal/square foot/day:

Nitrogen application rate, in lbs/gal/day:

D. Dosing information

Number of doses per day:

Dosing duration per area, in hours:

Rest period between doses, in hours:

Dosing amount per area, in inches/day:

Number of zones:

Does the proposed subsurface drip irrigation system use tree vegetative cover as a crop?

Yes 🗆 No 🗆

If **yes**, provide a vegetation survey by a certified arborist. Please call the Water Quality Assessment Team at (512) 239-4671 to schedule a pre-application meeting.

Attachment:

Section 3. Required Plans (Instructions Page 84)

A. Recharge feature plan

Attach a Recharge Feature Plan with all information required in *30 TAC §222.79*.

Attachment:

B. Soil evaluation

Attach a Soil Evaluation with all information required in 30 TAC §222.73.

Attachment:

C. Site preparation plan

Attach a Site Preparation Plan with all information required in *30 TAC §222.75*.

Attachment:

D. Soil sampling/testing

Attach soil sampling and testing that includes all information required in *30 TAC §222.157*.

Attachment:

Section 4. Floodway Designation (Instructions Page 85)

A. Site location

Is the existing/proposed land application site within a designated floodway?

Yes 🗆 No 🗆

B. Flood map

Attach either the FEMA flood map or alternate information used to determine the floodway.

Attachment:

Section 5. Surface Waters in the State (Instructions Page 85)

A. Buffer Map

Attach a map showing appropriate buffers on surface waters in the state, water wells, and springs/seeps.

Attachment:

B. Buffer variance request

Do you plan to request a buffer variance from water wells or waters in the

state?

Yes 🗆 No 🗆

If yes, then attach the additional information required in *30 TAC § 222.81(c).*

Attachment:

Section 6. Edwards Aquifer (Instructions Page 85)

A. Is the SADDS located on the Edwards Aquifer Recharge Zone as mapped by the TCEQ?

Yes 🗆 No 🗆

B. Is the SADDS located on the Edwards Aquifer Transition Zone as mapped by the TCEQ?

Yes 🗆 No 🗆

If yes to either question, then the SADDS may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team at 512-239-4671 to schedule a pre-application meeting.

DOMESTIC WORKSHEET 4.0

POLLUTANT ANALYSES REQUIREMENTS*

The following is required for facilities with a permitted or proposed flow of 1.0 MGD or greater, facilities with an approved pretreatment program, or facilities classified as a major facility. See instructions for further details.

This worksheet is not required for minor amendments without renewal

Section 1. Toxic Pollutants (Instructions Page 87)

For pollutants identified in Table 4.0(1), indicate the type of sample.

Grab \boxtimes Composite \square

Date and time sample(s) collected: <u>4/15/19-4/16/19 See Appendix A</u>

Pollutant	AVG Effluent Conc. (μg/l)	MAX Effluent Conc. (μg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile	ND		1	50
Aldrin	ND		1	0.01
Aluminum	48	48	1	2.5
Anthracene	ND		1	10
Antimony	5	5	1	5
Arsenic	.6	.6	1	0.5
Barium	25	25	1	3
Benzene	ND		1	10
Benzidine	ND		1	50
Benzo(a)anthracene	ND		1	5

Table 4.0(1) - Toxics Analysis

TCEQ-10054 (06/01/2017) Domestic Wastewater Permit Application, Technical Reports Page 53 of 81

	AVG	MAX	Number	
Pollutant	Effluent	Effluent	of	MAL
i onutunt	Conc.	Conc.	Samples	(µg/l)
	(µg/l)	(µg/l)	Sumples	
Benzo(a)pyrene	ND		1	5
Bis(2-chloroethyl)ether	ND		1	10
Bis(2-ethylhexyl)phthalate	ND		1	10
Bromodichloromethane	ND		1	10
Bromoform	ND		1	10
Cadmium	<1	<1	1	1
Carbon Tetrachloride	ND		1	2
Carbaryl	ND		1	5
Chlordane*	ND		1	0.2
Chlorobenzene	ND		1	10
Chlorodibromomethane	ND		1	10
Chloroform	71.8	71.8	1	10
Chlorpyrifos	<.039	<.039	1	0.05
Chromium (Total)	<3	<3	1	3
Chromium (Tri) (*1)	N/A		1	N/A
Chromium (Hex)	3	3	1	3
Copper	12	12	1	2
Chrysene	ND		1	5
p-Chloro-m-Cresol	ND		1	10
4,6-Dinitro-o-Cresol	ND		1	50
p-Cresol	ND		1	10

	AVG	MAX	Marcale or	
Dollutant	Effluent	Effluent	Number	MAL
Pollutalit	Conc.	Conc.	Complee	(µg/l)
	(µg/l)	(µg/l)	Samples	
Cyanide (*2)	ND		1	10
4,4'- DDD	ND		1	0.1
4,4'- DDE	ND		1	0.1
4,4'- DDT	ND		1	0.02
2,4-D	ND		1	0.7
Demeton (O and S)	<.0488	<.0488	1	0.20
Diazinon	<.0488	<.0488	1	0.5/0.1
1,2-Dibromoethane	ND		1	10
m-Dichlorobenzene	ND		1	10
o-Dichlorobenzene	ND		1	10
p-Dichlorobenzene	ND		1	10
3,3'-Dichlorobenzidine	ND		1	5
1,2-Dichloroethane	ND		1	10
1,1-Dichloroethylene	ND		1	10
Dichloromethane	ND		1	20
1,2-Dichloropropane	ND		1	10
1,3-Dichloropropene	ND		1	10
Dicofol	<.039	<.039	1	1
Dieldrin	ND		1	0.02
2,4-Dimethylphenol	ND		1	10
Di-n-Butyl Phthalate	ND		1	10

	AVG	MAX	Marcaleon	
Dollutont	Effluent	Effluent	Number	MAL
Pollutalit	Conc.	Conc.	01 Samplas	(µg/l)
	(µg/l)	(µg/l)	Samples	
Diuron	ND		1	0.09
Endosulfan I (alpha)	ND		1	0.01
Endosulfan II (beta)	ND		1	0.02
Endosulfan Sulfate	ND		1	0.1
Endrin	ND		1	0.02
Ethylbenzene	ND		1	10
Fluoride	430	430	1	500
Guthion	<.0488	<.0488	1	0.1
Heptachlor	ND		1	0.01
Heptachlor Epoxide	ND		1	0.01
Hexachlorobenzene	ND		1	5
Hexachlorobutadiene	ND		1	10
Hexachlorocyclohexane (alpha)	ND		1	0.05
Hexachlorocyclohexane (beta)	ND		1	0.05
gamma-Hexachlorocyclohexane	ND		1	0.05
(Lindane)				
Hexachlorocyclopentadiene	ND		1	10
Hexachloroethane	ND		1	20
Hexachlorophene	ND		1	10
Lead	.5	.5	1	0.5
Malathion	<.0488	<.0488	1	0.1

	AVG	MAX	N	
Dollutant	Effluent	Effluent	Number	MAL
Pollutalit	Conc.	Conc.	UI Samplas	(µg/l)
	(µg/l)	(µg/l)	Samples	
Mercury	<.005	<.005	1	0.005
Methoxychlor	<.00976	<.00976	1	2
Methyl Ethyl Ketone	ND		1	50
Mirex	<.00976	<.00976	1	0.02
Nickel	2	2	1	2
Nitrate-Nitrogen	29600	29600	1	100
Nitrobenzene	ND		1	10
N-Nitrosodiethylamine	ND		1	20
N-Nitroso-di-n-Butylamine	ND		1	20
Nonylphenol	ND		1	333
Parathion (ethyl)	<.0488	<.0488	1	0.1
Pentachlorobenzene	ND		1	20
Pentachlorophenol	ND		1	5
Phenanthrene	ND		1	10
Polychlorinated Biphenyls (PCB's)	ND		1	0.2
(*3)				
Pyridine	ND		1	20
Selenium	<5	<5	1	5
Silver	<.5	<.5	1	0.5
1,2,4,5-Tetrachlorobenzene	ND		1	20
1,1,2,2-Tetrachloroethane	ND		1	10

Pollutant	AVG Effluent Conc. (μg/l)	MAX Effluent Conc. (μg/l)	Number of Samples	MAL (µg/l)
Tetrachloroethylene	ND		1	10
Thallium	<.5	<.5	1	0.5
Toluene	ND		1	10
Toxaphene	ND		1	0.3
2,4,5-TP (Silvex)	ND		1	0.3
Tributyltin (see instructions for explanation)	N/A		1	0.01
1,1,1-Trichloroethane	ND	ND	1	10
1,1,2-Trichloroethane	ND		1	10
Trichloroethylene	ND		1	10
2,4,5-Trichlorophenol	ND		1	50
TTHM (Total Trihalomethanes)	79.9	79.9	1	10
Vinyl Chloride	ND		1	10
Zinc	63	63	1	5

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248,

1260, and 1016.

Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab \boxtimes Composite \square

Date and time sample(s) collected: <u>4/15/19-4/16/19 See Appendix A</u>

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony	5	5	1	5
Arsenic	.6	.6	1	0.5
Beryllium	<.5	<.5	1	0.5
Cadmium	<1	<1	1	1
Chromium (Total)	<3	<3	1	3
Chromium (Hex)	3	3	1	3
Chromium (Tri) (*1)	N/A		1	N/A
Copper	12	12	1	2
Lead	.5	.5	1	0.5
Mercury	<.005	<.005	1	0.005
Nickel	2	2	1	2
Selenium	<5	<5	1	5
Silver	<.5	<.5	1	0.5
Thallium	<.5	<.5	1	0.5
Zinc	63	63	1	5
Cyanide (*2)	ND		1	10
Phenols, Total	ND		1	10

Table 4.0(2)A - Metals, Cyanide, Phenols

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable

	AVG	MAX	Numbor	
Dollutant	Effluent	Effluent	number	MAL
ronutant	Conc.	Conc.	Samples	(µg/l)
	(µg/l)	(µg/l)	Samples	
Acrolein	ND		1	50
Acrylonitrile	ND		1	50
Benzene	ND		1	10
Bromoform	ND		1	10
Carbon Tetrachloride	ND		1	2
Chlorobenzene	ND		1	10
Chlorodibromomethane	ND		1	10
Chloroethane	ND		1	50
2-Chloroethylvinyl Ether	ND		1	10
Chloroform	71.8	71.8	1	10
Dichlorobromomethane				
[Bromodichloromethane]	ND		1	10
1,1-Dichloroethane	ND		1	10
1,2-Dichloroethane	ND		1	10
1,1-Dichloroethylene	ND		1	10
1,2-Dichloropropane	ND		1	10
1,3-Dichloropropylene				
[1,3-Dichloropropene]	ND		1	10
1,2-Trans-Dichloroethylene	ND		1	10
Ethylbenzene	ND		1	10
Methyl Bromide	ND		1	50
Methyl Chloride	ND		1	50
Methylene Chloride	ND		1	20
1,1,2,2-Tetrachloroethane	ND		1	10
Tetrachloroethylene	ND		1	10

Table 4.0(2)B - Volatile Compounds

Pollutant	AVG Effluent Conc. (μg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Toluene	ND		1	10
1,1,1-Trichloroethane	ND		1	10
1,1,2-Trichloroethane	ND		1	10
Trichloroethylene	ND		1	10
Vinyl Chloride	ND		1	10

Table 4.0(2)C - Acid Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol	ND		1	10
2,4-Dichlorophenol	ND		1	10
2,4-Dimethylphenol	ND		1	10
4,6-Dinitro-o-Cresol	ND		1	50
2,4-Dinitrophenol	ND		1	50
2-Nitrophenol	ND		1	20
4-Nitrophenol	ND		1	50
P-Chloro-m-Cresol	ND		1	10
Pentalchlorophenol	ND		1	5
Phenol	ND		1	10
2,4,6-Trichlorophenol	ND		1	10

	AVG	MAX	Numbor	
Pollutant	Effluent	Effluent	of	MAL
Tonuunt	Conc.	Conc.	Samples	(µg/l)
	(µg/l)	(µg/l)	Sampies	
Acenaphthene	ND		1	10
Acenaphthylene	ND		1	10
Anthracene	ND		1	10
Benzidine	ND		1	50
Benzo(a)Anthracene	ND		1	5
Benzo(a)Pyrene	ND		1	5
3,4-Benzofluoranthene	ND		1	10
Benzo(ghi)Perylene	ND		1	20
Benzo(k)Fluoranthene	ND		1	5
Bis(2-Chloroethoxy)Methane	ND		1	10
Bis(2-Chloroethyl)Ether	ND		1	10
Bis(2-Chloroisopropyl)Ether	ND		1	10
Bis(2-Ethylhexyl)Phthalate	ND		1	10
4-Bromophenyl Phenyl Ether	ND		1	10
Butyl benzyl Phthalate	ND		1	10
2-Chloronaphthalene	ND		1	10
4-Chlorophenyl phenyl ether	ND		1	10
Chrysene	ND		1	5
Dibenzo(a,h)Anthracene	ND		1	5
1,2-(o)Dichlorobenzene	ND		1	10
1,3-(m)Dichlorobenzene	ND		1	10
1,4-(p)Dichlorobenzene	ND		1	10
3,3-Dichlorobenzidine	ND		1	5
Diethyl Phthalate	ND		1	10
Dimethyl Phthalate	ND		1	10

Table 4.0(2)D - Base/Neutral Compounds

	AVG	MAX	Number	
Dollutont	Effluent	Effluent	Nulliber	MAL
Ponutant	Conc.	Conc.	01 Commloc	(µg/l)
	(µg/l)	(µg/l)	Samples	
Di-n-Butyl Phthalate	ND		1	10
2,4-Dinitrotoluene	ND		1	10
2,6-Dinitrotoluene	ND		1	10
Di-n-Octyl Phthalate	ND		1	10
1,2-Diphenylhydrazine (as Azo-				
benzene)	ND		1	20
Fluoranthene	ND		1	10
Fluorene	ND		1	10
Hexachlorobenzene	ND		1	5
Hexachlorobutadiene	ND		1	10
Hexachlorocyclo-pentadiene	ND		1	10
Hexachloroethane	ND		1	20
Indeno(1,2,3-cd)pyrene	ND		1	5
Isophorone	ND		1	10
Naphthalene	ND		1	10
Nitrobenzene	ND		1	10
N-Nitrosodimethylamine	ND		1	50
N-Nitrosodi-n-Propylamine	ND		1	20
N-Nitrosodiphenylamine	ND		1	20
Phenanthrene	ND		1	10
Pyrene	ND		1	10
1,2,4-Trichlorobenzene	ND		1	10

	AVG	MAX	Numbor	
Pollutant	Effluent	Effluent	of	MAL
Tonutant	Conc.	Conc.	Samples	(µg/l)
	(µg/l)	(µg/l)	Sampies	
Aldrin	ND		1	0.01
alpha-BHC				
(Hexachlorocyclohexane)	ND		1	0.05
beta-BHC				
(Hexachlorocyclohexane)	ND		1	0.05
gamma-BHC				
(Hexachlorocyclohexane)	ND		1	0.05
delta-BHC				
(Hexachlorocyclohexane)	ND		1	0.05
Chlordane	ND		1	0.2
4,4-DDT	ND		1	0.02
4,4-DDE	ND		1	0.1
4,4,-DDD	ND		1	0.1
Dieldrin	ND		1	0.02
Endosulfan I (alpha)	ND		1	0.01
Endosulfan II (beta)	ND		1	0.02
Endosulfan Sulfate	ND		1	0.1
Endrin	ND		1	0.02
Endrin Aldehyde	ND		1	0.1
Heptachlor	ND		1	0.01
Heptachlor Epoxide	ND		1	0.01
PCB-1242	ND		1	0.2
PCB-1254	ND		1	0.2
PCB-1221	ND		1	0.2
PCB-1232	ND		1	0.2

Table 4.0(2)E - Pesticides

Pollutant	AVG Effluent Conc. (μg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
PCB-1248	ND		1	0.2
PCB-1260	ND		1	0.2
PCB-1016	ND		1	0.2
Toxaphene	ND		1	0.3

* For PCBS, if all are non-detects, enter the highest non-detect preceded by a "<".

Section 3. Dioxin/Furan Compounds

- **A.** Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.
- 2,4,5-trichlorophenoxy acetic acid Common Name 2,4,5-T, CASRN 93-76-5 2-(2,4,5-trichlorophenoxy) propanoic acid Common Name Silvex or 2,4,5-TP, CASRN 93-72-1 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate Common Name Erbon, CASRN 136-25-4 0.0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate Common Name Ronnel, CASRN 299-84-3 2,4,5-trichlorophenol Common Name TCP, CASRN 95-95-4 hexachlorophene Common Name HCP, CASRN 70-30-4 For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

B. Do you 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 your effluent?

Yes □ No ⊠

If **yes**, provide a brief description of the conditions for its presence.

If any of the compounds in Subsection A **or** B are present, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate the type of sample.

Grab 🗆 Composite 🗆

Date and time sample(s) collected:

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5

TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS

Page 66 of 81

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

DOMESTIC WORKSHEET 5.0

TOXICITY TESTING REQUIREMENTS

The following is required for facilities with a currently-operating design flow greater than or equal to 1.0 MGD, with an EPA-approved pretreatment program (or those that are required to have one under 40 CFR Part 403), or are required by the TCEQ to perform Whole Effluent Toxicity testing. This worksheet is not required for minor amendments without renewal.

Section 1. Required Tests (Instructions Page 97)

Indicate the number of 7-day chronic or 48-hour acute Whole Effluent Toxicity (WET) tests performed in the four and one-half years prior to submission of the application.

7-day Chronic: <u>4 Tests completed</u>

48-hour Acute: <u>8 Tests completed</u>

Section 2. Toxicity Reduction Evaluations (TREs)

Has this facility completed a TRE in the past four and a half years? Or is the facility currently performing a TRE?

Yes □ No ⊠

If yes, describe the progress to date, if applicable, in identifying and confirming the toxicant.

TCEQ-10054 (06/01/2017) Domestic Wastewater Permit Application, Technical Reports

Section 3. Summary of WET Tests

If the required biomonitoring test information has not been previously submitted via both the Discharge Monitoring Reports (DMRs) and the Table 1 (as found in the permit), provide a summary of the testing results for all valid and invalid tests performed over the past four and one-half years. Make additional copies of this table as needed.

Tost Data	Test Species	NOEC Survival	NOEC Sub-
Test Date	Test species	NOEC Survival	lethal
2-10-2015	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Daphnia pulex	20%	
	Pimephales promelas	20%	
4-8-2015	Daphnia pulex	20%	
	Pimephales promelas	20%	
10-7-2015	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Daphnia pulex	20%	
2-3-2016	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Daphnia pulex	20%	
	Pimephales promelas	20%	
8-31-2016	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Daphnia pulex	20%	
2-7-2017	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Daphnia pulex	20%	

Tost Data	Tast Spacias	NOEC Survival	NOEC Sub-
Test Date	Test species	NOEC Survival	lethal
	Pimephales promelas	20%	
9-12-2017	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Ceriodaphnia dubia	8%	
	Pimephales promelas	8%	
11-14-2017	Ceriodaphnia dubia	8%	
	Pimephales promelas	8%	
3-6-2018	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Ceriodaphnia dubia	8%	
	Pimephales promelas	8%	
5-22-2018	Ceriodaphnia dubia	8%	
	Pimephales promelas	8%	
11-13-2018	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Ceriodaphnia dubia	8%	
3-19-2019	Daphnia pulex	100%	
	Pimephales promelas	100%	
	Ceriodaphnia dubia	6%	
	Pimephales promelas	8%	

DOMESTIC WORKSHEET 6.0

INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works (POTWs)

Section 1. All POTWs (Instructions Page 99)

A. Industrial users

Provide the number of each of the following types of industrial users (IUs) that discharge to your POTW and the daily flows from each user. See the Instructions for definitions of Categorical IUs, Significant IUs – non-categorical, and Other IUs.

If there are no users, enter 0 (zero).

Categorical IUs:

Number of IUs: 0

Average Daily Flows, in MGD: 0

Significant IUs - non-categorical:

Number of IUs: <u>0</u>

Average Daily Flows, in MGD: <u>0</u>

Other IUs:

Number of IUs: <u>0</u>

Average Daily Flows, in MGD: <u>0</u>

B. Treatment plant interference

In the past three years, has your POTW experienced treatment plant interference (see instructions)?

Yes 🗆 No 🖂

If yes, identify the dates, duration, description of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IUs that may have caused the interference.

C. Treatment plant pass through

In the past three years, has your POTW experienced pass through (see instructions)?

> No 🖂 Yes □

If yes, identify the dates, duration, a description of the pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass through event. Include the names of the IUs that may have caused pass through.

D. Pretreatment program

Does your POTW have an approved pretreatment program? Yes 🖂

No 🗆

If ves, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program? Yes 🖂 No 🗆

If yes, complete Section 2.c. and 2.d. only, and skip Section 3.

If no to either question above, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

Section 2. POTWs with Approved Programs or Those Required to **Develop a Program (Instructions Page 100)**

A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to 40 CFR §403.18?

> Yes 🗆 No 🖂

If yes, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

Click here to enter text.		

B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

Yes □ No ⊠

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

C.	Effluent	parameters	above	the MAL
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In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

Pollutant	Concentration	MAL	Units	Date
Chloride	243	1	mg/L	4/26/2019
Nitrate-N	29.6	.1	mg/L	4/26/2019
Sulfate	131	1	mg/L	4/26/2019
Fluoride	.43	.1	mg/L	4/26/2019
Kjeldahl-N	3	1	mg/L	4/26/2019
Alkalinity	134	10	mg/L	4/26/2019

 Table 6.0(1) - Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date
Arsenic	.0006	.0005	mg/L	4/26/2019
Barium	.025	.003	mg/L	4/26/2019
Copper	.012	.002	mg/L	4/26/2019
Aluminum	.048	.0025	mg/L	4/26/2019
Zinc	.063	.005	mg/L	4/26/2019
Chloroform	71.8	1.2	ug/L	4/18/2019
Total	79.9	3.4	ug/L	4/18/2019
Trihalomethanes				

Table 6.0(1) – Parameters Above the MAL

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

Yes \Box No \boxtimes

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 100)

A. General information

Company Name:		
SIC Code:		
Telephone number:	Fax number:	Click here to enter
Contact name:		
Address:		
City, State, and Zip Code:	r text.	

B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

C. Product and service information

Provide a description of the principal product(s) or services performed.

