

TCEQ Interoffice Memorandum

TO: Office of the Chief Clerk
Texas Commission on Environmental Quality

THRU: *CK* Chris Kozlowski, Team Leader
Water Rights Permitting Team

FROM: Sam Sewell, Project Manager
Water Rights Permitting Team

DATE: July 11, 2017

SUBJECT: City of Seguin
ADJ 3839
CN600342257, RN102074192
Application No. 18-3839C to Amend Certificate of Adjudication No. 18-3839
Texas Water Code §§ 11.042, 11.122, Requiring Limited Mailed Notice
Guadalupe River, Guadalupe River Basin
Guadalupe County

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY
2017 JUL 11 AM 11:21
CHIEF CLERKS OFFICE

The application and fees were received on March 9, 2016. Additional information and fees were received on December 21, 2016, January 5, 2017, and May 31, 2017. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on July 11, 2017. Mailed notice to the downstream water right holders of record in the Guadalupe River Basin is required pursuant to Title 30 Texas Administrative Code 295.161(a).

The City of Seguin seeks to amend Certificate of Adjudication 18-3839 to authorize the use of the bed and banks of the Guadalupe River, Guadalupe River Basin to convey 1,627 acre-feet of groundwater based return flows per year for subsequent diversion and use for municipal purposes in Guadalupe County.

All fees have been paid and the application is sufficient for filing.



Sam Sewell, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

OCC Mailed Notice Required YES NO

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 11, 2017

Mr. James L. Machin, P.E.
TRC Solutions
505 E. Huntland Dr. Suite 250
Austin, TX 78752

RE: City of Seguin
ADJ 3839
CN600342257, RN102074192
Application No. 18-3839C to Amend Certificate of Adjudication No. 18-3839
Texas Water Code §§ 11.042, 11.122, Requiring Limited Mailed Notice
Guadalupe River, Guadalupe River Basin
Guadalupe County

Dear Mr. Machin:

This acknowledges receipt of additional information for the referenced application on May 31, 2017.

The application was declared administratively complete and filed with the Office of the Chief Clerk on July 11, 2017. Staff will continue processing the application for consideration by the Executive Director.

Please be advised that additional information may be requested during the technical review phase of the application process.

If you have any questions concerning the application, please contact me at sam.sewell@tceq.texas.gov or by phone at (512) 239-4008.

Sincerely,

A handwritten signature in black ink, appearing to read "Sam Sewell".

Sam Sewell, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section



505 East Huntland Drive
Suite 250
Austin, TX 78752

512.329.6080 PHONE
512.329.8750 FAX

www.trcsolutions.com

May 31, 2017

Mr. Sam Sewell
Project Manager, Water Rights Permitting Team
Texas Commission on Environmental Quality
PO Box 13087 (MC-160)
Austin, TX 78711

Re: Request for Information (RFI) #2, City of Seguin ("City") water right 18-3839C amendment for bed & banks reuse

Dear Mr. Sewell:

This letter provides responses to the RFI #2 in your letter of May 4, 2017. Your numbered requests are pasted in, followed by our answers.

1. Provide additional information and discussion on how Texas Water Code § 11.042(b) applies to this application. Staff's understanding is that this application requests authorization to reuse groundwater-based return flows. However, staff notes that the diversion point is upstream of the discharge point.

A1: Texas Water Code 11.042(b) allows for the discharge and subsequent diversion of return flows derived from privately-owned groundwater. The authorization may allow for the diversion of existing return flows, less carriage losses.

The City's request is for the discharge and diversion of privately-owned groundwater-derived return flows in accordance with the Texas Water Code. With the diversion point being upstream of the discharge points, it is analogous to requesting an alternate diversion point for a water right. Since the diversion point is upstream of the discharge, there are no carriage losses attributable to the discharge, as discussed in the response to question 2.

It is common for a water right to have or request via amendment multiple diversion points. Impacts on interjacent water rights must be considered, and when an alternate diversion point is a distance downstream of the primary point, carriage losses may be considered.

First, the City's diversion point is only 0.78 miles upstream of the Walnut Branch WWTP discharge. There are no interjacent water rights. If, to give a hypothetical example, diversions were to be made 0.78 miles downstream of the discharge, it would be essentially the same situation, with no effect on any other water rights and no significant losses.

Second, the Geronimo Creek WWTP discharge is 7.66 miles downstream of the City's diversion point. This is addressed in the responses to the next two questions.