Click here to enter text		

D. Flow rate information

See the Instructions for definitions of "process" and "non-process wastewater." Process Wastewater:

Discharge, in gallons/day:	enter text.	
Discharge Type: 🗆 Continuous 🗖 B	atch 🗆	Intermittent
Non-Process Wastewater:		
Discharge, in gallons/day:	enter text.	
Discharge Type: 🗖 🛛 Continuous 🗖 🖪	atch 🗆	Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

Yes 🗆 🛛 No 🗆

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

Yes □ No □

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category: Subcategories:	
Category: Subcategories:	
Category: Subcategories:	
Category: Subcategories:	
Category: Subcategories:	

F. Industrial user interruptions

Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

Yes □ No □

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

WORKSHEET 7.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit to: TCEQ IUC Permits Team Radioactive Materials Division MC-233 PO Box 13087 Austin, Texas 78711-3087 512-239-6466

For TCEQ Use Only

Reg. No.____

Date Received_

Date Authorized

Section 1. General Information (Instructions Page 102)

1. TCEQ Program Area

Program Area (PST, VCP, IHW, etc.): Program ID: Contact Name: Phone Number: 2. Agent/Consultant Contact Information Contact Name: Address: City, State, and Zip Code: Phone Number: 3. Owner/Operator Contact Information Operator \Box Owner □ Owner/Operator Name: Contact Name: Address: City, State, and Zip Code: Phone Number: 4. Facility Contact Information Facility Name:

TCEQ-10054 (06/01/2017) Domestic Wastewater Permit Application, Technical Reports Address:

City, State, and Zip Code:

Location description (if no address is available):

Facility Contact Person:

Phone Number:

5. Latitude and Longitude, in degrees-minutes-seconds

Latitude: Click here to enter text Longitude: Click here to enter text

Method of determination (GPS, TOPO, etc.):

Attach topographic quadrangle map as attachment A.

6. Well Information

Type of Well Construction, select one:

- Vertical Injection
- □ Subsurface Fluid Distribution System
- □ Infiltration Gallery
- Temporary Injection Points
- □ Other, Specify:

Number of Injection Wells:

7. Purpose

Detailed Description regarding purpose of Injection System:



Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. Water Well Driller/Installer

Water Well Driller/Installer Name:	
City, State, and Zip Code:	

Phone Number:

License Number:

Section 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

Table 7.0(1) - Down Hole Design Table

Name of	Size	Setting	Sacks Cement/Grout -	Hole	Weight
String		Depth	Slurry Volume – Top of	Size	(lbs/ft)
			Cement		PVC/Steel
Casing					
Tubing					
Screen					

Section 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D. System(s) Dimensions:

System(s) Construction:

Section 4. Site Hydrogeological and Injection Zone Data

- **1.** Name of Contaminated Aquifer:
- 2. Receiving Formation Name of Injection Zone:
- **3.** Well/Trench Total Depth:
- **4.** Surface Elevation:
- 5. Depth to Ground Water:
- 6. Injection Zone Depth:
- **7.** Injection Zone vertically isolated geologically? Yes □ No □

Impervious Strata between Injection Zone and nearest Underground
Source of Drinking Water:

Manaa			
Name			
runne.			

8. Provide a list of contaminants and the levels (ppm) in contaminated aquifer

Attach as Attachment E.

- **9.** Horizontal and Vertical extent of contamination and injection plume Attach as Attachment F.
- Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc. Attach as Attachment G.
- Injection Fluid Chemistry in PPM at point of injection Attach as Attachment H.
- **12.** Lowest Known Depth of Ground Water with < 10,000 PPM TDS:
- **13.** Maximum injection Rate/Volume/Pressure:
- **14.** Water wells within 1/4 mile radius (attach map as Attachment I):
- **15.** Injection wells within 1/4 mile radius (attach map as Attachment J):
- 16. Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K):
- 17. Sampling frequency:
- **18.** Known hazardous components in injection fluid:

Section 5. Site History

- **1.** Type of Facility:
- 2. Contamination Dates:
- **3.** Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations (attach as Attachment L):
- 4. Previous Remediation:

Attach results of any previous remediation as attachment M

NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can

begin. Attach additional pages as necessary.

Class V Injection Well Designations

- 5A07 Heat Pump/AC return (IW used for groundwater to heat and/or cool buildings)
 5A10 Industrial Cooling Water Deturn Flow (IW used to cool industrial measure)
- 5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
- 5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
- 5D02 Storm Water Drainage (IW designed for the disposal of rain water)
- 5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
- 5F01 Agricultural Drainage (IW that receive agricultural runoff)
- 5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
- 5S23 Subsidence Control Wells (IW used to control land subsidence caused by ground water withdrawal)
- 5W09 Untreated Sewage
- 5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
- 5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
- 5W12 WTTP disposal
- 5W20 Industrial Process Waste Disposal Wells
- 5W31 Septic System (Well Disposal method)
- 5W32 Septic System Drainfield Disposal
- 5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, and/or fill sections of a mine)
- 5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
- 5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
- 5X27 Other Wells
- 5X28 Motor Vehicle Waste Disposal Wells (IW used to dispose of waste from a motor vehicle site These are currently banned)
- 5X29 Abandoned Drinking Water Wells (waste disposal)

Attachment 1 – Original USGS Map



ATTACHMENT 1A - ORIGINAL USGS MAP (PROPOSED WWTP EAST)



ATTACHMENT 1B - ORIGINAL USGS MAP (PROPOSED WWTP WEST)





Attachment 2 – Buffer Zone Map





Attachment 3 - SPIF USGS Map

ATTACHMENT 3 - EXISTING WWTP SUPPLEMENTAL PERMIT INFORMATION FORM USGS MAP



ATTACHMENT 3 - PROPOSED WWTP SUPPLEMENTAL PERMIT INFORMATION FORM USGS MAP



Attachment 4 – Process Description

ATTACHMENT 4 TREATMENT PROCESS DESCRIPTION

EXISTING PHASE (1.1 MGD ADF; 2.75 MGD PEAK)

The existing facility uses the complete mix mode of the activated sludge process with single stage nitrification.

Raw wastewater flows by gravity into the plant headworks, which contains a mechanically and manually cleaned bar screen channel. The screenings are collected and transported to a landfill. Screened wastewater flows by gravity from the screenings structure to the aerated grit basin, where coarse bubble aeration is used to mix the basin and allow heavy organic solids to settle out. The basin has a sloped floor to prevent solids buildup. The solids are removed from the basin using an airlift pump, which discharges into a grit classifier to dewater the solids. Solids are discharged into a dumpster and are transported to a landfill.

De-gritted wastewater discharges from the grit basin into the aeration basin, where coarse bubble aeration is used with external blowers to provide the required oxygenation. Return sludge (RAS) from the clarifier is pumped using airlift pumps and is mixed with the wastewater at the upstream end of the basin. Waste activated sludge (WAS) is collected at the downstream end of the basin using a slotted pipe skimmer with the WAS pumped to the aerobic digesters using an airlift pump. A downward opening weir gate is used to maintain a set level in the aeration basin. The discharge over the gate feeds into the Clarifier No. 1 Feed Basin and then into Clarifier No. 1. Surface discharge from the clarifier is collected by perimeter weir troughs with v-notch weirs. The collector rake arms contain vertical sludge removal tubes and a surface sludge trough to hydraulically remove the sludge from the basin floor. Effluent from Clarifier No. 1 can flow into Clarifier No. 2 or it can be directed to the chlorine basin, so the clarifiers can be operated in parallel or in series. Clarified water flows into the chlorine basin where it is mixed with chlorine for disinfection. The chlorinated water is de-chlorinated in the effluent weir box prior to discharge.

Waste activated sludge is pumped by an airlift pump from the aeration basin to the aerobic digesters where it is mixed using coarse bubble diffusers. Digested sludge flows into gravity thickeners to thicken the sludge. The thickened sludge is pumped, using progressive cavity pumps, to mechanical drying beds that have stainless steel filter material. The sludge is conditioned using polymer. The dried cake is disposed of at a landfill.

PROPOSED INTERIM II PHASE (2.5 MGD ADF; 10.0 MGD Peak)

The proposed treatment facilities will utilize the activated sludge process operated in the complete-mix mode, with single stage nitrification. To meet the anticipated phosphorus limitation of 1 mg/L, enhanced biological phosphorus removal in addition to chemical precipitation will be utilized.

<u>Headworks</u>

Raw wastewater will flow by gravity from the collection system to the raw sewage lift station wetwell. Submersible pumps will convey the sewage to the headworks structure. The headworks will have two screening channels, one equipped with a mechanically cleaned screen and the other with a manually cleaned bar rack. Screened solids will be disposed of in an enclosed waste container. The discharge from the screening channels will flow by gravity into the aerated grit basin. Removed grit will be washed and conveyed to an enclosed waste container. Screened and de-gritted wastewater will flow into the biological treatment system.

Biological Nutrient Removal

Screened and de-gritted wastewater will flow into the raw influent channel, where 20% of it will flow to the RAS (return activated sludge) mix basin. RAS will be pumped to this basin from the clarifiers and thoroughly mixed with the raw wastewater. The mixed liquor will flow to the anoxic basins for nitrate reduction (to aid in phosphorus reduction). These basins will be mechanically mixed. After the anoxic basins, the mixed liquor flows to the anaerobic basins, where it is mixed with the remaining 80% of the raw wastewater from the raw influent channel (for a carbon source for the biological phosphorus removal process). Alum will be fed to these basins as a secondary means of phosphorus reduction. The wastewater will then flow to the aeration basins for nitrification.

Aeration Basins

Mixed liquor from the anaerobic basin will flow to the aeration basins for biological treatment. Mixing and aeration will be provided by blowers and diffused aeration.

Clarification

Mixed liquor from the aeration basins will flow to the final clarifiers for solids settling. There will be two clarifiers, sized so that they may operate in series or in parallel, depending on the loading conditions. Sludge exits through the hopper at the bottom of the basin where it will be wasted to the digesters or recycled back to the biological treatment system. Baffles direct the flow of scum to the scum trough, and eventually to the scum pumps, where it will be conveyed to the sludge digesters. The effluent troughs will carry the clarified effluent to the tertiary filters.

Filtration

Clarified wastewater will flow to the mixed media sand/anthracite tertiary filter. Filtered water will exit the filter through the effluent channel and flow to the ultraviolet disinfection facilities. Backwash wastewater will flow to the raw sewage pump station to be recycled back through the facilities.

Disinfection & Post-Aeration

Filtered effluent will be disinfected in the UV system channels. The disinfected water is then directed to the post-aeration basin so that the DO can be increased to an acceptable level.

Effluent Discharge

The treated effluent will flow through the effluent flow meter for discharge measurement. The water will flow through the outfall pipe to the outfall structure for release into the Guadalupe River. The effluent pipe diameter will be 48-inch or equivalent.

Sludge Handling

Wasted sludge from the clarifiers or aeration basins will be pumped to the aerobic digesters. The digesters increase the solids in the sludge to a concentration adequate for use in the belt filter press (2-3%). Sludge

will be pressed into a cake by the belt filter press and conveyed to a container for disposal. Filtrate from the belt filter press will flow to the decant pump station to be recycled back through the plant.

FINAL PHASE (4.9 MGD ADF; 19.6 MGD Peak)

The Final Phase treatment facilities will expand upon the Interim II facilities. It will also utilize the activated sludge process operated in the complete-mix mode with single stage nitrification.

Headworks

Raw wastewater will flow by gravity from the collection system to the raw sewage lift station wetwell. Submersible pumps will convey the sewage to the headworks structure. The headworks will have two screening channels, one equipped with a mechanically cleaned screen and the other with a manually cleaned bar rack. Screened solids will be disposed of in an enclosed waste container. The discharge from the screening channels will flow by gravity into the aerated grit basin. Removed grit will be washed and conveyed to an enclosed waste container. Screened and de-gritted wastewater will flow into the biological treatment system.

Biological Nutrient Removal

Screened and de-gritted wastewater will flow into the raw influent channel, where 20% of it will flow to the RAS (return activated sludge) mix basin. RAS will be pumped to this basin from the clarifiers and thoroughly mixed with the raw wastewater. The mixed liquor will flow to the anoxic basins for nitrate reduction (to aid in phosphorus reduction). These basins will be mechanically mixed. After the anoxic basins, the mixed liquor flows to the anaerobic basins, where it is mixed with the remaining 80% of the raw wastewater from the raw influent channel (for a carbon source for the biological phosphorus removal process). Alum will be fed to these basins as a secondary means of phosphorus reduction. The wastewater will then flow to the aeration basins for nitrification.

Aeration Basins

Mixed liquor from the anaerobic basin will flow to the aeration basins for biological treatment. Mixing and aeration will be provided by blowers and diffused aeration.

Clarification

Mixed liquor from the aeration basins will flow to the final clarifiers for solids settling. There will be two clarifiers, sized so that they may operate in series or in parallel, depending on the loading conditions. Sludge exits through the hopper at the bottom of the basin where it will flow to the RAS pump station. Baffles direct the flow of scum to the scum trough, and eventually to the scum pumps, where it will be conveyed to the sludge digesters. The effluent troughs will carry the clarified effluent to the tertiary filters.

Filtration

Clarified wastewater will flow to the mixed media sand/anthracite tertiary filters. Filtered water will exit the filters through the effluent channel and flow to the ultraviolet disinfection facilities. Backwash wastewater will flow to the raw sewage pump station to be recycled back through the facilities.

Disinfection & Post-Aeration

Filtered effluent will be disinfected in the UV system channels. The disinfected water is then directed to the post-aeration basin so that the DO can be increased to an acceptable level.

Effluent Discharge

The treated effluent will flow through the effluent flow meter for discharge measurement. The water will flow through the outfall pipe to the outfall structure for release into the Guadalupe River. The effluent pipe diameter will be 48-inch or equivalent.

Sludge Handling

Wasted sludge from the clarifiers or aeration basins will be pumped to the aerobic digesters. The digesters increase the solids in the sludge to a concentration adequate for use in the belt filter press (2-3%). Sludge will be pressed into a cake by the belt filter press and conveyed to a container for disposal. Filtrate from the belt filter press will flow to the decant pump station to be recycled back through the plant.

Attachment 5 – Treatment Unit Dimensions

<u>ATTACHMENT 5</u> <u>TREATMENT UNIT DIMENSIONS</u>

EXISTING INTERIM I PHASE (1.1 MGD ADF; 2.75 MGD Peak)

Treatment Unit	Number of Units	Dimensions
Aerated Grit Chamber	1	14.0 ft length x 16.5 ft width x 19.5 ft swd
Aeration Basin	1	78.0 ft length x 42.0 ft width x 16.5 ft swd
Clarifier Inlet Basin	1	127.0 ft ² surface x 16.5 ft swd
Biological Clarifier	1	60.0 ft octagonal x 16.0 ft swd
Aerated Flocculation Basin	1	260.0 ft ² surface x 14.5 ft swd
Tertiary Clarifier	1	60.0 ft octagonal x 14.25 ft swd
Chlorine Contact Basin	1	416.0 ft ² surface x 12.75 ft swd
Aerobic Digester	1	39.0 ft length x 30.0 ft width x 15 ft swd
Sludge Thickener #1	1	30.0 Dia. x 11.33 ft swd
Sludge Dewatering Facilities	1	44.0 ft length x 30.0 ft width
Sludge Thickener #2	1	30.0 Dia. x 10.33 ft swd

PROPOSED INTERIM II PHASE (2.5 MGD ADF; 10.0 MGD Peak)

Treatment Unit	Number of Units	Dimensions
Raw Wastewater Lift Station	1	27.0 ft length x 16.0 ft width x17.5 ft swd
Screening Channels	2	4.0 ft wide by 10.0 ft deep
Aerated Grit Basin	1	27.0 ft square x 20.0 ft deep (9.0 ft swd)
RAS Mix Box	1	15.0 ft x 18.0 ft x 16.0 ft swd
Anoxic Basin	2	16.0 ft width x 16.0 ft length x 16.5 ft swd
Anaerobic Basin	2	16.0 ft width x 46.0 ft length x 16.5ft swd
Aeration Basins	2	75.0 ft width x 75.0 ft length x 16.0ft swd
Final Clarifiers	2	75.0 ft diameter x 14.0 ft swd

Tertiary Filters	1	86.0 ft long x 16.0 ft wide x 6.5 ft deep
UV Disinfection	5	2.5 MGD modules
Aerobic Sludge Digesters	2	25.0 ft wide x 76.0 ft long x 16.0 ft swd
Belt Filter Press	1	2.0 meter unit

FUTURE FINAL PHASE (4.9 MGD ADF; 19.6 MGD Peak)

Treatment Unit	Number of Units	Dimensions
Raw Wastewater Lift Station	1	27.0 ft length x 16.0 ft width x17.5 ft swd
Screening Channels	2	4.0 ft wide by 10.0 ft deep
Aerated Grit Basin	1	27.0 ft square x 20.0 ft deep (9.0 ft swd)
RAS Mix Box	2	15.0 ft x 18.0 ft x 16.0 ft deep
Anoxic Basin	3	16.0 ft width x 16.0 ft length x 16.5ft swd
Anaerobic Basin	3	16.0 ft width x 46.0 ft length x 16.5ft swd
Aeration Basins	3	75.0 ft width x 75.0 ft length x 16.0ft swd
Final Clarifiers	3	75.0 ft diameter x 14.0 ft swd
Tertiary Filters	2	86.0 ft long x 16.0 ft wide x 6.5 ft deep
UV Disinfection	10	2.5 MGD modules
Aerobic Sludge Digesters	4	25.0 ft wide x 76.0 ft long x 16.0 ft swd
Belt Filter Press	1	2.0 meter unit

Attachment 6 – Process Flow Diagram







Attachment 7 – Site Map



Attachment 8 – Core Data Form



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

SECTION	I. Gell	erai miorn	lation									
1. Reason for	r Submiss	ion (If other is	checked plea	ase des	scribe ii	n space	e provid	ded.)				
New Per	mit, Regist	ration or Authori	zation (<i>Core</i>)	Data F	orm sh	ould be	e subm	itted v	vith the p	program applicatio	on.)	
Renewal	(Core Da	ata Form should	be submitted	with th	ne rene	wal for	m)		Other			
2. Customer	Reference	e Number <i>(if iss</i>	sued)	Follo	ow this I	link to s	earch	3. F	Regulate	ed Entity Referen	ce Number	(if issued)
CN 60052	22957			<u>for (</u>	<u>CN or RI</u> Central I	<u>N numb</u> Registry	<u>ers in</u> / <u>**</u>	R	N 101	700946		
SECTION	II: Cus	stomer Info	ormation									
4. General Cu	ustomer Ir	nformation	5. Effective	Date	for Cu	stome	r Inforr	matio	n Updat	tes (mm/dd/yyyy)		
New Cust	omer Legal Nar	ne (Verifiable wit	th the Texas S	Update Secreta	e to Cu ary of S	stomer tate or	⁻ Inform Texas	nation Comp	otroller o	Change in Change in	Regulated I	Entity Ownership
The Custor	mer Nan	ne submitted	here may	be up	odated	d auto	omatio	cally	based	l on what is cu	irrent and	active with the
Texas Sect	retary of	^r State (SOS)	or Texas (Comp	trolle	r of P	ublic	Асс	ounts	(CPA).		
6. Customer	Legal Nar	ne (If an individua	al, print last nan	ne first:	eg: Doe	e, John)		<u> /</u>	f new Cu	ıstomer, enter prev	ious Custom	er below:
New Brau	nfels Ut	ilities										
7. TX SOS/CF	PA Filing l	Number	8. TX State	Tax IE) (11 digi	its)		ç	9. Federal Tax ID (9 digits)10. DUNS Number (if applicable)74-600-1783			
11. Type of C	Customer:	Corporati	ion			Individ	lual		Partnership: General Limited			
Government:	🛛 City 🗌 (County 🗌 Federal [State 🗌 Othe	er		Sole P	Propriet	orship] Other:		
12. Number o	of Employ 21-100	ees	251-500)] 501 a	nd higł	ner	1	13. Independently Owned and Operated? □ Yes			
14. Customer	r Role (Pro	posed or Actual)	– as it relates to	o the Re	egulated	d Entity i	listed or	n this f	orm. Plea	ase check one of the	e following:	
Owner	Owner Operator Owner & Operator Occupational Licensee Responsible Party Voluntary Cleanup Applicant Other:											
	263 Ma	ain Plaza										
15. Mailing Address:												
	City	New Braun	fels	65	State	ΤX		ZIP	781	30	ZIP + 4	
16. Country M	Mailing Inf	ormation (if outs	ide USA)				17. E	-Mail	Addres	S (if applicable)		
18. Telephon	e Number			19. E	xtensi	on or (Code			20. Fax Numbe	er <i>(if applical</i>	ble)
(830) 629-8400 (830) 629-8435												

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.)

Gruene Road Water Reclamation Facility

	1493 G	1493 Gruene Road									
23. Street Address of the Regulated Entity:											
<u>(No PO Boxes)</u>	City	New Braunfels	5	State	T	X	ZIP	781	30	ZIP + 4	
24. County	Comal										
	En	iter Physical L	ocatic	on Descriptio	n if no	o stree	t address i	s provi	ided.		
25. Description to Physical Location:	The exist 78130.	sting treatm The propose	ent f ed fa	facility in c cility addr	pera ess is	tion is at 1	is at 1493 835 Grue	3 Gru ene R	ene Rd, d, New I	New Brau Braunfels,	nfels, TX, TX, 78130.
26. Nearest City								State		Ne	arest ZIP Code
New Braunfels								ΤХ		78	130
27. Latitude (N) In Dec	imal:	29.735779)			28. L	ongitude (\	N) In	Decimal:	98.10777	79
Degrees	Minutes		Secor	nds		Degree	es		Minutes		Seconds
29		44		8.61			98			06	28.01
29. Primary SIC Code (4	digits) 30.	Secondary SI	C Cod	le (4 digits)	31 . (5 or	Primar 6 digits)	ry NAICS C	ode	32. S (5 or 6	econdary NA	ICS Code
4952											
33. What is the Primary	Business of	this entity?	(Do not	repeat the SIC of	NAICS	6 descrip	otion.)				
Domestic wastewa	ter treatme	ent									
						263 M	ain Plaza				
34. Mailing											
Address:	City	New Braun	fels	State		ТΧ	ZIP		78130	ZIP + 4	
35. E-Mail Address	s:										
36. Telepi	none Number	•		37. Extensio	on or	Code		3	8. Fax Nur	nber <i>(if applid</i>	cable)
(830)	629-8400								(830)) 629-1361	
39. TCEQ Programs and II form. See the Core Data Form) Numbers Cl	neck all Programs additional quidan	s and w	vrite in the perm	its/reg	istratior	n numbers th	at will be	e affected by	the updates su	bmitted on this
Dam Safety	Districts	<u> </u>		Edwards Aquife	er		Emissions	Invento	ory Air	Industrial H	azardous Waste
				I					<u>,</u>		
Municipal Solid Waste	New So	urce Review Air		OSSF			Petroleum	Storage	e Tank	PWS	
Sludge	Storm W	Storm Water Title V Air				Γ	Tires			Used Oil	
Voluntary Cleanup	🛛 Waste V	Vater		Wastewater Ag	ricultur	e [Water Rig	hts		Other:	
	WQ0010232002										
SECTION IV: Preparer Information											
40. Name: Craig Be	ll, P.E.					41. T	Title:	Austin	CES Pr	actice Lea	der
42. Telephone Number	43. Ext.	/Code 4	14. Fax	x Number		45.	E-Mail Add	dress			
(512)924.4999		(512) 454-2433	5	cb	ell@trcc	ompa	nies.con	 ו	

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:	New Braunfels Utilities	Chief Ope	ef Operations Officer		
Name(In Print):	Ryan Kelso			Phone:	(830)629-8400
Signature:				Date:	

Appendix A – Laboratory Reports



Report of Sample Analysis

Client Information	Complete Second	Tabanatan Tabanatan
Client Information	Sample Information	Laboratory Information
Trish Soechting	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #1	PCS Sample #: 550004 Page 1 of 1
P O Box 310289	Matrix: Non-Potable Water	Report Date: 05/01/2019
New Braunfels, TX 78131-0289	Date/Time Taken: 04/15/2019 1015	linet Whilleren
		Approved W
		Chuck Wallgren, President
Test Description Flag Re	esult Units RL Analysis Date/T	ime Method Analyst
Cyanide, Amenable + See At	tached	Pace Analytical Services - Dallas
<u>Quality Statement:</u> All supporting quality control data adher exceptions or in a case narrative attachment. Reports with fu	red to data quality objectives and test results meet the re Il quality data deliverables are available on request.	equirements of NELAC unless otherwise noted as flagged
	These analytical re	sults relate only to the sample tested.
+ Subcontract Work - NELAP Certified Lab	All data is reported RL = Reporting Li	l on an "As Is" basis unless designated as "Dry Wt." mits
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Blvd, Suite 100 210-3 Universal City, TX 78148-3318	40-0343 FAX # 210-658-7903
This report connect he represented	a or duplicated arount in full without price written and	ant from Pollution Control Services



Trish Soechting New Braunfels Utilities P.O. Box 310289 Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grah #1 Matrix: Non-Potable Water Date/Time Taken: 04/15/2019 1015 PCS Sample #: 55005 Page 1 of 1 Date/Time Received: 04/16/2019 Dit:004 Report Date: 0501/2019 Dit:004 Test Description Flag Result Units RL Analysis Date/Time Method Analyst Phenolics + See Attached See Attached Pace Analytical Services - Dallas Quality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged t Subcontract Work - NELAP Certified Lab Thee analytical service are available on request. * Subcontract Work - NELAP Certified Lab There analytical service are available on request. Web Site: www.petab.net Toll Free 806-880-4616 1532 Universal City Biod, Suite 100 Universal City R7 78 1318 210-346-043 FAX# 210-458-7903	Client Information	Sample Information	Laboratory Information			
Test Description Flag Result Units RL Analysis Date/Time Method Analyst Phenolics + See Attached Pace Analytical Services - Dallas Phenolics + See Attached Pace Analytical Services - Dallas Omality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged Omality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request. + Subcontract Work - NELAP Certified Lab These malytical results related on an "As Is" basis unless designated as "Dry Wt." Web Site: Toll Free 800-880-4616 1532 Universal City Birds, Suite 100 210-340-0343 FAX # 210-688-7903	Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #1 Matrix: Non-Potable Water Date/Time Taken: 04/15/2019 1015	PCS Sample #: 550005 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved by: https://www.hallegue.com/			
Test Description Flag Result Units RL Analysis Date/Time Method Analysis Phenolics + See Attached Pace Analytical Services - Dallas Pace Analytical Services - Dallas Phenolics + See Attached Pace Analytical Services - Dallas Pace Analytical Services - Dallas Quality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request. These analytical results relate only to the sample tested. + Subcontract Work - NELAP Certified Lab Instant City RNet_318 210-340-0343 FAX # 210-658-7903			Chuck Wallgren, President			
Phenolics + See Attached Pace Analytical Services - Dallas Phenolics + See Attached Pace Analytical Services - Dallas Quality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request. + Subcontract Work - NELAP Certified Lab These analytical results relate only to the sample tested. All data is reported on a "As 1s" basis unless designated as "Dry Wt." RL = Reporting Limits Web Site: www.peclab.net Toll Free 800-880-4616 1532 Universal City, BV:6, Suite 100 210-340-0343 FAX # 210-658-7903	Test Description Flag R	esult Units RL Analysis Date/Ti	me Method Analyst			
Ouality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request. + Subcontract Work - NELAP Certified Lab These analytical results relate only to the sample tested. All data is reported on an "As Is" basis unless designated as "Dry Wt." RL = Reporting Limits Web Site: www.pcslab.net Toll Free 800-880-4616 1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318 210-340-0343 FAX # 210-658-7903	Phenolics + See As	ttached	Pace Analytical Services - Dallas			
+ Subcontract Work - NELAP Certified Lab These analytical results relate only to the sample tested. All data is reported on an "As Is" basis unless designated as "Dry Wt." RL = Reporting Limits Web Site: www.pcslab.net Toll Free 800-880-4616 Universal City Blvd, Suite 100 Universal City, TX 78148-3318 210-340-0343	Quality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.					
Web Site: www.pcslab.netToll Free 800-880-46161532 Universal City Blvd, Suite 100210-340-0343FAX # 210-658-7903e-mail: chuck@pcslab.netUniversal City, TX 78148-3318Universal City, TX 78148-3318FAX # 210-658-7903	+ Subcontract Work - NELAP Certified Lab	These analytical res All data is reported RL = Reporting Lin	ults relate only to the sample tested. on an "As Is" basis unless designated as "Dry Wt." nits			
	Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Bivd, Suite 100210-34Universal City, TX 78148-3318	40-0343 FAX # 210-658-7903			



Client Information	Sample Information	Laboratory Information		
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #2 Matrix: Non-Potable Water Date/Time Taken: 04/15/2019 1530	PCS Sample #: 550006 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved by: Lunch Wallgreen President		
The second se		Mo Chuck Wangton, President		
Test Description Plag Ro	esult Units RL Analysis Date/11	me Method Analyst		
Cyanide, Amenable + See At	tached	Pace Analytical Services - Dallas		
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Quality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.				
+ Subcontract Work - NELAP Certified Lab	These analytical res All data is reported RL = Reporting Lin	ults relate only to the sample tested. on an "As Is" basis unless designated as "Dry Wt." its		
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net This report cannot be reproduced	1532 Universal City Blvd, Sulte 100 210-34 Universal City, TX 78148-3318	0-0343 FAX # 210-658-7903		



Client Information	Sample Information	Laboratory Information		
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #2 Matrix: Non-Potable Water Date/Time Taken: 04/15/2019 1530	PCS Sample #: 550007 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved by: Lunch Wallgreen, President		
Test Description Flag Re	esult Units RL Analysis Date/T	ime Method Analyst		
Phenolics + See At	tached	Pace Analytical Services - Dallas		
Quality Statement: All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged				
+ Subcontract Work - NELAP Certified Lab	These analytical re All data is reporter RL = Reporting Li	esults relate only to the sample tested. d on an "As Is" basis unless designated as "Dry Wt." imits		
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Blvd, Suite 100 210-3 Universal City, TX 78148-3318	340-0343 FAX # 210-658-7903		



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #3 Matrix: Non-Potable Water Date/Time Taken: 04/15/2019 2152	PCS Sample #: 550008 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved by: Lunch Mallguer W Chuck Wallgren, President
Test Description Flag R	esult Units RL Analysis Date/Tir	ne Method Analyst
Cyanide, Amenable + See At	tached	Pace Analytical Services - Dallas
<u>Quality Statement:</u> All supporting quality control data addet exceptions or in a case narrative attachment. Reports with fu	red to data quality objectives and test results meet the req ull quality data deliverables are available on request.	uirements of NELAC unless otherwise noted as flagged
+ Subcontract Work - NELAP Certified Lab	These analytical resu All data is reported o RL = Reporting Lim	ilts relate only to the sample tested. n an "As Is" basis unless designated as "Dry Wt." its
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Blvd, Sulte 100 210-340 Universal City, TX 78148-3318	D-0343 FAX # 210-658-7903



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #3 Matrix: Non-Potable Water Date/Time Taken: 04/15/2019 2154	PCS Sample #: 550009 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved by: Chuck Wallgren, President
Test Description Flag	Result Units RL Analysis Date/Tin	ne Method Analyst
Phenolics +	See Attached	Pace Analytical Services - Dallas
<u>Quality Statement:</u> All supporting quality control da exceptions or in a case narrative attachment. Report	ta adhered to data quality objectives and test results meet the req s with full quality data deliverables are available on request.	uirements of NELAC unless otherwise noted as flagged
+ Subcontract Work - NELAP Certified Lab	These analytical resu All data is reported o RL = Reporting Limi	lts relate only to the sample tested. n an "As Is" basis unless designated as "Dry Wt." its
Web Site: www.pcslab.net Toll Free 800-88 e-mail: chuck@pcslab.net	0-4616 1532 Universal Clty Blvd, Suite 100 210-340 Universal City, TX 78148-3318	D-0343 FAX # 210-658-7903

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Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Grab #4 Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0540	PCS Sample #: 550010 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved by:
	(- a term of all growth and the sound at the second	Chuck Wallgren, President
Test Description Flag Re	esult Units RL Analysis Date/Ti	me Method Analyst
Cyanide, Amenable + See At	tached ,	Pace Analytical Services - Dallas
Quality Statement: All supporting quality control data adher	ed to data quality objectives and test results meet the re	quirements of NELAC unless otherwise noted as flagged
exceptions or in a case narrative attachment. Reports with fu	Il quality data deliverables are available on request.	
+ Subcontract Work - NELAP Certified Lab	These analytical res All data is reported RL = Reporting Lin	ults relate only to the sample tested. on an "As Is" basis unless designated as "Dry Wt." nits
Web Site: www.pcslab.netToll Free 800-880-4616e-mail: chuck@pcslab.net	1532 Universal City Blvd, Suite 100 210-34 Universal City, TX 78148-3318	I0-0343 FAX # 210-658-7903



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWT Sample ID: Eff Grab #4 Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0540	P PCS Sample #: 550011 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 05/01/2019 Approved to: Chuck Wallgren, President
Test Description Flag Re	esult Units RL Analysis Date	/Time Method Analyst
Phenolics + See At	tached	Pace Analytical Services - Dallas
Quality Statement: All supporting quality control data adher exceptions or in a case narrative attachment. Reports with fu	red to data quality objectives and test results meet th Il quality data deliverables are available on request	e requirements of NELAC unless otherwise noted as flagged t.
+ Subcontract Work - NELAP Certified Lab	These analytic All data is rep RL = Reportin	al results relate only to the sample tested. orted on an "As Is" basis unless designated as "Dry Wt." g Limits
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Blvd, Suite 100 2 Universal City, TX 78148-3318	10-340-0343 FAX # 210-658-7903



Client Information	Sample Information	Laboratory In	formation
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene V Sample ID: Eff Grab Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0540	VWTP PCS Sample #: 55001 Date/Time Received: (Report Date: 05/01/20 Approved to:	2 Page 1 of 1 04/16/2019 10:04 19 <i>Mullgren</i> k Wallgren, President
Test Description R	esult Units RL Analysis	Date/Time Method A	nalyst
Volatiles 624 See At	tached	Pace Ana	lytical Services - Dallas
Quality Statement: All supporting quality control data adherest exceptions or in a case narrative attachment. Reports with fi	red to data quality objectives and test results m ull quality data deliverables are available on r	eet the requirements of NELAC unless other equest.	wise noted as flagged
	These All dat RL = F	analytical results relate only to the sample tested. a is reported on an "As Is" basis unless designated as "Dr Reporting Limits	/ Wt."
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Blvd, Sulte 100 Universal City, TX 78148-3318	210-340-0343 FA	X # 210-658-7903



Report of Sample Analysis

Client Information		Sa	mple Informa	ation		in the start is	Laboratory I	nformation
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Proje Samj Matr Date	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Comp Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0800				PCS Sample #: 550013 Page 1 of 4 Date/Time Received: 04/16/2019 10:04 Report Date: 04/26/2019 Approved by:		
							the	uck Wallgren, President
Test Description	Result	Units	RL	Analysis Dat	e/Time	Method		Analyst
Chloride Nitrate-N Sulfate Fluoride Kjeldahl-N, Total Alkalinity, Total Arsenic/ICP MS	243 29.6 131 0.43 3 134 0.0006	mg/L mg/L mg/L mg/L mg/L mg/L	1 0.1 1 0.10 1 10 0.0005	04/16/2019 04/16/2019 04/16/2019 04/16/2019 04/23/2019 04/23/2019 04/17/2019 04/24/2019	15:40 15:40 15:40 09:30 08:30 11:19	EPA 300.0 EPA 300.0 EPA 300.0 EPA 300.0 SM 4500-N 1 SM 2320 B EPA 200.8	B/E	PLP PLP PLP CRM CRM DJL
Test Description	Precision	Qua Limit	lity Assuranc LCL	e Summary MS MSE) UC	L LCS	LCS Limit	
Chloride Nitrate-N Sulfate Fluoride Kjeldahl-N, Total Alkalinity, Total Arsenic/ICP MS	<1 1 <1 <1 1 2	10 20 10 10 10 10 20	92 70 93 83 92 95 70	100 100 101 100 101 99 102 103 96 96 101 102 98 96	102 130 102 108 109 107 130	104 105 106 103 106 100 95	85 - 115 85 - 115	
Quality Statement: All supporting quality control data a exceptions or in a case narrative attachment. Reports w	adhered to da vith full quali	ta quality ot ty data deliv	bjectives and t verables are av	test results meet vailable on reque These ana All data is RL = Repu QC Data	the requi est. lytical resul reported or orting Limit a Reported	ts relate only to the tan "As Is" basis un ts I in %, Except BO	LAC unless oth sample tested nless designated as D in mg/L	erwise noted as flagged "Dry Wt."
Web Site: www.pcslab.netToll Free 800-880-4e-mail: chuck@pcslab.net	616 1	1532 Universa Universal Ci	l City Blvd, Suite ity, TX 78148-33	e 100 518	210-340-0	343	F	CAX # 210-658-7903



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Comp Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0800	PCS Sample #: 550013 Page 2 of 4 Date/Time Received: 04/16/2019 10:04 Report Date: 04/26/2019 10:04

Test Description	Result	Units	RL	Analys	is Date/Tir	ne Method	的建筑建设	Analyst	
Barium/ICP (Total)	0.025	mg/L	0.003	04/22/2	2019 14:04	4 EPA 200.7 /	6010 B	DJL	
Cadmium/ICP (Total)	< 0.001	mg/L	0.001	04/22/2	2019 14:04	4 EPA 200.7 /	6010 B	DJL	
Chromium/ICP (Total)	< 0.003	mg/L	0.003	04/22/2	2019 14:04	4 EPA 200.7 /	6010 B	DJL	
Copper/ICP (Total)	0.012	mg/L	0.002	04/22/2	2019 14:04	4 EPA 200.7 /	6010 B	DJL	
Lead/ICP MS	< 0.0005	mg/L	0.0005	04/24/2	2019 11:19	EPA 200.8		DJL	
Aluminum/ICP (Total)	0.048	mg/L	0.0025	04/22/2	2019 14:04	4 EPA 200.7 /	6010 B	DJL	
Beryllium/ICP (Total)	< 0.0005	mg/L	0.0005	04/22/2	2019 14:04	EPA 200.7 /	6010 B	DJL	
		Qual	ty Accurance	o Summo	3 MAX 7			1	
Test Description	Precision	Limit	LCL	MS	MSD U	JCL LCS	LCS Limit		
Barium/ICP (Total)	<1	20	75	92	92	125 105	85 - 115		
Cadmium/ICP (Total)	<1	20	75	96	96	125 105	85 - 115		
Chromium/ICP (Total)	<1	20	75	95	95	125 105	85 - 115		
Copper/ICP (Total)	<1	20	75	94	94	125 100	85 - 115		
Lead/ICP MS	3	20	70	110	108	130 107	85 - 115		
Aluminum/ICP (Total)	<1	20	75	103	103	125 105	85 - 115		
Beryllium/ICP (Total)	1	20	75	99	100	125 105	85 - 115		

<u>Ouality Statement:</u> All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

			These analytical results relate only to All data is reported on an "As Is" basi RL = Reporting Limits	the sample tested. is unless designated as "Dry Wt."	
			QC Data Reported in %, Except	BOD in mg/L	1
Web Site: www.pcs	lab.net Toll Free 800-880-4616	1532 Universal City Blvd, Suite 100	210-340-0343	FAX # 210-658-7903	
e-mail: chuck@nesl	lab.net	Universal City, TX 78148-3318			


Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene WWTP Sample ID: Eff Comp Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0800	PCS Sample #: 550013 Page 3 of 4 Date/Time Received: 04/16/2019 10:04 Report Date: 04/26/2019 10:04

Test Description	Flag	Result	Units	RL	Analys	sis Date/	/Time	Method	Analyst	Lev.
Molybdenum/ICP (Total)		< 0.010	mg/L	0.010	04/22/	2019 14	4:04	EPA 200.7 / 6010 B	DJL	
Hexavalent Chrome	R	< 0.003	mg/L	0.003	04/16/	2019 16	6:10	SM 3500-Cr D	DJL	
Antimony/ICP (Total)		< 0.005	mg/L	0.005	04/22/	2019 14	4:04	EPA 200.7 / 6010 B	DJL	
Nickel/ICP (Total)		0.002	mg/L	0.002	04/22/	2019 14	4:04	EPA 200.7 / 6010 B	DJL	
Silver/ICP (Total)		< 0.0005	mg/L	0.0005	04/22/	2019 14	4:04	EPA 200.7 / 6010 B	DJL	
Zinc/ICP (Total)		0.063	mg/L	0.005	04/22/	2019 14	4:04	EPA 200.7 / 6010 B	DJL	
Selenium/ICP (Total)		< 0.005	mg/L	0.005	04/22/	2019 14	4:04	EPA 200.7 / 6010 B	DJL	
			Qual		Comment					
Test Description		Drogision	Limit	I CI	MC	MGD	UCI	LCS LCST	mit -	
Test Description	and the last	rrecision	Limit	LCL	IVIS	MSD	UCI		multiple sees the set of the	Sec. m
Molybdenum/ICP (Total)		<1	20	75	97	97	125	105 85 - 1	15	
Hexavalent Chrome		<1	20	75	*69	*70	125	102 85 - 1	15	
Antimony/ICP (Total)		<1	20	75	99	99	125	100 85 - 1	15	
Nickel/ICP (Total)		<1	20	75	94	94	125	105 85 - 1	15	
Silver/ICP (Total)		1	20	75	94	95	125	110 85 - 1	15	
Zinc/ICP (Total)		<1	20	75	99	99	125	105 85 - 1	15	
Selenium/ICP (Total)		<1	20	75	100	100	125	105 85 - 1	15	

<u>Ouality Statement:</u> All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

R *	Spike recovery outside control limit Approved for release per QA Plan,	s due to matrix effect - LCS with Exception to Limits - QAM Section	in limits on 13-4	These analytical results relate only to the s All data is reported on an "As Is" basis un RL = Reporting Limits QC Data Reported in %, Except BO	sample tested. Iless designated as "Dry Wt," <i>D in mg/L</i>	
	Web Site: www.pcslab.net e-mail: chuck@pcslab.net	Toll Free 800-880-4616	1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318	210-340-0343	FAX # 210-658-7903	



Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Gruene W Sample ID: Eff Comp Matrix: Non-Potable Water Date/Time Taken: 04/16/2019 0800	WTP PCS Sample #: 550013 Page 4 of 4 Date/Time Received: 04/16/2019 10:04 Report Date: 04/26/2019
Test Description Re	sult Units RL Analysis D	ate/Time Method Analyst
Thallium/ICP MS <0.0	005 mg/L 0.0005 04/24/2019	11:19 EPA 200.8 DJL
Test Description Pro	Quality Assurance Summary ecision Limit LCL MS Mi	SD UCL LCS LCS Limit
Thallium/ICP MS	2 20 70 110 10	8 130 106 85 - 115
<u>Quality Statement:</u> All supporting quality control data adher exceptions or in a case narrative attachment. Reports with f	red to data quality objectives and test results me ull quality data deliverables are available on req	et the requirements of NELAC unless otherwise noted as flagged juest.
	These All dat	analytical results relate only to the sample tested.
	RL = F	eporting Limits
	QC L	αια περοτιεά τη 70, Ελθερι DOD τη mg/L
Web Site: www.pcslab.net Toll Free 800-880-4616 e-mail: chuck@pcslab.net	1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318	210-340-0343 FAX # 210-658-7903



Report of Sample Analysis

Client Information	Sample Information		Laboratory Information
Trish Soechting	Project Name: IPP Annual Gruer	ne WWTP PCS Sa	mple #: 550014 Page 1 of 1
New Braunfels Utilities	Sample ID: Eff Comp	Date/Ti	me Received: 04/16/2019 10:04
P.O. Box 310289	Matrix: Non-Potable Water	Report	Date: 05/01/2019
New Braunfels, TX 78131-0289	Date/Time Taken: 04/16/2019 0	820	the lunch Wallgreen
		Appiov	eu
			Chuck Wallgren, President
Test Description	Result Units RL Analy	vsis Date/Time Method	Analyst
Pesticides 617 See	Attached		Pace Analytical Services - Dallas
604.1 Hexachlorophene See	Attached		Pace Analytical Services - Dallas
Semi Volatiles 625 See	Attached		Pace Analytical Services - Dallas
Pesticides 608 See	Attached		Pace Analytical Services - Dallas
Pesticides 632 See	Attached		Pace Analytical Services - Dallas
Pesticide 1657 See	Attached		Pace Analytical Services - Dallas
Herbicides 615 See .	Attached		Pace Analytical Services - Dallas
<u>Quality Statement:</u> All supporting quality control data add exceptions or in a case narrative attachment. Reports with	ered to data quality objectives and test resu full quality data deliverables are available	lts meet the requirements of NE on request.	LAC unless otherwise noted as flagged
	T A R	hese analytical results relate only to the ll data is reported on an "As Is" basis un L = Reporting Limits	sample tested. less designated as "Dry Wt."
Web Site: www.pcslab.netToll Free 800-880-4616e-mail: chuck@pcslab.net	1532 Universal City Blvd, Sulte 100 Universal City, TX 78148-3318	210-340-0343	FAX # 210-658-7903