2. Provide the specific carriage losses expected to be associated with this application. Staff acknowledges that the applicant intends to use loss values from the Guadalupe River Basin WAM. However, losses must be quantified in order for the application to be declared administratively complete.

A2: Carriage losses are applicable to points downstream of where a return flow enters (or diversion is made). For example, if there is a return flow of 100 ac-ft and a 10% loss rate downstream to where the diversion is to be made, there would be an increase of only 90 ac-ft that reaches the downstream point. Conversely, if a diversion is made upstream, the opposite occurs. Using the same numbers, a 100 ac-ft upstream diversion would only result in a reduction in flow of 90 ac-ft downstream, i.e. less than the flow increase attributable to the return flow. Therefore, we believe that carriage losses should not be applied in this case, as the amount of return flow entering at Geronimo Creek would be more than the reduction in flow from the upstream diversion of the same amount, if there are losses. The distance between the diversion and outfall at Walnut Branch is so small that losses are a moot point.

3. Explain specifically how impacts on interjacent water rights will be addressed. Staff acknowledges the applicant's response that diversions attributable to Geronimo Creek discharges will only be allowed if there is streamflow in excess of GBRA's authorization under Certificate of Adjudication 18-5488 (Lake Nolte).

A3: There are no interjacent water rights between the diversion point and the Walnut Branch discharge, so there will be no impacts related to Walnut Branch.

There is only one interjacent water right between the City's diversion point and the Geronimo Creek discharge. That is Certificate of Adjudication 18-5488 owned by the Guadalupe-Blanco River Authority (GBRA) for TP-5 Lake Nolte, with a hydropower use of 624,781 ac-ft/yr (863 cubic feet per second (cfs)). The Lake Nolte diversion point is 4.81 miles downstream of the City's diversion point. It is anticipated that diversions attributable to Geronimo Creek will only be allowed if the average daily instream flow in the Guadalupe River exceeds 863 cfs.

Please contact me if you have any questions, at 512-684-3189 or [REDACTED]

Sincerely,



James L. Machin, P.E., CPESC

cc: Emery Gallagher, City of Seguin

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 04, 2017

Mr. James L. Machin, P.E.
TRC Solutions
505 E Huntland Dr, Suite 250
Austin, TX 78752

CERTIFIED MAIL

9489 0090 0027 6009 5117 10

RE: City of Seguin
ADJ 3839
CN600342257, RN102074192
Application No. 18-3839C to Amend Certificate of Adjudication No. 18-3839
Texas Water Code §§ 11.042, 11.122, Requiring Limited Mailed Notice
Guadalupe River, Guadalupe River Basin
Guadalupe County

Dear Mr. Machin:

This acknowledges the receipt, on December 21, 2016 and January 5, 2017, of additional information and fees in the amount of \$131.33 (Receipt No. M713510, enclosed).

Additional information is required before the application can be declared administratively complete.

1. Provide additional information and discussion on how Texas Water Code § 11.042(b) applies to this application. Staff's understanding is that this application requests authorization to reuse groundwater-based return flows. However, staff notes that the diversion point is upstream of the discharge point.
2. Provide the specific carriage losses expected to be associated with this application. Staff acknowledges that the applicant intends to use loss values from the Guadalupe River Basin WAM. However, losses must be quantified in order for the application to be declared administratively complete.
3. Explain specifically how impacts on interjacent water rights will be addressed. Staff acknowledges the applicant's response that diversions attributable to Geronimo Creek discharges will only be allowed if there is streamflow in excess of GBRA's authorization under Certificate of Adjudication 18-5488 (Lake Nolte).

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niemann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 9, 2016

Mr. James L Machin, P.E.
TRC Solutions
505 E Huntland Dr, Suite 250
Austin, TX 78752

CERTIFIED MAIL

91 7199 9991 7033 2845 7180

RE: City of Seguin
ADJ 3839
CN600342257, RN102074192
Application No. 18-3839C to Amend Certificate of Adjudication No. 18-3839
Texas Water Code §§ 11.042, 11.122, Requiring Limited Mailed Notice
Guadalupe River, Guadalupe River Basin
Guadalupe County

Dear Mr. Machin:

This acknowledges the receipt, on March 9, 2016, of the referenced application and the amended supplemental information.

Additional information and fees are required before the application can be declared administratively complete.