Report of Sample Analysis

Client Information	Sample Informa	ition	Laborator	y Information	
Trish Soechting New Braunfels Utilities P.O. Box 310289 New Braunfels, TX 78131-0289	Project Name: IPP Annual Sample ID: Eff Grab Matrix: Non-Potable Wate Date/Time Taken: 04/16/2	l Gruene WWTP er 2019 0820	PCS Sample #: 550015 Page 1 of 1 Date/Time Received: 04/16/2019 10:04 Report Date: 04/24/2019 Approved by:		
			Car	Chuck Wallgren, President	
Test Description	Result Units RL	Analysis Date/Time	Method	Analyst	
Mercury/CVAFS <0	0.000005 mg/L 0.000005	04/23/2019 12:08	EPA 245.7	DJL	
Test Description	Quality Assurance Precision Limit LCL	e Summary MS MSD UC	L LCS LCS Lim	it	
Mercury/CVAFS	5 20 70	13(0		
<u>Quality Statement:</u> All supporting quality control data exceptions or in a case narrative attachment. Reports	adhered to data quality objectives and t with full quality data deliverables are av	est results meet the require ailable on request.	irements of NELAC unless	otherwise noted as flagged	
		These analytical resu All data is reported o RL = Reporting Limi QC Data Reported	Its relate only to the sample tested. n an "As Is" basis unless designated its d in %, Except BOD in mg/L	as "Dry Wt."	
Web Site: www.pcslab.net Toll Free 800-880-4 e-mail: chuck@pcslab.net	1616 1532 Universal City Blvd, Suite Universal City, TX 78148-33	100 210-340-0 18)343	FAX # 210-658-7903	

Chain of Custody Number 5 5 0 0 0 4

MULTIPLE SAMPI	LE ANALY	SIS REQ	UES	T A	ND CHAIN	OF	CU	STODY FORM			page 1/2 s	tamp I st s	sample and COC as same number
CUSTOMER INFORM	ATION		1.12		REPORT	INF	OR	MATION		1.			
Name: New Braunfels Uti	lites				Attention	Attention: Trish Soechting				Ph	one: (830) 608-8900		Fax: (830) 626-1361
SAMPLE INFORMATIO	ON		a fi	6.12	10					ueste	ed Analysis		
Project Information:			Colle	cted By	": 1/m	-	_						Instructions/Comments:
IPP Annual Gruene WWT	TP				Matrix	2	1	Container					
Report "Soils" 🗆 As Is 🗆 Dry V	Vt.		orine mg/L	e or	DW -Drinking Water; NPW -Non-		F.		5.1				
S. Charles Contractory	Colle	ected	fual Chi	posil	potable water; WW-Wastewater;	ype	h	Preservative	A33	lols			
Client / Field Sample ID	Date	Time	Field Resid	Com	LW-Liquid Waste		ź		Ċ	Pher			PCS Sample Number
	Start:	Start: UIS		ПC		X P				Ĩ			550000
Eff Grab #1	End:	End:		🗷 G	Sludge LW		1	■ ICE □	_ X				
	Start:	Start		DС	DW NPW			H ₂ SO ₄ HNO ₃					550005
Eff Grab #1	End:	End:	1	🖾 G	Sludge D LW		1	\blacksquare H ₃ PO ₄ \blacksquare NaOH \blacksquare ICE \square	_	X			
0	Start:	Start:		ПC		ØP		H ₂ SO ₄ HNO ₃	100				550006
Eff Grab #2	End:	End:	1	🖬 G	Sludge D LW		1	□ H ₃ PO ₄ ⊡ NaOH □ ICE □	_ X				
	Start:	Start:		ПC	D DW D NPW	OP		H ₂ SO ₄ HNO ₃					5500071
Eff Grab #2 OUISIA 79	End:	End:		⊠G	Sludge C LW	©G □O	1	\square H ₃ PO ₄ \square NaOH \square ICE \square	_	X			
	Start:	Start:		DС	D DW D NPW	⊠P		H ₂ SO ₄ HNO ₃		1			550000
Eff Grab #3	End:	End:		G	Sludge C LW	G G G G G	1	$\square H_3PO_4 \blacksquare NaOH \\ \blacksquare ICE \square ____$	_ ×				
	Start:	Start:		ПC	DW DNPW	ПÞ		H ₂ SO ₄ HNO ₃					550000
Eff Grab #3	End:	End:		⊠G	Sludge C LW		1	$\square H_3PO_4 \square NaOH$ $\square ICE \square$	_	X			
<u>CAL</u> M	Start:	Start:			DW DNPW	₽P		H ₂ SO ₄ HNO ₃	-	1			E S D A = A
Eff Grab #4	G G I G G G G G G G G G G	DSU C		D C	☑ WW □ Soil □ Sludge □ LW		1	III,PO, INAOH	X			1 1	
041598	End,	End.			Other							\vdash	US UB UN LIHEM Other:
	Start:	Start: OSYO		ПС	DW DNPW	□P ⊠G	1	$H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$		4			550071
eli Grab #4	End:	End:		∎G	□ Sludge □ LW □ Other	00				~			□S □B □N □HEM Other:
Required Turnaround: 🔳 🖪	Routine (6-10 day	s) EXPEDI	<i>TE</i> : (Se	ee Surcl	narge Schedule)	- <	8 Hrs	1. 16 Hrs. $1.$ < 24	Hrs. 🗆 5	days	Other: Rush (Charges Au	ithorized by:
Sample Archive/Disposal:	Laboratory Star	ndard 🗆 Hold	for clie	nt pick	up Con	ntaine	er Ty	vpe: P = Plastic, G = Gla	ass, $O = 0$	Other		I. Start	Carrier ID:
Relinquished By:	sedifier	THANK	Date	4	16.19 Time:	de	Æ	Received By:	m	-		Date:	4.16.69 Time: 5925
Relinquished By: 5 Z	orale	Va.	Date	4-	(19 Time:	09	25	Received By:	In	~	-0.	Date:	4.16.19 Time: 0925
Rev. Multiple Sample COC 20120204 1532 Universal City Blvd., P (210) 340-0343 or (800) 8	Ste. 100, Unive 880-4616 - F	ersal City, Tex (210) 658-79	xas 78 903	148	-16-19	6	04	Y	haur	er	Welf		4. 10 2008 Pollution Control Services 2008 Pollution Control Services 2008 Pollution Control Services 2008 Service

Chain of Custody Number 5 5 0 0 1 2;

MULTIPLE SAMPI	LE ANALY	YSIS REQ	UES	TA	ND CHAIN	OF	CU	STODY FORM			Dac	12	12	St	amp 1 st	sample and COC as same number
CUSTOMER INFORMA	ATION		1.11	- A -	REPORT	REPORT INFORMATION										
Name: New Braunfels Uti	lities				Attention	: Tris	h So	echting		Pho	one: (830) 6	08-89	000		Fax: (830) 626-1361
SAMPLE INFORMATIC	ON	212110	Nav.		1.	Re					d An	alysis	1120	120	1.7.3	
Project Information:			Colle	cted By	y: m	h					Z	32	515	657		Instructions/Comments:
IPP Annual Gruene WWT	TP				Matrix	Matrix Container					031	st 6	erb	Pest	5	CI, Soy, Talk
Report "Soils" □ As Is □ Dry Wt.			orine mg/L	eor	DW-Drinking Water; NPW-Non-		H I] 4	Lable	F, N	3, Pe	25, He	st 617,	Lev	adalil 110 bir
Client / Field Sample ID	Collected Collected		ield Chlo esidual i	omposit rab	potable water; WW-Wastewater; LW-Liquid Waste	Type	Numbe	Preservative	OC 62	letals 7	ex Cr,	est 608	VOC 62	x 604.1, Pe	g Low	4(11110)
A LA SHALLAN PARA	Date	Time	ER	00		_			>	Σ	H	Pe	S	He	H	PCS Sample Number
Eff Grab	Start: <u> <u> <u> </u> <u> <u> </u> </u></u></u>	Start: End:		□C ⊠G	DW NPW WW Soil Sludge LW		1	$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$ $\blacksquare ICE \square _____$	×	ð.						5 5 0 0 1 2
Eff Grab	Start: 4-15-19	Start:	-		DW NPW WW Soil		1	$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$	X							
04131957	End:	End:		Marg	O Other				-							DS DB DN DHEM Other:
Eff Grab	Start: End:	End:	5	□ C ⊠ G	DW NPW WW Soil Sludge LW		1	$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$ $\blacksquare ICE \square$	×							
Eff Grab	Start: 4 1619 End:	Start: OS IO End:		⊡C ⊠G	DW NPW WW Soil Sludge LW	□P ⊠G □O	1	$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$ $\blacksquare ICE \square$	×							
Eff Comp	Start:	Start: (DOO End:		⊠ C ⊡ G	DW NPW WW Soil Sludge LW	ØP ■G ■O	2	$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$ $\square ICE \square$		×	×					5 0 0 1 3
Eff Comp 04/6/900	Start: <u>4.15.10</u> End: <u>4.16.9</u>	Start: LOLO End: OSCS		⊠ C □ G	DW NPW WW Soil Sludge LW		7	$\square H_2SO_4 \square HNO_3 \square H_3PO_4 \square N_0OH \square ICE \square$				×	×	X		15 5 0 0 7 4
Eff Grab 246 Pp	Start 4.15.4	Start		□c ⊠G	DW NPW WW Soil Sludge LW	□P ⊡G □O	3	$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$ $\blacksquare ICE \blacksquare HCL$							×	5 5 0 0 1 5
	7.6.63 Start:	Start:		DС	Other OW NPW WW Soil	OP OG		$\square H_2SO_4 \square HNO_3$ $\square H_3PO_4 \square NaOH$								
	End:	End:		G	□ Sludge □ L.W □ Other	0										DS DB DN DHEM Other.
Required Turnaround: 🔳 R	Routine (6-10 day	(s) EXPEDI	TE: (So	e Surcl	harge Schedule)	- <	8 Hrs	\Box < 16 Hrs. \Box < 24 Hr	s. 🗆 5	days [Othe	r:	R	Rush Cl	harges A	Authorized by:
Sample Archive/Disposal:	Laboratory Sta	ndard 🗆 Hold	for clie	nt pick	up Con	ntain	er Ty	pe: P = Plastic, G = Glass,	0=0	Other					-	Carrier ID:
Relinquished By: Tash	edition	Howviss	Date	: 4.1	6-19 Time:	00	125	Received By:	N	-					Date:	4.16.19 Time: 0925
Relinquished By: J. C.	siler		Date	: 4-1	IG-19 Time:	900	25	Received By:	b	-		-0	٨		Date:	4.16.19 Time: 0925
Rev. Multiple Sample COC 20120201 1532 Universal City Blvd., 5 P (210) 340-0343 or (800) 8	Ste. 100, Univ	ersal City, Tex F (210) 658-79	xas 78 003	4 . 148	file path: Z:\0	COCINI	NBU\I	1 Inf_IPP_Annual_NK_Page2_bai	au n28_201	Un 6.pdf	U	alj	h	a.		4 102008 Pelution Control Services - Atracting reserved Dogin at www.pcs.abs/met

LMW 4.16.19

www.pecelabs.com

May 01, 2019

Chuck Wallgren Pollution Control Services 1532 Universal City Blvd. #100 Universal City, TX 78148

RE: Project: 550004 Pace Project No.: 75106680

Dear Chuck Wallgren:

Enclosed are the analytical results for sample(s) received by the laboratory on April 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mehon Mi Cullough

Melissa McCullough melissa.mccullough@pacelabs.com (972)727-1123 Project Manager

Enclosures

cc: Michael Klang



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

 Project:
 550004

 Pace Project No.:
 75106680

Dallas Certification IDs: 400 West Bethany Dr Suite 190, Allen, TX 75013 Florida Certification #: E871118 EPA# TX00074 Texas T104704232-18-26 Texas Certification #: T104704232-18-26

Kansas Certification #: E-10388 Arkansas Certification #: 88-0647 Oklahoma Certification #: 8727 Louisiana Certification #: 30686 Iowa Certification #: 408

REPORT OF LABORATORY ANALYSIS



SAMPLE SUMMARY

 Project:
 550004

 Pace Project No.:
 75106680

75106680001550004Water04/15/19 10:1504/17/19 10:3475106680002550005Water04/15/19 10:1504/17/19 10:3475106680003550006Water04/15/19 15:3004/17/19 10:3475106680004550007Water04/15/19 15:3004/17/19 10:3475106680005550008Water04/15/19 21:5204/17/19 10:3475106680006550009Water04/15/19 21:5204/17/19 10:3475106680007550010Water04/16/19 05:4004/17/19 10:34
75106680002550005Water04/15/19 10:1504/17/19 10:3475106680003550006Water04/15/19 15:3004/17/19 10:3475106680004550007Water04/15/19 15:3004/17/19 10:3475106680005550008Water04/15/19 21:5204/17/19 10:3475106680006550009Water04/15/19 21:5404/17/19 10:3475106680007550010Water04/16/19 05:4004/17/19 10:34
75106680003 550006 Water 04/15/19 15:30 04/17/19 10:34 75106680004 550007 Water 04/15/19 15:30 04/17/19 10:34 75106680005 550008 Water 04/15/19 21:52 04/17/19 10:34 75106680006 550009 Water 04/15/19 21:52 04/17/19 10:34 75106680007 550010 Water 04/16/19 05:40 04/17/19 10:34
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75106680006 550009 Water 04/15/19 21:54 04/17/19 10:34 75106680007 550010 Water 04/16/19 05:40 04/17/19 10:34
75106680007 550010 Water 04/16/19 05:40 04/17/19 10:34
75106680008 550011 Water 04/16/19 05:40 04/17/19 10:34
75106680009 550012 Water 04/16/19 05:40 04/17/19 10:34
75106680010 550014 Water 04/16/19 08:20 04/17/19 10:34

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

 Project:
 550004

 Pace Project No.:
 75106680

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
75106680001	550004	SM 4500-CN-E	SRT	1	PASI-D
		SM 4500-CN-G	SRT	1	PASI-D
75106680003	550006	SM 4500-CN-E	SRT	1	PASI-D
		SM 4500-CN-G	SRT	1	PASI-D
75106680005	550008	SM 4500-CN-E	SRT	1	PASI-D
		SM 4500-CN-G	SRT	1	PASI-D
75106680007	550010	SM 4500-CN-E	SRT	1	PASI-D
		SM 4500-CN-G	SRT	1	PASI-D
75106680009	550012	EPA 624 Low	ZST	37	PASI-D
75106680010	550014	EPA 608	JL	28	PASI-D
		EPA 615	DAT	3	PASI-D
		EPA 604.1	NSR	2	PASI-D
		EPA 632	NSR	3	PASI-D
		EPA 625	XLY	69	PASI-D

REPORT OF LABORATORY ANALYSIS

Pace Analytical www.pacelabs.com

ANALYTICAL RESULTS

Project: Pace Project No	550004 75106680									
Sample: 550004		Lab ID:	75106680001	Collected	1: 04/15/19	9 10:15	Received: 04/	17/19 10:34 M	atrix: Water	
				Report						
Parame	ters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500CNE Cyanide,	Total	Analytical	Method: SM 4	500-CN-E P	reparation	Method	: SM 4500-CN-C			
Cyanide		ND	ug/L	10.0	4.0	1	04/24/19 15:08	04/24/19 17:20	57-12-5	
4500CNG Cyanide,	Amenable	Analytical	Method: SM 4	500-CN-G F	reparation	Method	: SM 4500-CN-C			
Amenable Cyanide		ND	ug/L	10.0	4.0	1	04/25/19 11:51	04/25/19 12:04	57-12-5	

REPORT OF LABORATORY ANALYSIS



Project:	550004									
Pace Project No .:	75106680									
Sample: 550006		Lab ID:	75106680003	Collected	d: 04/15/19	15:30	Received: 04/	17/19 10:34 N	latrix: Water	
Parame	eters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500CNE Cyanide	, Total	Analytical	Method: SM 4	500-CN-Е F	Preparation	Method	: SM 4500-CN-C			
Cyanide		ND	ug/L	10.0	4.0	1	04/24/19 15:08	04/24/19 17:20	57-12-5	
4500CNG Cyanide	, Amenable	Analytical	Method: SM 4	500-CN-G F	Preparation	Method	I: SM 4500-CN-C			
Amenable Cyanide		ND	ug/L	10.0	4.0	1	04/25/19 11:51	04/25/19 12:04	57-12-5	

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: Pace Project No.:	550004 75106680									
Sample: 550008		Lab ID:	75106680005	Collected	: 04/15/19	21:52	Received: 04/	17/19 10:34 M	atrix: Water	
				Report						
Parame	eters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500CNE Cyanide,	Total	Analytical	Method: SM 4	500-CN-E P	reparation	Method	: SM 4500-CN-C			
Cyanide		ND	ug/L	10.0	4.0	1	04/24/19 15:08	04/24/19 17:20	57-12-5	
4500CNG Cyanide	, Amenable	Analytical	Method: SM 4	500-CN-G P	reparation	Method	: SM 4500-CN-C			
Amenable Cyanide		ND	ug/L	10.0	4.0	1	04/25/19 11:51	04/25/19 12:04	57-12-5	

REPORT OF LABORATORY ANALYSIS



Project: Pace Project No.:	550004 75106680									
Sample: 550010		Lab ID:	75106680007	Collected	: 04/16/19	05:40	Received: 04/	17/19 10:34 M	atrix: Water	
				Report						
Parame	eters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500CNE Cyanide,	Total	Analytical	Method: SM 48	500-CN-E P	reparation	Method	: SM 4500-CN-C			
Cyanide		ND	ug/L	10.0	4.0	1	04/24/19 15:08	04/24/19 17:20	57-12-5	
4500CNG Cyanide	, Amenable	Analytical	Method: SM 48	500-CN-G P	reparation	Method	: SM 4500-CN-C			
Amenable Cyanide		ND	ug/L	10.0	4.0	1	04/25/19 11:51	04/25/19 12:04	57-12-5	

REPORT OF LABORATORY ANALYSIS



 Project:
 550004

 Pace Project No.:
 75106680

Sample: 550012	Lab ID:	75106680009	Collected	04/16/19	05:40	Received: 04	/17/19 10:34 Ma	trix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytica	I Method: EPA 6	24 Low						
Acrolein	ND	ug/L	50.0	7.9	1		04/18/19 05:06	107-02-8	
Acrylonitrile	ND	ug/L	50.0	6.0	1		04/18/19 05:06	107-13-1	
Benzene	ND	ug/L	10.0	0.49	1		04/18/19 05:06	71-43-2	
Bromoform	ND	ug/L	10.0	7.5	1		04/18/19 05:06	75-25-2	
Carbon tetrachloride	ND	ug/L	2.0	1.1	1		04/18/19 05:06	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.37	1		04/18/19 05:06	108-90-7	
Dibromochloromethane	ND	ug/L	10.0	0.40	1		04/18/19 05:06	124-48-1	
Chloroethane	ND	ug/L	50.0	0.95	1		04/18/19 05:06	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	3.2	1		04/18/19 05:06	110-75-8	
Chloroform	71.8	ug/L	10.0	1.2	1		04/18/19 05:06	67-66-3	
Bromodichloromethane	ND	ug/L	10.0	0.50	1		04/18/19 05:06	75-27-4	
1,1-Dichloroethane	ND	ug/L	5.0	1.2	1		04/18/19 05:06	75-34-3	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.40	1		04/18/19 05:06	106-46-7	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.43	1		04/18/19 05:06	541-73-1	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.37	1		04/18/19 05:06	95-50-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	0.45	1		04/18/19 05:06	106-93-4	
1,2-Dichloroethane	ND	ug/L	10.0	1.1	1		04/18/19 05:06	107-06-2	
1.1-Dichloroethene	ND	ug/L	10.0	1.1	1		04/18/19 05:06	75-35-4	
1,2-Dichloropropane	ND	ug/L	10.0	0.49	1		04/18/19 05:06	78-87-5	
Total 1,3-Dichloropropene	ND	ug/L	10.0	3.7	1		04/18/19 05:06	542-75-6	N2
Ethylbenzene	ND	ug/L	10.0	0.46	1		04/18/19 05:06	100-41-4	
Bromomethane	ND	ug/L	50.0	1.2	1		04/18/19 05:06	74-83-9	
Chloromethane	ND	ug/L	50.0	1.1	1		04/18/19 05:06	74-87-3	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	1		04/18/19 05:06	78-93-3	
Methylene Chloride	ND	ug/L	20.0	10.0	1		04/18/19 05:06	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	1.5	1		04/18/19 05:06	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	1.5	1		04/18/19 05:06	127-18-4	
Toluene	ND	ug/L	10.0	1.3	1		04/18/19 05:06	108-88-3	
trans-1,2-Dichloroethene	ND	ug/L	10.0	1.2	1		04/18/19 05:06	156-60-5	
1.1.1-Trichloroethane	ND	ug/L	10.0	0.69	1		04/18/19 05:06	71-55-6	
1.1.2-Trichloroethane	ND	ug/L	10.0	1.3	1		04/18/19 05:06	79-00-5	
Trichloroethene	ND	ua/L	10.0	0.60	1		04/18/19 05:06	79-01-6	
Vinvl chloride	ND	ug/L	10.0	0.93	1		04/18/19 05:06	75-01-4	
Total Trihalomethanes (Calc.)	79.9	ug/L	10.0	3.4	1		04/18/19 05:06		
Surrogates		0							
4-Bromofluorobenzene (S)	99	%	70-130		1		04/18/19 05:06	460-00-4	
Toluene-d8 (S)	103	%.	70-130		1		04/18/19 05:06	2037-26-5	
1,2-Dichloroethane-d4 (S)	107	%.	70-130		1		04/18/19 05:06	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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 Project:
 550004

 Pace Project No.:
 75106680

Sample: 550014	Lab ID:	75106680010	Collected	04/16/19	08:20	Received: 04/	17/19 10:34 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608SF GCS Pesticides and PCBs	Analytical	Method: EPA 6	08 Preparat	ion Method	: EPA (508 SF			
Aldrin	ND	ua/L	0.0098	0.0069	1	04/22/19 23:35	04/24/19 12:48	309-00-2	
alpha-BHC	ND	ug/L	0.049	0.0059	1	04/22/19 23:35	04/24/19 12:48	319-84-6	
beta-BHC	ND	ug/L	0.049	0.011	1	04/22/19 23:35	04/24/19 12:48	319-85-7	
gamma-BHC (Lindane)	ND	ua/L	0.049	0.0049	1	04/22/19 23:35	04/24/19 12:48	58-89-9	
delta-BHC	ND	ua/L	0.049	0.0039	1	04/22/19 23:35	04/24/19 12:48	319-86-8	
Chlordane (Technical)	ND	ua/L	0.20	0.040	1	04/22/19 23:35	04/24/19 12:48	57-74-9	
4.4'-DDT	ND	ua/L	0.020	0.0049	1	04/22/19 23:35	04/24/19 12:48	50-29-3	
4.4'-DDE	ND	ua/L	0.098	0.0039	1	04/22/19 23:35	04/24/19 12:48	72-55-9	
4.4'-DDD	ND	ug/L	0.098	0.0059	1	04/22/19 23:35	04/24/19 12:48	72-54-8	
Dieldrin	ND	ug/1	0.020	0.0039	1	04/22/19 23:35	04/24/19 12:48	60-57-1	
Endosulfan (ND	ug/L	0.0098	0.0039	1	04/22/19 23:35	04/24/19 12:48	959-98-8	
Endosulfan II	ND	ug/L	0.020	0.0039	1	04/22/19 23:35	04/24/19 12:48	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.098	0.0039	1	04/22/19 23:35	04/24/19 12:48	1031-07-8	
Endrin	ND	ug/L	0.000	0.0000	1	04/22/19 23:35	04/24/19 12:48	72-20-8	
Endrin aldebyde	ND	ug/L	0.098	0.012	1	04/22/19 23:35	04/24/19 12:48	7421-93-4	
Hentachlor	ND	ug/L	0.0008	0.012	1	04/22/10 23:35	04/24/10 12:48	76_44_8	
Heptachlor enovide	ND	ug/L	0.0008	0.0000	1	04/22/10 23:35	04/24/10 12:48	1024-57-3	
Toyanhene	ND	ug/L	0.0000	0.0000	4	04/22/10 23:35	04/24/10 12:48	8001-35-2	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.20	0.20	1	04/22/10 23:35	04/24/10 12:48	53460-21-0	
PCB-1254 (Aroclor 1254)		ug/L	0.20	0.007	1	04/22/19 23:35	04/24/19 12:48	11007_60_1	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.20	0.000	4	04/22/10 22:35	04/24/10 12:48	11104-28-2	
PCB-1227 (Aroclor 1232)	ND	ug/L	0.20	0.094	1	04/22/19 23:35	04/24/19 12:40	111/1_16_5	
PCB 1248 (Aroclor 1248)	ND	ug/L	0.20	0.030	1	04/22/19 23:35	04/24/19 12:40	12672 20.6	
PCB-1240 (Aroclor 1240)	ND	ug/L	0.20	0.024	1	04/22/19 23:35	04/24/19 12:40	11006-82-5	
PCB 1016 (Arocior 1016)	ND	ug/L	0.20	0.009	4	04/22/19 23.35	04/24/19 12.40	12674 11 2	
PCB Total		ug/L	0.20	0.009	1	04/22/19 23:35	04/24/19 12.40	12074-11-2	
Surrogatos	ND	ug/L	0.20	0.090		04/22/19 23.33	04/24/15 12.40	1000-00-0	
Tetrachloro-m-xylene (S)	67	0/0	47-135		1	04/22/19 23:35	04/24/19 12:48	877-09-8	
Decachlorohinhenyl (S)	65	%	16-161		1	04/22/19 23:35	04/24/19 12:48	2051-24-3	
CdE Chloringtod Nathioides	Apolitica	Mothod: EDA 6	15 Propera	tion Motho		615	04724710 12.40	2001 24 0	
ors chlorinated herbicides	Analytica	I MELIOU. LI AC			u. LI A	015			
2,4-D	ND	ug/L	0.70	0.069	1	04/23/19 23:30	04/30/19 16:23	94-75-7	
2,4,5-TP (Silvex)	ND	ug/L	0.30	0.072	1	04/23/19 23:30	04/30/19 16:23	93-72-1	
Surrogates									
2,4-DCAA (S)	111	%.	44-137		1	04/23/19 23:30	04/30/19 16:23	19719-28-9	
604.1 HPLC Hexachlorophene	Analytica	I Method: EPA 6	604.1 Prepa	ration Meth	nod: EP	A 604.1			
Hexachlorophene	ND	ug/L	9.9	3.2	1	04/23/19 19:20	04/26/19 13:12	70-30-4	N3
Surrogates	20	%	25-108		1	04/23/10 10.20	04/26/10 12.12		
Nitrobelizerie (3)	50	/0.	20-100			04/20/13 10:20	04/20/10 10:12		
632 HPLC Carbamates	Analytica	al Method: EPA 6	32 Prepara	tion Metho	d: EPA	632			
Carbaryl	ND	ug/L	4.0	0.60	1	04/23/19 19:20	04/26/19 13:12	63-25-2	
Diuron	ND	ug/L	0.079	0.020	1	04/23/19 19:20	04/26/19 13:12	330-54-1	N2
Surrogates									
Nitrobenzene (S)	38	%	18-113		1	04/23/19 19:20	04/26/19 13:12		

REPORT OF LABORATORY ANALYSIS

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Project: 550004 Pace Project No.: 75106680

Sample: 550014	Lab ID:	75106680010	Collected	1: 04/16/19	08:20	Received: 04/	17/19 10:34 Ma	trix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical	Method: EPA	625 Prepara	tion Method	: EPA	625			
Nonylphenol	ND	ug/L	333	2.8	1	04/19/19 22:55	04/24/19 03:45	25154-52-3	N2
2-Chlorophenol	ND	ug/L	10.0	0.81	1	04/19/19 22:55	04/24/19 03:45	95-57-8	
2,4-Dichlorophenol	ND	ug/L	10.0	0.81	1	04/19/19 22:55	04/24/19 03:45	120-83-2	
Cresols (Total)	ND	ug/L	10.0	1.5	1	04/19/19 22:55	04/24/19 03:45	1319-77-3	N2
2,4-Dimethylphenol	ND	ug/L	10.0	1.4	1	04/19/19 22:55	04/24/19 03:45	105-67-9	
4,6-Dinitro-2-methylphenol	ND	ug/L	10.0	1.5	1	04/19/19 22:55	04/24/19 03:45	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1.1	1	04/19/19 22:55	04/24/19 03:45	51-28-5	
2-Nitrophenol	ND	ug/L	20.0	1.7	1	04/19/19 22:55	04/24/19 03:45	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1.6	1	04/19/19 22:55	04/24/19 03:45	100-02-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	0.76	1	04/19/19 22:55	04/24/19 03:45		
4-Chloro-3-methylphenol	ND	ug/L	10.0	0.86	1	04/19/19 22:55	04/24/19 03:45	59-50-7	
Pentachlorophenol	ND	ug/L	5.0	2.1	1	04/19/19 22:55	04/24/19 03:45	87-86-5	
Phenoi	ND	ug/L	10.0	0.96	1	04/19/19 22:55	04/24/19 03:45	108-95-2	
2,4,5-Trichlorophenol	ND	ug/L	50.0	1.9	1	04/19/19 22:55	04/24/19 03:45	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.8	1	04/19/19 22:55	04/24/19 03:45	88-06-2	
Acenaphthene	ND	ug/L	10.0	1.3	1	04/19/19 22:55	04/24/19 03:45	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1.3	1	04/19/19 22:55	04/24/19 03:45	208-96-8	
Anthracene	ND	ug/L	10.0	1.1	1	04/19/19 22:55	04/24/19 03:45	120-12-7	
Benzidine	ND	ug/L	50.0	3.1	1	04/19/19 22:55	04/24/19 03:45	92-87-5	
Benzo(a)anthracene	ND	ug/L	5.0	0.92	1	04/19/19 22:55	04/24/19 03:45	56-55-3	
Benzo(a)pyrene	ND	ug/L	5.0	0.93	1	04/19/19 22:55	04/24/19 03:45	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1.0	1	04/19/19 22:55	04/24/19 03:45	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	20.0	1.0	1	04/19/19 22:55	04/24/19 03:45	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	2.5	0.92	1	04/19/19 22:55	04/24/19 03:45	207-08-9	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.98	1	04/19/19 22:55	04/24/19 03:45	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	04/19/19 22:55	04/24/19 03:45	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	2.5	1.2	1	04/19/19 22:55	04/24/19 03:45	108-60-1	
bis(2-Ethylhexyl)phthalate	ND	ug/L	10.0	3.1	1	04/19/19 22:55	04/24/19 03:45	117-81-7	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.0	1	04/19/19 22:55	04/24/19 03:45	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1.4	1	04/19/19 22:55	04/24/19 03:45	85-68-7	
2-Chloronaphthalene	ND	ug/L	10.0	1.4	1	04/19/19 22:55	04/24/19 03:45	91-58-7	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1.4	1	04/19/19 22:55	04/24/19 03:45	7005-72-3	
Chrysene	ND	ug/L	5.0	1.0	1	04/19/19 22:55	04/24/19 03:45	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	5.0	1.1	1	04/19/19 22:55	04/24/19 03:45	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	5.0	2.6	1	04/19/19 22:55	04/24/19 03:45	91-94-1	
Diethylphthalate	ND	ug/L	10.0	0.91	1	04/19/19 22:55	04/24/19 03:45	84-66-2	
Dimethylphthalate	ND	ug/L	10.0	0.87	1	04/19/19 22:55	04/24/19 03:45	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.2	1	04/19/19 22:55	04/24/19 03:45	84-74-2	
2,4-Dinitrotoluene	ND	ug/L	10.0	2.6	1	04/19/19 22:55	04/24/19 03:45	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.8	1	04/19/19 22:55	04/24/19 03:45	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	1.7	1	04/19/19 22:55	04/24/19 03:45	117-84-0	
1,2-Diphenylhydrazine	ND	ug/L	20.0	1.2	1	04/19/19 22:55	04/24/19 03:45	122-66-7	
Fluoranthene	ND	ug/L	10.0	1.1	1	04/19/19 22:55	04/24/19 03:45	206-44-0	
Fluorene	ND	ug/L	10.0	1.3	1	04/19/19 22:55	04/24/19 03:45	86-73-7	
Hexachlorobenzene	ND	ug/L	5.0	0.96	1	04/19/19 22:55	04/24/19 03:45	118-74-1	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.7	1	04/19/19 22:55	04/24/19 03:45	87-68-3	

REPORT OF LABORATORY ANALYSIS



Project: 550004 Pace Project No.: 75106680

Sample: 550014	Lab ID:	75106680010	Collected:	04/16/19	08:20	Received: 04/	17/19 10:34 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical	Method: EPA 6	25 Preparat	ion Method	d: EPA (525			
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.2	1	04/19/19 22:55	04/24/19 03:45	77-47-4	
Hexachloroethane	ND	ug/L	20.0	1.9	1	04/19/19 22:55	04/24/19 03:45	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	5.0	0.97	1	04/19/19 22:55	04/24/19 03:45	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	04/19/19 22:55	04/24/19 03:45	78-59-1	
Naphthalene	ND	ug/L	10.0	2.0	1	04/19/19 22:55	04/24/19 03:45	91-20-3	
Nitrobenzene	ND	ug/L	10.0	1.2	1	04/19/19 22:55	04/24/19 03:45	98-95-3	
N-Nitrosodiethylamine	ND	ug/L	20.0	0.92	1	04/19/19 22:55	04/24/19 03:45	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	50.0	0.64	1	04/19/19 22:55	04/24/19 03:45	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	20.0	0.73	1	04/19/19 22:55	04/24/19 03:45	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	20.0	1.1	1	04/19/19 22:55	04/24/19 03:45	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	20.0	0.82	1	04/19/19 22:55	04/24/19 03:45	86-30-6	
Phenanthrene	ND	ug/L	10.0	1.1	1	04/19/19 22:55	04/24/19 03:45	85-01-8	
Pentachlorobenzene	ND	ug/L	20.0	1.3	1	04/19/19 22:55	04/24/19 03:45	608-93-5	
Pyrene	ND	ug/L	10.0	1.1	1	04/19/19 22:55	04/24/19 03:45	129-00-0	
Pyridine	ND	ug/L	20.0	1.2	1	04/19/19 22:55	04/24/19 03:45	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	1.6	1	04/19/19 22:55	04/24/19 03:45	120-82-1	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	20.0	1.3	1	04/19/19 22:55	04/24/19 03:45	95-94-3	
Surrogates									
Nitrobenzene-d5 (S)	32	%.	15-106		1	04/19/19 22:55	04/24/19 03:45	4165-60-0	
2-Fluorobiphenyl (S)	32	%.	26-102		1	04/19/19 22:55	04/24/19 03:45	321-60-8	
p-Terphenyl-d14 (S)	74	%.	10-120		1	04/19/19 22:55	04/24/19 03:45	1718-51-0	
Phenol-d6 (S)	11	%.	10-54		1	04/19/19 22:55	04/24/19 03:45	13127-88-3	
2-Fluorophenol (S)	16	%.	10-66		1	04/19/19 22:55	04/24/19 03:45	367-12-4	
2,4,6-Tribromophenol (S)	52	%.	29-132		1	04/19/19 22:55	04/24/19 03:45	118-79-6	

REPORT OF LABORATORY ANALYSIS



EPA 624 Low

624 MSV

Analysis Method:

Analysis Description:

Project: 550004 Pace Project No .: 75106680 QC Batch: 116083

QC Batch Method EPA 624 Low

Associated Lab Samples:

75106680009 METHOD BLANK: 523029 Matrix: Water Associated Lab Samples: 75106680009 Blank Reporting Units Result Limit MDL Analyzed Qualifiers Parameter 04/17/19 10:50 1,1,1-Trichloroethane ug/L ND 10.0 0.69 04/17/19 10:50 1,1,2,2-Tetrachloroethane ug/L ND 10.0 1.5 1,1,2-Trichloroethane ND 10.0 04/17/19 10:50 ug/L 1.3 1,1-Dichloroethane ND 04/17/19 10:50 ug/L 5.0 1.2 1,1-Dichloroethene ug/L ND 10.0 1.1 04/17/19 10:50 1,2-Dibromoethane (EDB) ug/L ND 10.0 0.45 04/17/19 10:50 1,2-Dichlorobenzene ND 10.0 0.37 04/17/19 10:50 ug/L 1,2-Dichloroethane ug/L ND 10.0 1.1 04/17/19 10:50 1,2-Dichloropropane ug/L ND 10.0 0.49 04/17/19 10:50 1,3-Dichlorobenzene ug/L ND 10.0 0.43 04/17/19 10:50 04/17/19 10:50 1,4-Dichlorobenzene ug/L ND 10.0 0.40 4.9 50.0 04/17/19 10:50 2-Butanone (MEK) ug/L ND 04/17/19 10:50 ND 10.0 3.2 2-Chloroethylvinyl ether ug/L ND 50.0 7.9 04/17/19 10:50 Acrolein ug/L 04/17/19 10:50 Acrylonitrile ug/L ND 50.0 60 04/17/19 10:50 Benzene ug/L ND 10.0 0.49 10.0 0.50 04/17/19 10:50 Bromodichloromethane ND ug/L 10.0 7.5 04/17/19 10:50 Bromoform ug/L ND Bromomethane ug/L ND 50.0 1.2 04/17/19 10:50 04/17/19 10:50 Carbon tetrachloride ND 2.0 1.1 ug/L 04/17/19 10:50 Chlorobenzene ug/L ND 10.0 0.37 04/17/19 10:50 Chloroethane ug/L ND 50.0 0.95 Chloroform ug/L ND 10.0 1.2 04/17/19 10:50 ND 50.0 04/17/19 10:50 Chloromethane ug/L 1.1 Dibromochloromethane ug/L ND 10.0 0.40 04/17/19 10:50 ND 10.0 0.46 04/17/19 10:50 Ethylbenzene ug/L Methylene Chloride ND 20.0 10.0 04/17/19 10:50 ug/L Tetrachloroethene ug/L ND 10.0 1.5 04/17/19 10:50 1.3 04/17/19 10:50 Toluene ug/L ND 10.0 3.7 04/17/19 10:50 N2 Total 1,3-Dichloropropene ug/L ND 10.0 04/17/19 10:50 ND 10.0 3.4 Total Trihalomethanes (Calc.) ug/L ND 10.0 1.2 04/17/19 10:50 trans-1,2-Dichloroethene ug/L 04/17/19 10:50 ND 0.60 Trichloroethene ug/L 10.0 0.93 04/17/19 10:50 Vinyl chloride ug/L ND 10.0 04/17/19 10:50 1,2-Dichloroethane-d4 (S) %. 102 70-130 100 70-130 04/17/19 10:50 %. 4-Bromofluorobenzene (S) % 101 70-130 04/17/19 10:50 Toluene-d8 (S)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Date: 05/01/2019 02:44 PM

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 Project:
 550004

 Pace Project No.:
 75106680

LABORATORY CONTROL SAMPLE: 523030

		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
1,1,1-Trichloroethane	ug/L	19.9	20.5	103	52-162		
1,1,2,2-Tetrachloroethane	ug/L	20.1	18.7	93	46-157		
1,1,2-Trichloroethane	ug/L	19.9	20.6	103	52-150		
1,1-Dichloroethane	ug/L	20	21.8	109	59-155		
1,1-Dichloroethene	ug/L	19.8	19.2	97	1-234		
1,2-Dibromoethane (EDB)	ug/L	20	20.3	101	81-118		
1,2-Dichlorobenzene	ug/L	20	21.1	106	18-190		
1,2-Dichloroethane	ug/L	19.9	20.9	105	49-155		
1,2-Dichloropropane	ug/L	19.9	21.4	107	76-124		
1,3-Dichlorobenzene	ug/L	19.9	21.4	107	59-156		
1,4-Dichlorobenzene	ug/L	20	21.6	108	18-190		
2-Butanone (MEK)	ug/L	100	76.2	76	60-130		
2-Chloroethylvinyl ether	ug/L	20.1	16.6	82	1-305		
Acrolein	ug/L	200	193	96	49-138		
Acrylonitrile	ug/L	199	170	85	57-137		
Benzene	ug/L	20	22.0	110	37-151		
Bromodichloromethane	ug/L	19.9	20.7	104	35~155		
Bromoform	ug/L	19.8	21.0	106	45-169		
Bromomethane	ug/L	20	24J	120	1-242		
Carbon tetrachloride	ug/L	19.8	20.5	103	70-140		
Chlorobenzene	ug/L	19.8	21.5	109	37-160		
Chloroethane	ug/L	20.1	20.8J	103	14-230		
Chloroform	ug/L	19.8	21.5	109	51-138		
Chloromethane	ug/L	19.9	17.5J	88	1-273		
Dibromochloromethane	ug/L	19.8	19.6	99	53-149		
Ethylbenzene	ug/L	20.1	22.8	114	37-162		
Methylene Chloride	ug/L	20.4	21.6	106	1-221		
Tetrachloroethene	ug/L	19.9	20.7	104	64-148		
Toluene	ug/L	20	22.0	110	47-150		
Total 1,3-Dichloropropene	ug/L	40.1	41.2	103	70-130 N	12	
Total Trihalomethanes (Calc.)	ug/L		82.9				
trans-1,2-Dichloroethene	ug/L	20	22.4	112	54-156		
Trichloroethene	ug/L	20	21.5	107	71-157		
Vinyl chloride	ug/L	20	18.1	91	1-251		
1,2-Dichloroethane-d4 (S)	%.			98	70-130		
4-Bromofluorobenzene (S)	%.			99	70-130		
Toluene-d8 (S)	%.			102	70-130		

MATRIX SPIKE & MATRIX SP	IKE DUPLIC	ATE: 52303	1		523032							
Parameter	7 Linite	75106657009 Result	MS Spike	MSD Spike	MS	MSD Result	MS % Rec	MSD % Rec	% Rec	RPD	Max	Qual
Farameter	Offits		CONC.	00110.	Result	Result	70 1100	70 1100				QUUI
1,1,1-Trichloroethane	ug/L	ND	1990	1990	2260	2200	114	111	52-162	3	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	2010	2010	2090	2160	104	107	46-157	3	20	
1,1,2-Trichloroethane	ug/L	ND	1990	1990	2200	2200	110	110	52-150	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Date: 05/01/2019 02:44 PM

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 Project:
 550004

 Pace Project No.:
 75106680

MATRIX SPIKE & MATRIX SPI	KE DUPLI	CATE: 52303	1		523032							
Parameter	Units	75106657009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	2000	2000	2320	2250	116	113	59-155	3	20	
1,1-Dichloroethene	ug/L	ND	1980	1980	2400	2310	121	117	1-234	4	20	
1,2-Dibromoethane (EDB)	ug/L	ND	2000	2000	2160	2180	108	109	77-122	1	20	
1,2-Dichlorobenzene	ug/L	ND	2000	2000	2160	2150	108	108	18-190	0	20	
1,2-Dichloroethane	ug/L	ND	1990	1990	2230	2190	112	110	49-155	2	20	
1,2-Dichloropropane	ug/L	ND	1990	1990	2240	2240	113	112	1-210	0	20	
1,3-Dichlorobenzene	ug/L	ND	1990	1990	2140	2110	107	106	59-156	2	20	
1,4-Dichlorobenzene	ug/L	ND	2000	2000	2150	2120	107	105	18-190	2	20	
2-Butanone (MEK)	ug/L	ND	10000	10000	10500	11600	105	116	62-131	9	20	
2-Chloroethylvinyl ether	ug/L	ND	2010	2010	1840	1930	92	96	40-140	4	20	
Acrolein	ug/L	ND	20000	20000	20700	22000	103	110	10-140	6	20	
Acrylonitrile	ug/L	ND	19900	19900	21100	22600	106	113	10-140	7	20	
Benzene	ug/L	ND	2000	2000	2300	2250	115	112	37-151	3	20	
Bromodichloromethane	ug/L	ND	1990	1990	2140	2110	107	106	35-155	1	20	
Bromoform	ug/L	ND	1980	1980	2180	2220	110	112	45-169	2	20	
Bromomethane	ug/L	ND	2000	2000	2140	1970	107	99	1-242	8	20	
Carbon tetrachloride	ug/L	ND	1980	1980	2210	2180	112	110	70-140	1	20	
Chlorobenzene	ug/L	ND	1980	1980	2230	2170	112	109	37-160	3	20	
Chloroethane	ug/L	ND	2010	2010	2140	1940	106	96	14-230	10	20	
Chloroform	ug/L	ND	1980	1980	2250	2200	114	111	51-138	2	20	
Chloromethane	ug/L	ND	1990	1990	1840	1780	93	90	10-273	3	20	
Dibromochloromethane	ug/L	ND	1980	1980	2010	2000	101	101	53-149	0	20	
Ethylbenzene	ug/L	ND	2010	2010	2390	2360	119	118	37-162	1	20	
Methylene Chloride	ug/L	ND	2040	2040	2280	2230	104	102	1-221	2	20	
Tetrachloroethene	ug/L	ND	1990	1990	2190	2180	110	110	64-148	0	20	
Toluene	ug/L	ND	2000	2000	2290	2240	114	112	47-150	2	20	
Total 1,3-Dichloropropene	ug/L	ND	4010	4010	4110	4090	102	102	70-130	0	20	N2
Total Trihalomethanes (Calc.)	ug/L	ND			8580	8530				1	20	
trans-1,2-Dichloroethene	ug/L	ND	2000	2000	2430	2300	122	115	54-156	6	20	
Trichloroethene	ug/L	ND	2000	2000	2280	2210	114	111	71-157	3	20	
Vinyl chloride	ug/L	ND	2000	2000	1980	1880	99	94	1-251	5	20	
1,2-Dichloroethane-d4 (S)	%.						103	102	70-130	ł		
4-Bromofluorobenzene (S)	%.						97	97	70-130	ł.		
Toluene-d8 (S)	%.						103	103	70-130	l.		