1. Clarify the request for authorization to use the bed and banks of the Guadalupe River and its tributaries (Walnut Branch and Geronimo Creek) to convey groundwater based return flows for reuse. Staff notes that the requested diversion points are located upstream of the discharge locations for the return flows.
2. Clarify the volume of groundwater based return flows requested for bed and banks conveyance and diversion. On Pages 4 and 5, the volume is identified as 54% of the maximum annual discharges. However, on Page 7 of the supplement to the application, the volume is identified as 1,627 acre-feet per year.
3. Provide an estimate of the losses due to transportation, evaporation, seepage and channel or other associated carriage losses from the point of discharge to the point of diversion and the method used to calculate the losses (Title 30 Texas Administrative Code (TAC) § 295.112). Staff notes that the Guadalupe Basin WAM identifies losses within the reaches identified in the application.
4. Indicate how effects on interjacent water rights will be addressed.

5. Provide the following additional information in support of the request for authorization to use the bed and banks of the Guadalupe River and its tributaries for conveyance of groundwater based return flows for reuse:
 - a. USGS 7.5 minute topographic map (or equivalent map) showing the specific reach of the watercourse for which authorization is requested defined by the beginning or upstream point (discharge point) and the end or downstream point (diversion point);
 - b. Latitude and longitude for the beginning and endpoints of the reach (Include coordinates in decimal degrees to six decimal places);
 - c. Names of all watercourses which will be used to transport water within the reach;
 - d. Length of the reach. Provide the distance in river miles from the discharge point to the point of diversion;
 - e. Average estimated travel time; and
 - f. An assessment of the adequacy of the quantity and quality of the flows remaining after the proposed diversion to meet instream flow needs and bay and estuary freshwater inflow needs.
6. Provide completed *Supplemental Diversion Point Information Sheet* (enclosed) for any diversion points. Include coordinates in decimal degrees to six decimal places.
7. Confirm the drainage area above the existing diversion point. Staff has calculated a drainage area of 1,744.35 square miles for this point.
8. Confirm the bearing and distance of the proposed discharge points from the original corner survey. Staff has calculated the bearing and distance to be:
 - a. Discharge Point No. 1 - N 40°W, 6,243 feet from the SE corner of the Humphrys Branch Original Survey, Abstract No. 6 in Guadalupe County; and
 - b. Discharge Point No. 2 - N 34°E, 274 feet from the SE corner of the John Sowell Original Survey, Abstract No. 35 in Guadalupe County.
9. Provide a current copy of the TPDES Permit No. WQ 0010277003. The permit provided with the application expired February 1, 2016.
10. Provide five years of discharge data for the Geronimo Branch and Walnut Branch facilities in electronic format (spreadsheet or database).

11. Remit fees in the amount of **\$131.33** as described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.

Filing (Amendment)	\$ 100.00
Recording (\$1.25 x 1 page)	\$ 1.25
Notice Fee (\$0.94 x 32)	\$ 30.08
Total Fees	\$ 131.33
Fees Received	\$ 0.00
Fees Due	\$ 131.33

Please submit the requested information and fees by **January 11, 2017** or the application may be returned pursuant to Title 30 TAC § 281.18.

Note that additional information will be required before technical review of the application can be completed.

12. Submit an accounting plan that demonstrates compliance with the terms and conditions of any authorization prior to completion of technical review. The accounting plan should demonstrate that diversions do not exceed discharges of groundwater based return flows less losses at any time. The accounting plan should include:

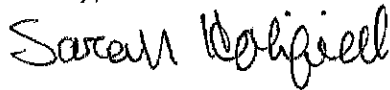
- a. A text file containing:
 - i. A detailed description of the accounting plan;
 - ii. A summary of all authorizations under the water right;
 - iii. A summary of the accounting plan;
 - iv. A narrative explanation of each worksheet, table and column (including the name and number of the column as it appears in the spreadsheet); and
 - v. The source(s) of the data, and explanations of the calculations.
- b. An Excel spreadsheet containing:
 - i. Columns to account for basic daily data, including discharges and diversions by location, discharge and diversion rates and volumes, any lag time or conveyance losses, any applicable instream flow requirements, and applicable gage-flows;
 - ii. The units actually used to measure diversions, and conversion calculations to acre-feet, cfs, and any other units used; and

City of Seguin
Application No. 18-3839C
December 9, 2016
Page 4 of 4

- iii. Running total calculations indicating the total annual authorized diversion and use in acre-feet.