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REPORT OF LABORATORY ANALYSIS



Project:	550004	4											
Pace Project No.:	75106	580											
QC Batch:	1165	29		Analysi	is Method:	E	PA 604.1						
QC Batch Method:	EPA	604.1		Analysi	is Descript	tion: 6	04.1 HPLC H	lexachlor	ophene				
Associated Lab Sa	mples:	7510668001	0										
METHOD BLANK:	52503	2		M	latrix: Wat	ter							
Associated Lab Sa	mples:	7510668001	0										
				Blank	R	eporting							
Para	meter		Units	Result	t	Limit	MDL		Analyzed	Qua	alifiers		
Hexachlorophene			ug/L		ND	10.0)	3.2 04	/26/19 02:36	N3			
Nitrobenzene (S)			%.		63	25-108	3	04	/26/19 02:36				
LABORATORY CO	NTROL	SAMPLE: 5	25033										
				Spike	LCS	6	LCS	% Re	C				
Para	meter		Units	Conc.	Resu	ılt	% Rec	Limit	s Qu	alifiers			
Hexachlorophene			ug/L	50		38.9	78	2	8-123 N3				
Nitrobenzene (S)			%.				80	2	5-108				
MATRIX SPIKE & I	MATRIX	SPIKE DUPLI	CATE: 525034	4		525035							
				MS	MSD								
			75106700002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramet	ег	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Hexachlorophene		ug/L	ND	49	49	30.7	33.3	63	68	22-130	8	28	N3
Nitrobenzene (S)		%						68	68	25-108			

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REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

EPA 608

608 GCS Pest PCB

Analysis Method:

Analysis Description:

 Project:
 550004

 Pace Project No.:
 75106680

 QC Batch:
 116427

QC Batch: 116427 QC Batch Method: EPA 608 SF

Associated Lab Samples: 75106680010

METHOD BLANK: 524541 Matrix: Water Associated Lab Samples 75106680010 Blank Reporting Parameter Units Result Limit MDL Analyzed Qualifiers 4,4'-DDD ND 04/24/19 11:01 ug/L 0.10 0.0060 4,4'-DDE ND 0.10 04/24/19 11:01 ug/L 0.0040 4,4'-DDT ND 0.020 0.0050 04/24/19 11:01 ug/L Aldrin ND 0.010 0.0070 04/24/19 11:01 ug/L alpha-BHC ug/L ND 0.050 0.0060 04/24/19 11:01 beta-BHC ug/L ND 0.050 0.011 04/24/19 11:01 Chlordane (Technical) ug/L ND 0.20 0.041 04/24/19 11:01 delta-BHC ug/L ND 0.050 0.0040 04/24/19 11:01 Dieldrin ug/L ND 0.020 0.0040 04/24/19 11:01 Endosulfan I ug/L ND 0.010 0.0040 04/24/19 11:01 ND 0.020 0.0040 04/24/19 11:01 Endosulfan II ug/L 0.0040 Endosulfan sulfate ND 0.10 04/24/19 11:01 ug/L 0.0040 04/24/19 11:01 ND 0.020 Endrin ug/L Endrin aldehyde ND 0.10 0.012 04/24/19 11:01 ug/L 04/24/19 11:01 gamma-BHC (Lindane) ug/L ND 0.050 0.0050 0.010 0.0060 04/24/19 11:01 Heptachlor ug/L ND ND 0.010 0.0040 04/24/19 11:01 Heptachlor epoxide ug/L PCB-1016 (Aroclor 1016) ND 0.20 0.090 04/24/19 11:01 ug/L PCB-1221 (Aroclor 1221) ug/L ND 0.20 0.096 04/24/19 11:01 ug/L 04/24/19 11:01 PCB-1232 (Aroclor 1232) ND 0.20 0.10 ug/L 0.068 04/24/19 11:01 PCB-1242 (Aroclor 1242) ND 0.20 ND 0.20 0.024 04/24/19 11:01 PCB-1248 (Arocior 1248) ug/L PCB-1254 (Aroclor 1254) ug/L ND 0.20 0.087 04/24/19 11:01 PCB-1260 (Aroclor 1260) ND 0.20 0.070 04/24/19 11:01 ug/L Toxaphene ug/L ND 0.30 0.21 04/24/19 11:01 Decachlorobiphenyl (S) %. 51 16-161 04/24/19 11:01 Tetrachloro-m-xylene (S) %. 70 47-135 04/24/19 11:01

LABORATORY CONTROL SAMPLE: 524542

		Snike	105	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
4,4'-DDD	ug/L	0.5	0.42	85	31-141	
4,4'-DDE	ug/L	0.5	0.41	83	30-145	
4,4'-DDT	ug/L	0.5	0.44	88	10-160	
Aldrin	ug/L	0.5	0.38	76	42-142	
alpha-BHC	ug/L	0.5	0.44	87	37-134	
beta-BHC	ug/L	0.5	0.45	90	17-147	
delta-BHC	ug/L	0.5	0.43	86	19-140	
Dieldrin	ug/L	0.5	0.42	85	36-146	
Endosulfan I	ug/L	0.5	0.40	81	45-153	

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REPORT OF LABORATORY ANALYSIS

Date: 05/01/2019 02:44 PM

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QUALITY CONTROL DATA

 Project:
 550004

 Pace Project No.:
 75106680

LABORATORY CONTROL SAMPLE: 524542

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Endosulfan II	ug/L	0.5	0.43	86	40-140	
Endosulfan sulfate	ug/L	0.5	0.41	82	26-144	
Endrin	ug/L	0.5	0.44	87	30-147	
Endrin aldehyde	ug/L	0.5	0.40	81	40-140	
gamma-BHC (Lindane)	ug/L	0.5	0.44	88	32-127	
Heptachlor	ug/L	0.5	0.42	85	34-141	
Heptachlor epoxide	ug/L	0.5	0.44	87	25-142	
Decachlorobiphenyl (S)	%.			57	16-161	
Tetrachloro-m-xylene (S)	%.			72	47-135	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524543

			MS	MSD								
		75106787001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
4,4'-DDD	ug/L	ND	0.49	0.49	0.35	0.31	72	65	24-177	12	40	
4,4'-DDE	ug/L	ND	0.49	0.49	0.33	0.29	68	61	22-161	12	40	
4,4'-DDT	ug/L	ND	0.49	0.49	0.34	0.30	68	61	10-180	13	40	
Aldrin	ug/L	ND	0.49	0.49	0.31	0.27	63	56	10-156	12	40	
alpha-BHC	ug/L	ND	0.49	0.49	0.35	0.33	72	67	71-143	7	40	M1
beta-BHC	ug/L	ND	0.49	0.49	0.39	0.34	80	71	72-149	13	40	M1
delta-BHC	ug/L	ND	0.49	0.49	0.39	0.35	79	71	44-151	12	40	
Dieldrin	ug/L	ND	0.49	0.49	0.37	0.34	76	69	33-166	11	40	
Endosulfan I	ug/L	ND	0.49	0.49	0.35	0.32	71	66	27-167	9	40	
Endosulfan II	ug/L	ND	0.49	0.49	0.38	0.34	77	70	37-173	10	40	
Endosulfan sulfate	ug/L	ND	0.49	0.49	0.33	0.29	67	60	33-167	12	40	
Endrin	ug/L	ND	0.49	0.49	0.40	0.36	81	73	39-173	11	40	
Endrin aldehyde	ug/L	ND	0.49	0.49	0.34	0.28	69	59	14-180	17	40	
gamma-BHC (Lindane)	ug/L	ND	0.49	0.49	0.35	0.32	72	67	69-139	9	40	M1
Heptachlor	ug/L	ND	0.49	0.49	0.33	0.29	67	59	48-141	13	40	
Heptachlor epoxide	ug/L	ND	0.49	0.49	0.38	0.34	78	70	28-164	11	40	
Decachlorobiphenyl (S)	%.						56	46	16-161			
Tetrachloro-m-xylene (S)	%.						55	52	47-135			

524544

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REPORT OF LABORATORY ANALYSIS

Date: 05/01/2019 02:44 PM



Project: 5	50004								
Pace Project No.: 7	5106680								
QC Batch:	116532		Analysis	Method	l: E	PA 615			
QC Batch Method:	EPA 615		Analysis	Descrip	otion: 6	15 GCS Herbici	des		
Associated Lab Samp	les: 75106680	010							
METHOD BLANK: 5	25044		Mat	rix: Wa	ater				
Associated Lab Samp	les: 75106680	010							
			Blank	F	Reporting				
Parame	ter	Units	Result		Limit	MDL	Analyze	d Qualifie	rs
2,4,5-TP (Silvex)		ug/L	١	ND	0.30	0.074	4 04/30/19 12	2:28	
2,4-D		ug/L	ľ	١D	0.70	0.07	1 04/30/19 1	2:28	
2,4-DCAA (S)		%.		87	44-137		04/30/19 12	2:28	
LABORATORY CONT	ROL SAMPLE:	525045							
			Spike	LC	S	LCS	% Rec		
Parame	ter	Units	Conc.	Res	ult	% Rec	Limits	Qualifiers	
2,4,5-TP (Silvex)		ug/L	3		2.7	90	57-125		
2,4-D		ug/L	3		2.8	95	49-133		
2,4-DCAA (S)		%.				103	44-137		
MATRIX SPIKE SAMI	PLE:	525046							
			75106700	002	Spike	MS	MS	% Rec	
Parame	ter	Units	Result		Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)		ug/L		ND	3.1	3.0	97	7 44-134	
2,4-D		ug/L		ND	3.1	3.1	103	3 49-145	
2,4-DCAA (S)		%.					115	5 44-137	

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REPORT OF LABORATORY ANALYSIS



EPA 625

625 MSS

Analysis Method:

Analysis Description:

 Project:
 550004

 Pace Project No.:
 75106680

 QC Batch:
 116304

QC Batch Method: EPA 625

Associated Lab Samples: 75106680010

METHOD BLANK: 524134 Matrix: Water Associated Lab Samples: 75106680010 Blank Reporting Units Result Limit MDL Analyzed Qualifiers Parameter 1,2,4,5-Tetrachlorobenzene ug/L ND 20.0 1.3 04/23/19 13:24 1,2,4-Trichlorobenzene ug/L ND 10.0 1.6 04/23/19 13:24 20.0 04/23/19 13:24 1,2-Diphenylhydrazine ug/L ND 1.2 2,4,5-Trichlorophenol ND 50.0 04/23/19 13:24 ug/L 1.9 2,4,6-Trichlorophenol ug/L ND 10.0 1.8 04/23/19 13:24 2,4-Dichlorophenol ug/L ND 10.0 0.82 04/23/19 13:24 2,4-Dimethylphenol ug/L ND 10.0 1.4 04/23/19 13:24 2,4-Dinitrophenol ug/L ND 50.0 1.1 04/23/19 13:24 2.4-Dinitrotoluene ug/L ND 10.0 2.7 04/23/19 13:24 2,6-Dinitrotoluene ug/L ND 10.0 1.8 04/23/19 13:24 04/23/19 13:24 2-Chloronaphthalene ug/L ND 10.0 1.4 04/23/19 13:24 ND 10.0 0.82 2-Chlorophenol ug/L 04/23/19 13:24 ND 20.0 17 2-Nitrophenol ug/L 3&4-Methylphenol(m&p Cresol) ND 10.0 0.77 04/23/19 13:24 ug/L 04/23/19 13:24 3,3'-Dichlorobenzidine ug/L ND 5.0 27 04/23/19 13:24 4,6-Dinitro-2-methylphenol ug/L ND 10.0 1.5 10.0 04/23/19 13:24 ND 1.0 4-Bromophenylphenyl ether ug/L ND 10.0 0.87 04/23/19 13:24 4-Chloro-3-methylphenoi ug/L 4-Chlorophenylphenyl ether ug/L ND 10.0 1.4 04/23/19 13:24 04/23/19 13:24 4-Nitrophenol ND 50.0 1.6 ug/L 04/23/19 13:24 Acenaphthene ug/L ND 10.0 1.3 04/23/19 13:24 Acenaphthylene ug/L ND 10.0 1.3 Anthracene ug/L ND 10.0 1.1 04/23/19 13:24 ND 50.0 3.1 04/23/19 13:24 Benzidine ug/L Benzo(a)anthracene ug/L ND 5.0 0.93 04/23/19 13:24 ND 5.0 0.94 04/23/19 13:24 Benzo(a)pyrene ug/L Benzo(b)fluoranthene ug/L ND 10.0 1.0 04/23/19 13:24 1.0 04/23/19 13:24 Benzo(g,h,i)perylene ug/L ND 20.0 0.93 04/23/19 13:24 Benzo(k)fluoranthene ug/L ND 2.5 04/23/19 13:24 ND 10.0 0.99 bis(2-Chloroethoxy)methane ug/L 1.0 04/23/19 13:24 ND 10.0 bis(2-Chloroethyl) ether ug/L ND 2.5 1.2 04/23/19 13:24 bis(2-Chloroisopropyl) ether ug/L ND 10.0 32 04/23/19 13:24 bis(2-Ethylhexyl)phthalate ug/L 04/23/19 13:24 ND 10.0 14 Butylbenzylphthalate ug/L ND 1.0 04/23/19 13:24 Chrysene ug/L 5.0 ND 10.0 1.5 04/23/19 13:24 N2 Cresols (Total) ug/L ND 10.0 1.2 04/23/19 13:24 Di-n-butylphthalate ug/L ND 10.0 1.7 04/23/19 13:24 Di-n-octylphthalate ug/L ND 5.0 1.1 04/23/19 13:24 Dibenz(a,h)anthracene ug/L 0.92 04/23/19 13:24 ND 10.0 Diethylphthalate ug/L Dimethylphthalate ND 10.0 0.88 04/23/19 13:24 ug/L

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

 Project:
 550004

 Pace Project No.:
 75106680

METHOD BLANK: 524134		Matrix:	Water			
Associated Lab Samples: 75106680	010					
Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoranthene	ug/L	ND	10.0	1.1	04/23/19 13:24	
Fluorene	ug/L	ND	10.0	1.3	04/23/19 13:24	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	04/23/19 13:24	
Hexachlorobenzene	ug/L	ND	5.0	0.97	04/23/19 13:24	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.2	04/23/19 13:24	
Hexachloroethane	ug/L	ND	20.0	1.9	04/23/19 13:24	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	0.98	04/23/19 13:24	
Isophorone	ug/L	ND	10.0	1.8	04/23/19 13:24	
N-Nitroso-di-n-butylamine	ug/L	ND	20.0	0.74	04/23/19 13:24	
N-Nitroso-di-n-propylamine	ug/L	ND	20.0	1.1	04/23/19 13:24	
N-Nitrosodiethylamine	ug/L	ND	20.0	0.93	04/23/19 13:24	
N-Nitrosodimethylamine	ug/L	ND	50.0	0.65	04/23/19 13:24	
N-Nitrosodiphenylamine	ug/L	ND	20.0	0.83	04/23/19 13:24	
Naphthalene	ug/L	ND	10.0	2.0	04/23/19 13:24	
Nitrobenzene	ug/L	ND	10.0	1.2	04/23/19 13:24	
Nonylphenol	ug/L	ND	333	2.9	04/23/19 13:24	N2
Pentachlorobenzene	ug/L	ND	20.0	1.3	04/23/19 13:24	
Pentachlorophenol	ug/L	ND	5.0	2.1	04/23/19 13:24	
Phenanthrene	ug/L	ND	10.0	1.1	04/23/19 13:24	
Phenol	ug/L	ND	10.0	0.97	04/23/19 13:24	
Pyrene	ug/L	ND	10.0	1.2	04/23/19 13:24	
Pyridine	ug/L	ND	20.0	1.2	04/23/19 13:24	
2,4,6-Tribromophenol (S)	%.	55	29-132		04/23/19 13:24	
2-Fluorobiphenyl (S)	%.	86	26-102		04/23/19 13:24	
2-Fluorophenol (S)	%.	45	10-66		04/23/19 13:24	
Nitrobenzene-d5 (S)	%.	78	15-106		04/23/19 13:24	
p-Terphenyl-d14 (S)	%.	94	10-120		04/23/19 13:24	
Phenol-d6 (S)	%.	35	10-54		04/23/19 13:24	

LABORATORY CONTROL SAMPLE: 524135

Deservator	1 1= 24	Spike	LCS	LCS	% Rec	Qualificati
Parameter	Units	Conc.	Result	% Rec	Limits	Quaimers
1,2,4,5-Tetrachlorobenzene	ug/L	50	43.3	87	35-108	
1,2,4-Trichlorobenzene	ug/L	50	38.2	76	44-142	
1,2-Diphenylhydrazine	ug/L	50	38.8	78	62-114	
2,4,5-Trichlorophenol	ug/L	50	42.8J	86	60-118	
2,4,6-Trichlorophenol	ug/L	50	43 5	87	37-144	
2,4-Dichlorophenol	ug/L	50	40.2	80	39-135	
2,4-Dimethylphenol	ug/L	50	29.1	58	32-119	
2,4-Dinitrophenol	ug/L	50	26.5J	53	1-191	
2,4-Dinitrotoluene	ug/L	50	45.7	91	39-139	
2,6-Dinitrotoluene	ug/L	50	45.5	91	50-158	
2-Chloronaphthalene	ug/L	50	43.9	88	60-118	
2-Chlorophenol	ua/L	50	36.0	72	23-134	

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REPORT OF LABORATORY ANALYSIS

Date: 05/01/2019 02:44 PM

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QUALITY CONTROL DATA

 Project:
 550004

 Pace Project No.:
 75106680

LABORATORY CONTROL SAMPLE: 524135

		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
2-Nitrophenol	ua/L	50	45.1	90	29-182		
3&4-Methylphenol(m&p Cresol)	ua/L	50	28.0	56	33-110		
3.3'-Dichlorobenzidine	ua/L	100	90.4	90	1-262		
4.6-Dinitro-2-methylphenol	ua/L	50	40.3	81	1-181		
4-Bromophenylphenyl ether	ug/L	50	44.9	90	53-127		
4-Chloro-3-methylphenol	ug/L	50	40.2	80	22-147		
4-Chlorophenylphenyl ether	ug/l	50	41.8	84	25-158		
4-Nitrophenol	ug/L	50	26.8.1	54	1-132		
Acenaphthene	ug/	50	40.7	81	47-145		
Acenaphthylene	ug/L	50	40.9	82	33-145		
Anthracene	ug/L	50	42.3	85	27-133		
Benzidine	ug/L	100	37 4.1	37	10-140		
Benzo(a)anthracene	ug/L	50	40.6	81	33-143		
Benzo(a)ovrene	ug/L	50	43.2	86	17-163		
Benzo(h)fluoranthene	ug/L	50	45.2	01	24_150		
Benzo(a h i)pen/ene	ug/L	50	43.7	87	1-210		
Benzo(k)fluoranthene	ug/L	50	42.0	07	11_160		
bic/2 Chloroothom)mothono	ug/L	50	40.0	76	22 104		
bis(2 Chloroethyl) ethor	ug/L	50	30.0	70	10 10 9		
bis(2-Chloroiseprepul) ether	ug/L	50	34.0	70	12-100		
bis(2-Chlorolsopropyl) ether	ug/L	50	33.5	01	30-100		
Dis(2-Etriyinexy)primatate	ug/L	50	40.4	91	0-100		
Butyipenzyiphinalate	ug/L	50	42.7	85	1-152		
Chrysene Crassila (Tatal)	ug/L	50	42.1	64	17-108	NO	
Cresols (Total)	ug/L	100	60.1	60	30-110	NZ	
Di-n-butyiphthalate	ug/L	50	44.1	88	1-118		
Di-n-octylphthalate	ug/L	50	48.2	96	4-140		
Dibenz(a,h)anthracene	ug/L	50	45.2	90	1-227		
Dietnyiphthalate	ug/L	50	43.9	88	1-114		
Dimethylphthalate	ug/L	50	44.5	89	1-112		
Fluoranthene	ug/L	50	44.4	89	26-137		
Fluorene	ug/L	50	41.3	83	59-121		
Hexachloro-1,3-butadiene	ug/L	50	39.4	79	24-116		
Hexachlorobenzene	ug/L	50	45.1	90	1-152		
Hexachlorocyclopentadiene	ug/L	50	37.1	74	12-121		
Hexachloroethane	ug/L	50	32.1	64	40-113		
Indeno(1,2,3-cd)pyrene	ug/L	50	45.0	90	1-171		
Isophorone	ug/L	50	40.3	81	21-196		
N-Nitroso-di-n-butylamine	ug/L	50	39.3	79	49-117		
N-Nitroso-di-n-propylamine	ug/L	50	35.2	70	1-230		
N-Nitrosodiethylamine	ug/L	50	38.5	77	40-140		
N-Nitrosodimethylamine	ug/L	50	25.5J	51	26-77		
N-Nitrosodiphenylamine	ug/L	50	44.8	90	67-115		
Naphthalene	ug/L	50	37.5	75	21-133		
Nitrobenzene	ug/L	50	35.5	71	35-180		
Nonylphenol	ug/L	50	38.8J	78	57-136	N2	
Pentachlorobenzene	ug/L	50	44.3	89	40-140		
Pentachlorophenol	ug/L	50	20.9	42	14-176		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

e Analytical www.pacelabs.com

 Project:
 550004

 Pace Project No.:
 75106680

LABORATORY CONTROL SAMPLE: 524135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/L	50	41.7	83	54-120	
Phenol	ug/L	50	15.9	32	5-112	
Pyrene	ug/L	50	43.7	87	52-115	
Pyridine	ug/L	50	21.3	43	12-110	
2,4,6-Tribromophenol (S)	%.			89	29-132	
2-Fluorobiphenyl (S)	%.			85	26-102	
2-Fluorophenol (S)	%.			47	10-66	
Nitrobenzene-d5 (S)	%.			79	15-106	
p-Terphenyl-d14 (S)	%.			89	10-120	
Phenol-d6 (S)	%.			35	10-54	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	524144	
--	--------	--

524145

Parameter	Units	75106670001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
1,2,4,5-Tetrachlorobenzene	ug/L	ND	50	50	45.2	42.7	90	85	37-105	6	40		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	40.9	39.5	82	79	44-142	3	40		
1,2-Diphenylhydrazine	ug/L	ND	50	50	44.3	41.9	89	84	43-124	6	40		
2,4,5-Trichlorophenol	ug/L	ND	50	50	50.6	48.6J	101	97	50-121	4	40		
2,4,6-Trichlorophenol	ug/L	ND	50	50	51.0	48.0	102	96	37-144	6	40		
2,4-Dichlorophenol	ug/L	ND	50	50	45.9	43.7	92	87	39-135	5	40		
2,4-Dimethylphenol	ug/L	ND	50	50	42.0	40.0	84	80	32-119	5	40		
2,4-Dinitrophenol	ug/L	ND	50	50	44.6J	41.1J	89	82	1-191	8	40		
2,4-Dinitrotoluene	ug/L	ND	50	50	51.1	49.2	102	98	39-139	4	40		
2,6-Dinitrotoluene	ug/L	ND	50	50	50.7	48.9	101	98	50-158	4	40		
2-Chloronaphthalene	ug/L	ND	50	50	46.8	44.1	94	88	60-118	6	40		
2-Chlorophenol	ug/L	ND	50	50	38.2	37.0	76	74	23-134	3	40		
2-Nitrophenol	ug/L	ND	50	50	49.1	47.4	98	95	29-182	4	40		
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	50	30.8	28.7	62	57	10-105	7	40		
3,3'-Dichlorobenzidine	ug/L	ND	100	100	56.3	47.2	56	47	1-262	18	40		
4,6-Dinitro-2-methylphenol	ug/L	ND	50	50	50.8	47.0	102	94	1-181	8	40		
4-Bromophenylphenyl ether	ug/L	ND	50	50	51.9	49.7	104	99	53-127	4	40		
4-Chloro-3-methylphenol	ug/L	ND	50	50	45.2	43.1	90	86	22-147	5	40		
4-Chlorophenylphenyl ether	ug/L	ND	50	50	46.7	44.0	93	88	25-158	6	40		
4-Nitrophenol	ug/L	ND	50	50	31.8J	30.6J	64	61	1-132	4	40		
Acenaphthene	ug/L	ND	50	50	44.3	41.4	89	83	47-145	7	40		
Acenaphthylene	ug/L	ND	50	50	44.2	41.7	88	83	33-145	6	40		
Anthracene	ug/L	ND	50	50	48.1	46.0	96	92	27-133	4	40		
Benzidine	ug/L	ND	100	100	5.3J	3.2J	5	3	10-74		40	M1	
Benzo(a)anthracene	ug/L	ND	50	50	44.7	43.2	89	86	33-143	3	40		
Benzo(a)pyrene	ug/L	ND	50	50	50.1	47.7	100	95	17-163	5	40		
Benzo(b)fluoranthene	ug/L	ND	50	50	55.4	52.3	111	105	24-159	6	40		
Benzo(g,h,i)perylene	ug/L	ND	50	50	50.3	48.5	101	97	1-219	4	40		
Benzo(k)fluoranthene	ug/L	ND	50	50	48.4	47.1	97	94	11-162	3	40		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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 Project:
 550004

 Pace Project No.:
 75106680

MATRIX SPIKE & MATRIX SPI	KE DUPLI	CATE: 52414	4	MOD	524145							
		75106670001	MS	MSD	MS	MSD	MS	MSD	% Pac		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
bis(2-Chloroethoxy)methane	ug/L	ND	50	50	41.5	40.2	83	80	33-184	3	40	
bis(2-Chloroethyl) ether	uq/L	ND	50	50	52.6	48.5	105	97	12-158	8	40	
bis(2-Chloroisopropyl) ether	ug/L	ND	50	50	37.4	36.2	75	72	36-166	3	40	
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	50	53.7	51.1	107	102	8-158	5	40	
Butylbenzylphthalate	ug/L	ND	50	50	49.8	48.0	100	96	1-152	4	40	
Chrysene	ug/L	ND	50	50	47.7	45.4	95	91	17-168	5	40	
Cresols (Total)	ug/L	ND	100	100	66.1	61.9	66	62	10-118	6	40	N2
Di-n-butylphthalate	ug/L	ND	50	50	51.7	49.9	103	100	1-118	4	40	
Di-n-octylphthalate	ug/L	ND	50	50	55.2	53.8	110	108	4-146	2	40	
Dibenz(a,h)anthracene	ug/L	ND	50	50	52.8	50.5	106	101	1-227	4	40	
Diethylphthalate	ug/L	ND	50	50	49.9	47.7	100	95	1-114	4	40	
Dimethylphthalate	ug/L	ND	50	50	49.6	47.3	99	95	1-112	5	40	
Fluoranthene	ug/L	ND	50	50	49.5	47.3	99	95	26-137	4	40	
Fluorene	ug/L	ND	50	50	45.5	43.2	91	86	59-121	5	40	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	42.8	41.4	86	83	24-116	3	40	
Hexachlorobenzene	ug/L	ND	50	50	51.5	50.5	103	101	1-152	2	40	
Hexachlorocyclopentadiene	ug/L	ND	50	50	42.1	41.0	84	82	10-123	3	40	
Hexachloroethane	ug/L	ND	50	50	34.6	33.5	69	67	40-113	3	40	
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	50	52.2	49.3	104	99	1-171	6	40	
Isophorone	ug/L	ND	50	50	45.0	42.5	90	85	21-196	6	40	
N-Nitroso-di-n-butylamine	ug/L	ND	50	50	44.5	40.9	89	82	41- 1 19	9	40	
N-Nitroso-di-n-propylamine	ug/L	ND	50	50	39.7	37.7	79	75	1-230	5	40	
N-Nitrosodiethylamine	ug/L	ND	50	50	43.4	38.7	87	77	25-126	11	40	
N-Nitrosodimethylamine	ug/L	ND	50	50	26J	25.2J	52	50	14-77	3	40	
N-Nitrosodiphenylamine	ug/L	ND	50	50	54.6	50.5	109	101	35-131	8	40	
Naphthalene	ug/L	ND	50	50	44.5	42.9	89	86	21-133	4	40	
Nitrobenzene	ug/L	ND	50	50	43.3	41.9	87	84	35-180	3	40	
Nonylphenol	ug/L	ND	50	50	47.6J	45.9J	95	92	37-142	4	40	N2
Pentachlorobenzene	ug/L	ND	50	50	47.8	44.9	96	90	48-111	6	40	
Pentachlorophenol	ug/L	ND	50	50	35.3	32.5	71	65	14-176	8	40	
Phenanthrene	ug/L	ND	50	50	47.4	45.4	95	91	54-120	4	40	
Phenol	ug/L	ND	50	50	15.7	14.7	31	29	5-112	7	40	
Pyrene	ug/L	ND	50	50	48.3	47.0	97	94	52-115	3	40	
Pyridine	ug/L	ND	50	50	17.1J	13.1J	34	26	10-69	27	40	
2,4,6-Tribromophenol (S)	%.						106	99	29-132	2		
2-Fluorobiphenyl (S)	%.						94	86	26-102	2		
2-Fluorophenol (S)	%.						47	45	10-66	i		
Nitrobenzene-d5 (S)	%.						84	79	15-106	i		
p-Terphenyl-d14 (S)	%.						104	98	10-120)		
Phenol-d6 (S)	%						37	35	10-54	ļ		

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REPORT OF LABORATORY ANALYSIS

Date: 05/01/2019 02:44 PM

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Project:	550004												
Pace Project No.:	75106680												
QC Batch:	116530			Analysi	is Method:	E	PA 632						
QC Batch Method:	EPA 632			Analysi	is Descripti	on: 6	32 HPLC Ca	rbamates					
Associated Lab Sa	mples: 7510	6680010											
METHOD BLANK:	525036			N	latrix: Wat	er							
Associated Lab Sa	mples: 7510	6680010											
				Blank	Re	eporting							
Para	meter		Units	Result	t	Limit	MDL	/	Analyzed	Qua	alifiers	_	
Carbaryl			ug/L		ND	4.0		0.61 04/2	26/19 02:36				
Diuron			ug/L		ND	0.080	0	.020 04/2	26/19 02:36	N2			
Nitrobenzene (S)			%.		63	18-113		04/	26/19 02:36				
LABORATORY CC	NTROL SAMP	LE: 525	037										
				Spike	LCS		LCS	% Red	C				
Para	meter		Units	Conc.	Resu	lt	% Rec	Limits	a Qu	alifiers			
Carbaryl			ug/L	10		8.6	86	59	-119				
Diuron			ug/L	5		3.9	77	61	1-114 N2				
Nitrobenzene (S)			%.				80	18	3-113				
MATRIX SPIKE &	MATRIX SPIKE	DUPLICA	TE: 52503	3		525039							
				MS	MSD								
		7	5106700002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramet	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Carbaryl		ug/L	ND	9.8	9.8	6.8	7.1	69	73	45-139	5	20	

4.9

3.3

3.5

68

68

70 54-127

68 18-113

4.9

ND

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Diuron

Nitrobenzene (S)

ug/L

ug/L

%.

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Project:	550004	1											
Pace Project No.	: 751066	580											
QC Batch:	11654	47		Analys	is Method:		SM 4500-CN-	E		1.50 C. 11	-		
QC Batch Method	d: SM 4	500-CN-C		Analys	is Descript	ion:	4500CNE Cya	anide, Tota	1				
Associated Lab S	Samples:	75106680001	1, 75106680003,	75106680	005, 75106	680007							
METHOD BLANK	K: 525086	3		N	Matrix: Wat	ter							
Associated Lab S	Samples:	75106680001	1, 75106680003,	75106680	005, 75106	680007							
				Blank	K R	eporting							
Pa	rameter		Units	Resul	lt	Limit	MDL	/	Analyzed	Qua	alifiers		
Cyanide			ug/L		ND	10	.0	4.0 04/	24/19 17:19			_	
LABORATORY C	ONTROL	SAMPLE: 52	25087										
D			11-24-	Spike	LCS	5	LCS	% Red	с Оч	-116			
Pa	rameter		Units	Conc.	Resu		% Rec	Linns		aimers			
Cyanide			ug/L	100)	106	106	8	5-115				
MATRIX SPIKE	& MATRIX	SPIKE DUPLIC	CATE: 52508	8		525089							
				MS	MSD								
			75106678007	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Param	eter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cyanide		ug/L	ND	100	100	73.	1 66.8	73	67	85-115	9	20	M1
MATRIX SPIKE	& MATRIX	SPIKE DUPLIC	CATE: 52509	0		525091							
				MS	MSD								
			75106763002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Param	neter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cyanide		ug/L	0.015 ma/l	100	100	27.	.1 24.8	12	10	85-115	9	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Amenable Cyanide		ug/L	ND	10	.0 4.0	04/25/19 12:04	
Parar	neter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Associated Lab Sar	nples: 75106680001	, 75106680003	75106680005, 7	5106680007			
METHOD BLANK:	525697		Matrix:	Water			
Associated Lab Sar	nples: 75106680001	, 75106680003	75106680005, 7	5106680007			
QC Batch Method:	SM 4500-CN-C		Analysis Des	cription:	4500CNG Cyanide	e, Amenable	
QC Batch:	116681		Analysis Met	hod:	SM 4500-CN-G		
Pace Project No .:	75106680						
Project:	550004						

Results presented on this page are In the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project:	550004
Pace Project No .:	75106680
DEFINITIONS	
DF - Dilution	Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Def	tected at or above adjusted reporting limit.
J - Estimated	d concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjust	ted Method Detection Limit.
PQL - Praction RL - Reporting bias for a sp S - Surrogate	cal Quantitation Limit. ng Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and ecific analyte in a specific matrix.
1,2-Diphenyl	hydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is
a combined	concentration.
Consistent w	vith EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Lal	poratory Control Sample (Duplicate)
MS(D) - Mat	rix Spike (Duplicate)
DUP - Samp	le Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

LABORATORIES

PASI-D Pace Analytical Services - Dallas

ANALYTE QUALIFIERS

- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
- N3 Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

 Project:
 550004

 Pace Project No.:
 75106680

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
75106680010	550014	EPA 608 SF	116427	EPA 608	116570
75106680010	550014	EPA 615	116532	EPA 615	116988
75106680010	550014	EPA 604.1	116529	EPA 604.1	116833
75106680010	550014	EPA 632	116530	EPA 632	116792
75106680010	550014	EPA 625	116304	EPA 625	116469
75106680009	550012	EPA 624 Low 116083			
75106680001 75106680003 75106680005 75106680007	550004 550006 550008 550010	SM 4500-CN-C SM 4500-CN-C SM 4500-CN-C SM 4500-CN-C	116547 116547 116547 116547	SM 4500-CN-E SM 4500-CN-E SM 4500-CN-E SM 4500-CN-E	116602 116602 116602 116602
75106680001 75106680003 75106680005 75106680007	550004 550006 550008 550010	SM 4500-CN-C SM 4500-CN-C SM 4500-CN-C SM 4500-CN-C	116681 116681 116681 116681	SM 4500-CN-G SM 4500-CN-G SM 4500-CN-G SM 4500-CN-G	116682 116682 116682 116682

REPORT OF LABORATORY ANALYSIS

Pare Analytical	Document N Sample Condition U	lame: Jpon Receipt	Document Revised: 03-14-19 Page 1 of 1					
- Accornicagada	Document No.:		Issuing Authority: Pace Dallas Quality Office					
	Sample Conditi	on Upon Re	ceipt					
0	Zballas El C	NOT CH	WU#: /5106680					
Client Name: PCS Courier: FedEX UPS USPS Client L	Project SO 🖉 PACE 🗆 Other:	Work order:	75106680					
Tracking #:								
Custody Seal on Cooler/Box: Yes D No Packing Material: Bubble Wrap/Bags Foam D None Other D								
Received on ice: Yes a No D Type of Ice: Wet a Blue D								
Inermometer Used: <u>HAT H</u> Cooler Temp "C: <u>>@</u> (Recorded) <u>O.O</u> (Correction Factor) <u>> O</u> (Actual)								
Temperature should be above freezing to 6°C								
Chain of Custody relinquished		Yes No D						
Sampler name & signature on COC		Yes D No P						
Short HT analyses (<72 hrs)		Yes No 🗆						
Sufficient Volume received		Yes No D						
Correct Container used		Yes P-No D						
Container Intact		Yes, T No 🗆						
Sample pH Acceptable		Yes No D NA D						
Residual Chlorine Present	-	Yes 🗆 No 🕫	NA 🗆					
Cl Strips: 141364			NAD					
Lead Acetate Strips: 1913	5							
Are soil samples (volatiles, TPH) rece	ived in 5035A Kits	Yes 🗆 No 🗆 NA 🖄						
Unpreserved 5035A soil frozen withi	n 48 hrs	Yes D No D NA Ø						
Headspace in VOA (>6mm)		Yes D No D NA D						
Project sampled in USDA Regulated A State Sampled:	Area:	Yes 🗹 No 🗆						
Non-Conformance(s):		Yes 🗆 No 🗖						
POLLUTION CONTROL SERVICES 1532 Universal City Blvd, Suite 100

Universal City, TX 78148-3318 Facsimilie 210.658.7903 210.340.0343

CHAIN OF CUSTODY & SUBCONTRACT TRACKING SHEET

TO:	Pace Analytical Services, Inc.
	400 W Bethany Rd, Ste 190
	Allen, TX 75013

Relinquished by: Greg Felux

	-
Date/Time:	4/16/2019 @ 1700
Received by:	Aluca Theth Man
Date/Time:	4/17/19 09261034
	AEYLIHIY

			Analycic		1
PCS#	Date	Time	Requested	Pres	T. A. T.
550004	04/15/2019	1015	Cyanide, Amenable	NAOH	Std c
550005	04/15/2019	1015	Phenolics	H2SO4	Std -00
550006	04/15/2019	1530	Cyanide, Amenable	NAOH	Std
550007	04/15/2019	1530	Phenolics	H2SO4	Std
550008	04/15/2019	2152	Cyanide, Amenable	NAOH	Std -c
550009	04/15/2019	2154	Phenolics	H2SO4	Std - cc
550010	04/16/2019	0540	Cyanide, Amenable	NAOH	Std -u
550011	04/16/2019	0540	Phenolics	H2SO4	Std
550012	04/16/2019	0540	Volatiles 624	ICE	Std -u
550014	04/16/2019	0820	604.1 Hexachlorophene	ICE	STD
1	and the second sec				

Comments/Special Instructions:

Unless otherwise requested, send results and invoice to:

Chuck Wallgren Pollution Control Services 1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318

Authorized by:

W0#:75106680

PM: MLM Due Date: 05/01/19 CLIENT: PCS

Date:

16/19

Page 31 of 42 Document1

POLLUTION CONTROL SERVICES

1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318 Facsimilie 210.658.7903 210.340.0343

CHAIN OF CUSTODY & SUBCONTRACT TRACKING SHEET

TO:	Pac	e Analytic	al Service	s, Inc.	Relinquished by:	Greg Felu	eg Felux			
	400	W Bethar	ny Rd, Ste	190	Date/Time:	4/16/2019	@ 1700			
	Alle	en, TX 750	013		Received by:	Aluser The Main				
					Date/Time:	4/17/	a anti	1034		
				Analysis			AENlith	<u>،</u>		
PCS#	ŧ	Date	Time	Requested			Pres	T. A. T.		
5500	14			Semi Vola	tiles 625		ICE			
5500	14			Herbicides	615		ICE			
5500	14	******		Pesticide 1	657		ICE			
5500	14			Pesticides	608		ICE			
5500	14			Pesticides	617		ICE			
5500	14			Pesticides	632		ICE			

Comments/Special Instructions:

Unless otherwise requested, send results and invoice to:

Chuck Wallgren Pollution Control Services 1532 Universal City Blvd, Suite 100 Universal City, TX 78148-3318

Authorized by:

WO#:75106680

PM: MLM CLIENT: PCS

Due Date: 05/01/19

6/18 Date:

Page 32 of 42 Document1

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	Ana-Lab Corp. P.O. Box 900) Kilgore,	TX 75663	Repor	t Page 1 of 1	10
ANA-LAD	Phone 903/984-0551 FAX 903/984-5914 e-Mai Employce Owned	l corp@ana-lab.co	Continual Improvem	ent		
THE COMPLETE SERVICE LAB	Results Printed: 05/01/20	19 10:06			Page 1 of	f4
	Corrected Report, Deleted PCBs	Acc	ount	Pr	oject	
Report To		PAN	1M-N	8'	72112	
Pace Analytical - Dallas Melissa McCullough 400 West Bethany Drive Suite 190 Allen, TX 75013						
	Results					
1779487 75106680002				Received	04/19/2019	
Non-Potable Water	Collected by: Client Pace Analytica	- Da	PO	DASUB200	65	
Supplement to Test Report 1777043	Taken: 04/15/2019 10:15:00					
EPA 420.4 1	Prepared: 834818 04/24/.	2019 12:00:00	Analyzed 834979	04/24/2019	17:31:00 M	ALC
Parameter N Phenolics, Total Recoverable	Results Units <0.005 mg/L	<i>RL</i> 0.005	Flag	CAS	Bottle 02	
1779488 75106680004 Non-Potable Water Supplement to Test Report 1777044	Collected by: Client Pace Analytica Taken: 04/15/2019 15:30:00	l - Da	PO	Received: DASUB20	04/19/2019 65	_
EPA 420.4 1	Prepared: 834818 04/24/	2019 12:00:00	Analyzed 834979	04/24/2019	17:33:00 M	MLC
Parameter N Phenolics, Total Recoverable	Results Units 0.0063 mg/L	<i>RL</i> 0.005	Flag	CAS	<i>Bottle</i> 02	
1779489 75106680006				Received:	04/19/2019	_
Non-Potable Water	Collected by: Client Pace Analytica	l - Da	PO	DASUB20	65	
Supplement to Test Report 1777045	Taken: 04/15/2019 21:54:00					
EPA 420.4 1	Prepared: 834818 04/24/	2019 12:00:00	Analyzed 834979	04/24/2019	17:35:00 N	MLC
Parameter N Phenolics, Total Recoverable	Results Units <0.005 mg/L	<i>RL</i> 0.005	Flag	CAS	Bottle 02	
1779490 75106680008				Received:	04/19/2019	-
Non-Potable Water	Collected by: Client Pace Analytica	l - Da	PC	DASUB20	65	
	Taken: 04/16/2019 05:40:00					