If you have any questions concerning this matter please contact me via email at sarah.holifield@tceq.texas.gov or by telephone at (512) 239-4022.

Sincerely,



Sarah Holifield, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Enclosures

Supplemental Diversion Point Information Sheet

Diversion Point No. _____.

1) Watercourse: _____

2) Location of point of diversion at Latitude _____ N, Longitude _____ W, also bearing _____°, _____, _____ feet (distance) from the _____ corner of the _____ Original Survey No. _____, Abstract No. _____, in _____ County, Texas. (Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location)

3) Location from County Seat: _____ miles in a _____ direction from _____ County, Texas. Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

4) The diversion will be (check all appropriate boxes and if applicable, indicate whether existing or proposed):

	Existing	Proposed
Directly from stream		
From an on-channel reservoir		
From a stream to an off-channel reservoir		
From a stream to an on-channel reservoir		
From an off-channel reservoir		
Other method (explain fully, use additional sheets if necessary)		

5) Rate of Diversion (Check (%) applicable provision):

___ 1. Diversion Facility:

A. _____ Maximum gpm (gallons per minute)

1) _____ Number of pumps

2) _____ Type of pump

3) _____ gpm, Pump capacity of each pump

4) Portable pump _____ Yes or _ No

___ 2. If by gravity:

A. _____ Headgate _____ Diversion Dam _____ Maximum gpm

B. _____ Other method (explain fully - use additional sheets if necessary)

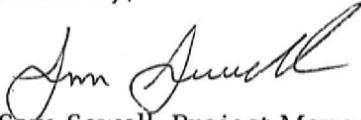
6) The drainage area above the diversion point is _____ acres or _____ square miles.

City of Seguin
Application No. 18-3839C
May 04, 2017
Page 2 of 2

Please submit the requested information by **June 04, 2017** or the application may be returned pursuant to Title 30 Texas Administrative Code § 281.18.

If you have any questions concerning this matter please contact me via email at sam.sewell@tceq.texas.gov or by telephone at (512) 239-4008.

Sincerely,

A handwritten signature in black ink, appearing to read "Sam Sewell". The signature is fluid and cursive, with the first name "Sam" and last name "Sewell" clearly distinguishable.

Sam Sewell, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Enclosure



505 East Huntland Drive
Suite 250
Austin, TX 78752

512.329.6080 PHONE
512.329.8750 FAX

www.trcsolutions.com

December 21, 2016

Ms. Sarah Holifield
Water Rights Permitting Team
Texas Commission on Environmental Quality
PO Box 13087 (MC-160)
Austin, TX 78711

Re: City of Seguin (“City”) water right 18-3839C amendment for bed & banks reuse

Dear Ms. Holifield:

This letter provides responses to the request for information in your letter of December 9, 2016. Your requests are pasted in, followed by our answers.

1. Clarify the request for authorization to use the bed and banks of the Guadalupe River and its tributaries (Walnut Branch and Geronimo Creek) to convey groundwater based return flows for reuse. Staff notes that the requested diversion points are located upstream of the discharge locations for the return flows.

A1: The Walnut Branch WWTP discharges directly to the Guadalupe River (“Guadalupe”), Segment 1804, essentially at the mouth of Walnut Branch. The Geronimo Creek WWTP is constructing a new outfall, which will soon discharge to the Guadalupe, Segment 1804, essentially at the mouth of Geronimo Creek. The requested diversion point is the City’s existing diversion point as specified in Certificate 18-3839, which is at the existing reservoir on the Guadalupe. The diversion point is located 0.78 miles upstream of the Walnut Branch outfall and 7.66 miles upstream of the Geronimo Creek outfall.

We recognize that this is an uncommon request, but it is akin to requesting an alternate diversion point for a water right.

2. Clarify the volume of groundwater based return flows requested for bed and banks conveyance and diversion. On Pages 4 and 5, the volume is identified as 54% of the maximum annual discharges. However, on Page 7 of the supplement to the application, the volume is identified as 1,627 acre-feet per year.

A2: Pages 4 and 5 ask for the maximum flows. Groundwater comprises an average of 54% of the water used and effluent discharged by the WWTPs. The permitted maximum

annual average flow for Walnut Branch is 4.9 MGD and for Geronimo Creek is 2.13 MGD, which is a total of 7.03 MGD or 7880 ac-ft/yr. Using those numbers, the maximum amount to be diverted would be $0.54 * 7880 = 4255$ ac-ft/yr.

On page 7 we address the average expected flows. Actual diversions will be based on actual flows and actual groundwater usage, to be documented in the accounting plan. Based on the previous 5-year average, and subtracting reuse, the average annual discharges were 3013 ac-ft/yr. The average expected to be available for diversion in the near future is therefore $0.54 * 3013 = 1627$ ac-ft/yr.

3. Provide an estimate of the losses due to transportation, evaporation, seepage and channel or other associated carriage losses from the point of discharge to the point of diversion and the method used to calculate the losses (Title 30 Texas Administrative Code (TAC) § 295.112). Staff notes that the Guadalupe Basin WAM identifies losses within the reaches identified in the application.

A3: The distance between the intake and the Walnut Branch outfall is only 0.78 miles, and losses are considered insignificant. The distance between the intake and the Geronimo Creek outfall is 7.66 miles, and applying losses may be appropriate. We would anticipate using the loss rate for this reach used in the Guadalupe WAM. This would be calculated in the accounting plan.

4. Indicate how effects on interjacent water rights will be addressed.

A4: There is only one interjacent water right in this reach (GBRA, 18-5488, Lake Nolte Hydropower). It is anticipated that diversions attributable to Geronimo Creek will only be allowed if there is instream flow in excess of GBRA's water right amount. If it is determined that there are significant channel losses between the diversion point and the GBRA water right location, the volume attributable to Geronimo Creek will be reduced accordingly. Since the Walnut Branch outfall is a short distance downstream of the diversion point and there are no interjacent water rights, an adjustment should not be necessary for Walnut Branch.

5. Provide the following additional information in support of the request for authorization to use the bed and banks of the Guadalupe River and its tributaries for conveyance of groundwater based return flows for reuse:
 - a. USGS 7.5 minute topographic map (or equivalent map) showing the specific reach of the watercourse for which authorization is requested defined by the beginning or upstream point (discharge point) and the end or downstream point (diversion point);

A5a: Both an aerial photograph (Figure 1) and USGS map (Figure 2) were provided in the application package. Discharge points, diversion point, and river miles of relevant features appear on both figures.

- b. Latitude and longitude for the beginning and endpoints of the reach (Include coordinates in decimal degrees to six decimal places);

A5b: Latitude and longitude of the beginning (diversion point) and ending (Geronimo Creek outfall) as shown on Figures 1 and 2 and are:

Location	Latitude, degrees N	Longitude, degrees W
Diversion Point	29.551325	-97.971134
Geronimo Creek Outfall	29.541699	-97.913673

- c. Names of all watercourses which will be used to transport water within the reach;

A5c: The Guadalupe River is the only watercourse to be used to transport water.

- d. Length of the reach. Provide the distance in river miles from the discharge point to the point of diversion;

A5d: From the diversion point it is 0.78 miles downstream to the Walnut Branch outfall (discharge point) and 7.66 miles downstream to the Geronimo Creek outfall.

- e. Average estimated travel time;

A5e: Travel time is dependent on stream geometry and especially flow, so is variable. We have not conducted a dye study or performed measurements to determine the hydraulics of the stream. Lacking data, at a median flow around 500 cfs a ballpark estimate of velocity is about 0.5 ft/sec, which over 7.66 miles would yield a travel time of 22 hours.

- f. An assessment of the adequacy of the quantity and quality of the flows remaining after the proposed diversion to meet instream flow needs and bay and estuary freshwater inflow needs.

A5f: USGS gage 08169792 Guadalupe River at FM 1117 near Seguin, TX has an annual average flow of 712.24 cfs, or about 516,000 ac-ft/yr. The expected average annual diversion of 1,627 ac-ft/yr represents only 0.3% of the average flow. Also note that any increase in diversions will likely result in an increase in return flows, which would reduce this small impact further. Instream uses and bay and estuary freshwater inflow needs are unlikely to be impacted. Water quality will not be impacted.

- 6. Provide completed *Supplemental Diversion Point Information Sheet* (enclosed) for any diversion points. Include coordinates in decimal degrees to six decimal places.

A6: The existing diversion point as specified in the original water right will continue to be used. See attached form.

7. Confirm the drainage area above the existing diversion point. Staff has calculated a drainage area of 1,744.35 square miles for this point.