NELAP-accredited #T104704201-19-15

Form rptPROJRES Created 10/13/2004 v1.2

Page 33 of 42



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Results

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Page 2 of 4

1779490 75106680008							Received:	04/19/2019	
Non-Potable Water	Collected by: Client	Pace Analy	tical - Da			PO:	DASUB20	65	
G 1	Taken: 04/16/2019 05:40:00								
Supplement to Test Report 1777046									
EPA 420.4 1	Prepared:	834818 04,	/24/2019	12:00:00	Analyzed	834979	04/24/2019	17:42:00	MLC
Parameter	Results	Units	RL		Flag		CAS	Bot	tle
N Phenolics, Total Recoverable	0.0069	mg/L	0.005					02	
1779491 75106680010							Received:	04/19/2019)
Non-Potable Water	Collected by: Client	Pace Analy	tical - Da			PO:	DASUB20	65	
	Taken: 04/16/2019 08:20:00								
Supplement to Test Report 1777047									
EPA 1657	Prepared:	834355 04	/22/2019	06:45:00	Analyzed	835620	04/26/2019	06:17:00	EMT
Parameter	Results	Units	RL		Flag		CAS	Bot	tle
z Azinphos-methyl (Guthion)	<0.0488	ug/L	0.0488		Х		86-50-0	04	
z Chlorpyrifos	<0.039	ug/L	0.039				2921-88-2	04	
z Demeton	<0.0488	ug/L	0.0488				8065-48-3	04	
z Diazinon	<0.0488	ug/L	0.0488				333-41-5	04	
Z Malathion	<0.0488	ug/L	0.0488				121-75-5	04	
Z Parathion, ethyl	<0.0488	ug/L	0.0488				50-38-2 298-00-0	04	
EPA 617	Prepared:	834354 04	/22/2019	06:45:00	Analyzed	835854	04/25/2019	14:19:00	EMT
Parameter	Results	Units	RL		Flag		CAS	Boi	ttle
z Kelthane (Dicofol)	<0.039	ug/L	0.039				115-32-2	03	
Z Methoxychlor	<0.00976	ug/L	0.00976				72-43-5	03	
z Mirex	<0.00976 Sa	ug/L ample Prep	0.00976		-	-	2385-85-5	03	
1779487 75106680002							Received:	04/19/2019)
							DASUB20)65	
EPA 420.4 1	Prepared:	834818 04	4/24/2019	12:00:00	Analyzed	834818	04/24/2019	12:00:00	CRS
N Phenol Distillation	50/50	ml						01	
PL2	101 75413			5°	Insue Danien	11105 25	dy fre Ste 132	Dullas TV 261	74 <u>.</u> 7632
apporate Shipping show theorem Rd. Rec.	2010. 1.3 /3002			1 2 61 5 5 1 3	eras region	. 1110	uş III dir. Lad	Man the 152.	_/ /////

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Page 34 of 42

	Ana-Lab Corp.	P.O. Bo	x 9000	Kilgore,	TX 75	663	Repo	ort Page 3	of 10
ANA-LAD	one 903/984-0551 FAX 90	13/984-591 Employee Ow	4 e-Mail cor ned Integr	p@ana-lab.co ity Caring	m Continue	al Improven	ent		_
THE COMPLETE SERVICE LAB	Results _p	Printed:	05/01/2019	10:06				Page	3 of 4
1779488 75106680004							Received:	04/19/2019)
							DASUB2	065	
EPA 420.4 1	Prepare	rd: 834818	04/24/2019	12:00:00	Analyzed	834818	04/24/2019	12:00:00	CRS
N Phenol Distillation	50/50	1	ml					01	
1779489 75106680006							Received:	04/19/2019)
							DASUB2	065	
EPA 420.4 1	Prepare	ed: 834818	04/24/2019	12:00:00	Analyzed	834818	04/24/2019	12:00:00	CRS
N Phenol Distillation	50/50	1	ml					01	
1779490 75106680008					_		Received:	04/19/2019	9
							DASUB2	065	
EPA 420.4 1	Prepare	ed: 834818	04/24/2019	12:00:00	Analyzed	834818	04/24/2019	12:00:00	CRS
N Phenol Distillation	50/50		ml					01	
1779491 75106680010							Received: DASUB2	04/19/2019	9
EPA 1657	Prepart	ed: 834355	04/22/2019	06:45:00	Analyzed	835620	04/26/2019	06:17:00	EMT
Organophos. Pesticides	Entered							04	
EPA 614/608/617/1657	Prepar	ed: 834354	04/22/2019	06:45:00	Analyzed	834354	04/22/2019	06:45:00	МСС
Liquid-Liquid Extr. W/Hex Ex	1/1025		ml					01	
Corporate Shipping: 2600 Budley Rd. Kilgore	TX 75662			North 7	Fexas Regiun	e 11105 Sh	ady Trl Ste. 123	Dallas TX 752	29-7633
		ACC OR	nelac	HITH					
	NH	ELAP-accr	edited #T104	704201-19-15				Page 35	of 42

Form rptPROJRES Created 10/13/2004 v1.2



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Page 4 of 4

1779491 75106680010 Received: 04/19/2019 DASUB2065 EPA 614/608/617/1657 Prepared: 834355 04/22/2019 06.45:00 Analvzed 834355 04/22/2019 06:45:00 MCC Solvent Extraction 1/1025 01 ml EPA 617 Prepared: 834354 04/22/2019 06:45:00 Analvzed 835854 04/25/2019 14:19:00 EMT Dicofol/Methoxychlor/Mirex Entered 03 Ζ

Qualifiers:

X - Standard reads higher than desired.

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-19-15, Louisiana Department of Environmental Quality Laboratory Certification (NELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z - not covered under NELAC scope of accreditation.

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Bill Peery, MS, VP Technical Services

Corporate Shipping 2060 Budley Rd. Kilgore, TN 75662



North Texas Region: 11105 Shady Trl. Ste. 123 Dallas TX: 75229-7633



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Page 36 of 42

	Ana-Lab	o Corp.	P.C	. Box 9	9000	Kilgore,	TX 75	663	Report	t Page	5 of 10
ANALAB	Phone 903/984-	-0551 FA	K 903/98 loyee Or	4-5914 e wned	-Mail corp(Integrity	@ana-lab.co Caring	m ç Cont	LELA tinual Improve	P-accredi	ted #02(D08
THE COMPLETE SERVICE LAB	Qu	ality	Co	ntro	1	Prin	ted 05/01	/2019		Pa	.ge 1 of 3
Report to						PA PA	lccount MM-N	V	Proje 872	ect 2112	
Pace Analytical - Dallas Melissa McCullough 400 West Bethany Drive Suite 190 Allen, TX 75013											
Analytical Set	834979			Blank						E	PA 420.4 1
<u>Parameter</u> Phenolics, Total Recover	PrepSet rable 834818	Reading ND	<i>MDL</i> 0.00377	MQL 0.005 CCV	<i>Units</i> mg/L			File 119862683			
<u>Parameter</u> Phenolics, Total Recover	rable	<i>Reading</i> 0.193 0.200 0.197 0.210	Known 0.200 0.200 0.200 0.200	Units mg/L mg/L mg/L mg/L	Recover% 96.5 100 98.5 105	Limits% 90.0 - 110 90.0 - 110 90.0 - 110 90.0 - 110		File 119862682 119862693 119862704 119862712			
Parameter Phenolics, Total Recove	Sample rable 1776695 1776697		Result ND 0.0042	Unknown ND 0.0049 ICV	e		<i>Unit</i> mg/L mg/L		RPD 15.4		<i>Limit%</i> 20.0 20.0
<u>Parameter</u> Phenolics, Total Recove	rable	Reading 0.204	Known 0.200	Units mg/L LCS Du	Recover% 102 P	<i>Limits%</i> 90.0 - 110		<i>File</i> 119862681			
<u>Parameter</u> Ph e nolics, Total Recove	PrepSet rable 834818	<i>LCS</i> 0.220	<i>LCSD</i> 0.213	Mat. Spi	<i>Кпоwп</i> 0.200 ke	<i>Limits%</i> 90.0 - 110	<i>LCS%</i> 110	<i>LCSD%</i> 106	Units mg/L	RPD 3.23	<i>Limit%</i> 20.0
<u>Parameter</u> Phenolics, Total Recove	Sample rable 1776695 1776697	<i>Spike</i> 0.203 0.210	<i>Unknow</i> ND 0.0049	n Known 0.200 0.200	<i>Units</i> mg/L mg/L	Recovery % 102 105	<i>Limits %</i> 90.0 - 110 90.0 - 110	File 119862688 119862691			
Analytical Set	835620			CCV							EPA 1657
<u>Parameter</u> Azinphos-methyl (Guth	ion)	Reading 965	Known 1000	<i>Units</i> ug/L	Recover% 96.5	<i>Limits%</i> 80.0 - 120		<i>File</i> 119876371			
Chlorpyrifos		1750 1040 1100	1000 1000 1000	ug/L ug/L ug/L	175 104 110	80.0 - 120 80.0 - 120 80.0 - 120	*	119876386 119876371 119876386			
Demeton		960 1060 932	1000 1000 1000	ug/L ug/L ug/L	96.0 106 93.2	80.0 - 120 80.0 - 120 80.0 - 120		119876371 119876386 119876371			
Malathion		1090 969 1050	1000 1000 1000	ug/L ug/L ug/L	109 96.9 105	80.0 - 120 80.0 - 120 80.0 - 120		119876386 119876371 119876386			
Parathion, ethyl		1040 1090	1000 1000	ug/L ug/L	104 109	80.0 - 120 80.0 - 120		119876371 119876386			

Corporate Shipping: 2660 Dudles Rd. Kilgure, TX 75662





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Page 37 of 42

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Form rptPROJQCGrpt Created 01/27/2005 v1.0



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Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008 Employee Owned Integrity Caring Continual Improvement

Quality Control

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Page 2 of 3

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		X.	autry		11110	1						
					CCV							
	Parameter		Ronding	Know	1/mite	Recover%	Y imaite %		File			
	Parathion methyl		1130	1000	119Л.	113	80.0 - 120		119876371			
	I de dans on, Leonay I		1140	1000	ug/I.	114	80.0 - 120		119876386			
				1000	LCS D	in	00.0 120		11/0/0000			
					20020	-r						
	Parameter	PrepSet	LCS	LCSD		Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
	Azinphos-methyl (Guthion)	834355	0.247	0.254		1.00	0.100 - 166	24.7	25.4	ug/L	2.79	50.0
	Chlorpyrifos	834355	0.339	0.301		1.00	0.100 - 109	33.9	30.1	ug/L	11.9	50.0
	Demeton	834355	0.232	0.194		1.00	0.100 - 101	23.2	19.4	ug/L	17.8	50.0
	Diazinon	834355	0.338	0.317		1.00	0.100 - 106	33.8	31.7	ug/L	0.41	50.0
	Malamion	824255	0.382	0.345		1.00	0.100 - 113	38.2	34.3	ug/L	10.8	50.0
	Parathion, empl	034333	0.454	0.391		1.00	0.100 - 111	43.4	39.1	ug/L	10.4	50.0
	газашоц, шеціуі	034333	0.550	0.203	MSD	1.00	0.100 - 109	33.0	20.3	ug/L	17.1	50.0
					INTOD							
	Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
	Azinphos-methyl (Guthion)	1777087	2.18	0.275	0.584	1.00	30.0 - 130	160 *	-30.9 *	ug/L	296 *	30.0
	Chlorpyrifos	1777087	0.140	0.406	ND	1.00	30.0 - 130	14.0 *	40.6	ug/L	97.4 *	30.0
	Demeton	1777087	0.228	0.094	ND	1.00	30.0 - 130	22.8 *	9.40 *	ug/L	83.2 *	30.0
	Diazinon	1777087	0.160	0.162	ND	1.00	30.0 - 130	16.0 *	16.2 *	ug/L	1.24	30.0
	Malathion	1777087	0.148	0.125	0.148	1.00	30.0 - 130	0 *	-2.30 *	ug/L	16.8	30.0
	Parathion, ethyl	1777087	0.152	0.107	ND	1.00	30.0 - 130	15.2 *	10.7 •	ug/L	34.7 *	30.0
	Parathion, methyl	1777087	0.0524	0.161	ND	1.00	30.0 - 130	5.24 *	16.1 *	ug/L	102 *	30.0
					Surroga	ate						
	Parameter	Sample	Туре	Reading	Known	Units	Recover%	Limits%	File			
	Tributylphosphate		CCV	916	1000	ug/L	91.6	0.100 - 118	119876371			
			CCV	1090	1000	ug/L	109	0.100 - 118	119876386			
	Triphenylphosphate		CCV	1030	1000	ug/L	103	0.100 - 147	119876371			
			CCV	833	1000	ug/L	83.3	0.100 - 147	119876386			
	Tributylphosphate	834355	LCS	297	1000	ug/L	29.7	0.100 - 118	119876376			
		834355	LCS Dup	286	1000	ug/L	28.6	0.100 - 118	119876377			
	Triphenylphosphate	834355	LCS	283	1000	ug/L	28.3	0.100 - 147	119876376			
	m 1	834355	LCS Dup	234	1000	ug/L	23.4	0.100 - 147	1198/03//			
	Indutyiphosphate	1///08/	MS	0.400	1.00	ug/L	40.0	0.100 - 118	119870384			
	Triphonulahoonhoto	1777087	MSD	0.249	1.00	ug/L	24.9	0.100 - 147	110876384			
	Tupnenyipnosphate	1777087	MSD	0.240	1.00	ug/L	22.0	0.100 - 147	119876385			
1-		£ % %2.		A800103 12 10002 100	CANAL CALL	-8-	and the second second					100 million (1,000 /
	Analytical Set 83	5854										EPA 617
					Blanl	ĸ						
	Parameter	PrepSet	Reading	MDL	MQL	Units			File			
	Kelthane (Dicofol)	834354	ND	0.0352	0.040	ug/L			119880750			
	Methoxychlor	834354	ND	0.00897	0.010	ug/L			119880750			
	Mirex	834354	ND	0.00905	0.010	ug/L			119880750			
					CCV	7						
	Parameter		Reading	Known	Units	Recover%	Limits%		File			
	Kelthane (Dicofol)		220	200	ug/L	110	70.0 - 130		119880749			
	~ 5		257	200	ug/L	128	70.0 - 130		119880755			
			239	200	ug/L	120	70.0 - 130		119880770			
	Methoxychlor		93.8	100	ug/L	93.8	70.0 - 130		119880749			
Corpurate Shipp	ning: 2600 Dudley Rd. Kilgore	TX 75662					Nort	h Texas Region	11105 Shady Tr	Ste. 123 T	Dallas TX	75229-7633



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Page 38 of 42

Form rptPROJQCGrpt Created 01/27/2005 v1.0



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Page 3 of 3

1

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Quality Control

				CCV							
Parameter		Reading	Known	Units	Recover%	Limits%		File			
Methoxychlor		100	100	ug/L	100	70.0 - 130		119880755			
		103	100	ug/L	103	70.0 - 130		119880770			
Mirex		92.5	100	ug/L	92.5	70.0 - 130		119880749			
		94.2	100	ug/L	94.2	70.0 - 130		119880755			
		91.3	100	ug/L	91.3	70.0 - 130		119880770			
				LCS Duj	p						
Parameter	PrepSet	LCS	LCSD		Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Kelthane (Dicofol)	834354	0.961	0.857		2.00	0.100 - 130	48.0	42.8	ug/L	11.5	30.0
Methoxychlor	834354	0.820	0.810		1.00	33.6 - 137	82.0	81.0	ug/L	1.23	30.0
Mirex	834354	0.750	0.775		1.00	37.6 - 119	75.0	77.5	ug/L	3.28	30.0
				MSD							
Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Kelthane (Dicofol)	1777089	0.632	0.768	ND	1.01	70.0 - 130	62.6 *	76.0	ug/L	19.4	30.0
Methoxychlor	1777089	0.438	0.551	ND	1.01	70.0 - 130	43.4 *	54.6 *	ug/L	22.9	30.0
Mirex	1777089	0.297	0.349	ND	1.01	70.0 - 130	29.4 *	34.6 *	ug/L	16.1	30.0
				Surrogat	e						
Parameter	Sample	Туре	Reading	Known	Units	Recover%	Limits%	File			
Decachlorobiphenyl		CCV	86.0	100	ug/L	86.0	10.0 - 150	119880749			
		CCV	94.7	100	ug/L	94.7	10.0 - 150	119880755			
		CCV	93.9	100	ug/L	93.9	10.0 - 150	119880770			
Tetrachloro-m-Xylene (Surr)		CCV	101	100	ug/L	101	10.0 - 150	119880749			
		CCV	101	100	ug/L	101	10.0 - 150	119880755			
		CCV	102	100	ug/L	102	10.0 - 150	119880770			
Decachlorobiphenyl	834354	Blank	43.8	100	ug/L	43.8	10.0 - 150	119880750			
	834354	LCS	84.0	100	ug/L	84.0	10.0 - 150	119880751			
	834354	LCS Dup	89.4	100	ug/L	89.4	10.0 - 150	119880752			
Tetrachloro-m-Xylene (Surr)	834354	Blank	36.5	100	ug/L	36.5	10.0 - 150	119880750			
	834354	LCS	58.0	100	ug/L	58.0	10.0 - 150	119880751			
	834354	LCS Dup	58.0	100	ug/L	58.0	10.0 - 150	119880752			
Decachlorobiphenyl	1777089	MS	0.422	1.01	ug/L	41.8	10.0 - 150	119880768			
	1777089	MSD	0.503	1.01	ug/L	49.8	10.0 - 150	119880769			
Tetrachloro-m-Xylene (Surr)	1777089	MS	0.353	1.01	ug/L	35.0	10,0 - 150	119880768			
	1777089	MSD	0.365	1.01	ug/L	36.1	10.0 - 150	119880769			
A DECT THE REPORT OF	I REAL PROPERTY.					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1				

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; ICV - Initial Calibration Verification

Corporate Shipping: 2600 Hudley Rd. Kilgore, TX 75662



North Texas Region: 11105 Shady Trl Ste. 123 Dallas TX 75229-7633

Page 39 of 42

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Report	t / Invo	ice To	a de la Alta	Subco	ntract To										Re	queste	d Analys	lis		
Meliss Pace / 400 W Suite Allen, Phone Email:	a McC Analyti lest Ba 190 TX 75 (972) mells	Cullough Ical Dallas Sthany Drive 5013 727-1123 sa.mccullough@pacelai	bs.com	AnaLa	ab		P.C	D	AS	uB	20	65	& 1657	1 Phenol						
State	or Sar	npie Origin: TATPI			1		T	+ -	7986	rved C	ontal	ners	617	420,						
ltern .	Samp	e ID	Collect Date/Tir	ne	Lab ID	× •	Matrix	H2SO4	peveseudun											LAB USE ONLY
1	55000	5	4/15/201	9 10:15	751066	80002	Water							X						1777083
2	65000	7	4/15/201	9 15:30	751066	80004	Water							X						1772 44
3	55000	Ð	4/15/201	9 21:54	751066	80006	Water							X						1777345
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1		Alurg Engl	2 1/ku	YHI+ GI	917w		v kg		4	liste	5 17	247		Phen	ol RL 10	ug/L				
2	-	Fre	4	19/19/19	7/031)	C	81	_			19	919119	1D	20						
-	_						I II Thank	100	Area	J ab										

See Attached for Tracking # and Temp

Chain of Custody -

FMT-ALL-C-002rev.00 24March2009

Page 1 of 1

Pace Analytical www.pacelaba.com

1 of 3

2 of 3

872112 CoC Print Group 001 of 001

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Profile List

PASI Dallas Laboratory

Clier	nt PCS	F	Profile I	N 6252	Line 12			
Line								Sig
Item	Acode	Cnep List	Cmp	Analyte	CAS No.	PQL	MDL Units	Figs
2	1657 W	1657 W	azin	Azinphos, methyl (Guthi	an) 86-50-0	0.1	0.01 ug/L	E
			chly	Chlorpyrifes	2921-88-2	0.05	0.02 ug/L	E
			diaz	Diaziaon	333-41-5	0.5	0.01 ug/L	E
			prth	Parathion (Ethyl parathio	on) 58-38-2	0.1	0.02 ug/L	E
			mala	Melathion	121-75-5	0.1	0.01 ug/L	E
			demt	Total Demeton	8065-48-3	0.2	0.01 ug/L	E
	617 W	617 W	meax	Methoxychior	72-43-5	2	0.02 ug/L	E
			mitor	Mirex	2385-85-6	0.02	0.£2 ug/L	E
			dico	Dicoiol	115-32-2	1	0.5 ug/L	E
	A seller a little of the second							

"The MOLs listed are not instrument specific,

*Significant Figures:

Numeric Value - The actual number of significant figures

E (EPA) - Numbers less than 10 have 2 significant figures and numbers greater than or equal to 10 have 3

M (Metaic) - Numbers less than 100 have 2 significant figures and numbers greater than or equal to 100 have 3

O (Organice) - Numbers less than 1 have 1 significant figure, numbers less than 100 but not less than 1 have 2 significant figures, and numbers greater than or equal to 100 have 3 significant

3 of 3

872112 CoC Print Group 001 of 001

4/18/2019



After printing this label:

Use the 'Print' button on this page to print your label to your laser or inkjet printer.
 Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and sould result in additional billing charges, along with the cancellation of your FedEx account number. Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, Including intrinsic value of the package, loss of sales, income interest, profit, attorney's frase, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented less.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious matals, negotiable Instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Pollution Control Services Sample Log-In Checklist
PCS Sample No(s) 550004 550011 COC No. 550004
Client/Company Name: 130 50015 Checklist Completed by: 6 WM
Sample Delivery to Lab Via: Client Drop Off Commercial Carrier: Bus UPS Lone Star FedEx USPS PCS Field Services: Collection/Pick Up Other:
Sample Kit/Coolers Sample Kit/Cooler? Yes No Sample Kit/Cooler? Yes No Custody Seals on Sample Kit/Cooler: Not Present If Present, Intact Sample Containers Intact; Unbroken and Not Leaking? Yes No Custody Seals on Sample Bottles: Not Present If Present, Intact Broken
If cooling required of Kequired of Kequired / o C Is Ice Present in Sample Kit/Cooler? Yes No Samples received same day as collected? Yes No Lab Thermometer Make and Serial Number: EX Tech 10093657 Other:
Acid Preserved Sample - If present, is pH <2?
Adjusted by Tech/Analyst: Date : Time:
Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments Person Notified:
Actions taken to correct problems/discrepancies:
Receiving qualifier needed (<i>requires client notification above</i>) Temp Holding Time Initails: Receiving qualifier entered into LIMS at login Initial/Date: Revision Comments:

* Samples submitted for Metals Analysis (except Hex Cr) or Drinking Water for Coliform Bacteria Only are not required to be iced. Samples collected prior day to receipt at the laboratory must meet method specific thermal cooling requirements. "or will be flagged accordingly". Samples delivered the same day as collected may not meet thermal criteria, but shall be considered acceptable if evidence that the chilling process has begun, such as arrival on ice (EPA 815-17-08-006. June 2008). ** Water samples for metals analysis that are not acid preserved prior to shipment may be acceptably preserved by the laboratory on receipt – however, the sample digestion procedure must be delayed for at least 24 hours after preservation by the laboratory.