A7: The drainage area at USGS gage no. 29356098020999 Guadalupe River at Hwy 78 above Seguin is listed as 1733 sq. mi. That is just below Lake McQueeney and a considerable distance above the diversion point. We estimated the drainage area between that gage and the diversion point to be 44 sq. mi. for a total of 1777 sq. mi., assuming the USGS figure is correct. Using a Texas Water Development Board GIS dataset <http://www.twdb.texas.gov/mapping/gisdata.asp>, we calculated the area above the USGS gage at about 1698 sq. mi. and the total above the diversion point at about 1742 sq. mi. So there is an inconsistency between the two sources. We will accept your number of 1744.35 sq. mi.

8. Confirm the bearing and distance of the proposed discharge points from the original corner survey. Staff has calculated the bearing and distance to be:

- a. Discharge Point No. 1 - N 40°W, 6,243 feet from the SE corner of the Humphrys Branch Original Survey, Abstract No. 6 in Guadalupe County; and
- b. Discharge Point No. 2 - N 34°E, 274 feet from the SE corner of the John Sowell Original Survey, Abstract No. 35 in Guadalupe County.

A8: We accept your bearing and distance calculations.

9. Provide a current copy of the TPDES Permit No. WQ 0010277003. The permit provided with the application expired February 1, 2016.

A9: A copy of the 2016 permit for Geronimo Creek is attached.

10. Provide five years of discharge data for the Geronimo Branch and Walnut Branch facilities in electronic format (spreadsheet or database).

A10: A spreadsheet file with the data is being transmitted via email along with this letter.

Ms. Sarah Holifield
December 21, 2016
Page 5

11. Remit fees in the amount of **\$131.33** as described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.

Filing (Amendment)	\$ 100.00
Recording (\$1.25 x 1 page)	\$ 1.25
<u>Notice Fee (\$0.94 x 32)</u>	<u>\$ 30.08</u>
Total Fees	\$ 131.33
<u>Fees Received</u>	<u>\$ 0.00</u>
Fees Due	\$ 131.33

Please submit the requested information and fees by **January 11, 2017** or the application may be returned pursuant to Title 30 TAC § 281.18.

A11: The fees will be transmitted under separate cover directly from the City of Seguin.

12. Submit an accounting plan that demonstrates compliance with the terms and conditions of any authorization prior to completion of technical review. The accounting plan should demonstrate that diversions do not exceed discharges of groundwater based return flows less losses at any time. The accounting plan should include:

A12: The accounting plan will be prepared once all other requirements have been satisfactorily met and the application is declared administratively complete.

Please contact me if you have any questions, at 512-684-3189 or

[REDACTED]

Sincerely,



James L. Machin, P.E., CPESC

Attachments

cc: Emery Gallagher, City of Seguin

Supplemental Diversion Point Information Sheet

Diversion Point No. 1 (same diversion point as in original water right)_____.

- 1) Watercourse: Guadalupe River_____
- 2) Location of point of diversion at Latitude 29.551325_____°N, Longitude -97.971134_____°W,
also, bearing S 7.8°E, 4,865 feet (distance) from the southwest corner of the Humphry's Branch
Original Survey No. , Abstract No. 6_____, in
Guadalupe_____ County, Texas. **Provide Latitude and Longitude coordinates in decimal degrees,
to at least six decimal places, and indicate the method used to calculate the diversion point location.**
- 3) Location from County Seat: 1.3_____ miles in a SE_____ direction from Seguin_____,
Guadalupe_____ County, Texas.
Location from nearby town (if other than County Seat): _____ miles in a _____
direction from _____, a nearby town shown on county highway map.
- 4) Zip Code: 78155_____
- 5) The diversion will be (check (√) all appropriate boxes and if applicable, indicate whether existing or proposed):

	Existing	Proposed
Directly from stream		
From an on-channel reservoir	√	
From stream to an off-channel reservoir		
From a stream to an on-channel reservoir		
From an off-channel reservoir		
Other method (explain fully, use additional sheets if necessary)		

6) Rate of Diversion (Check (√) applicable provision):

 √ 1. Diversion Facility:

A. 5380_____ Maximum gpm (gallons per minute)

1) 8_____ Number of pumps

2) 4 turbine, 4 centrifugal_____ Type of pump

3) 1250 (1), 2700 (3), 1200 (4)_____ gpm, Pump capacity of each pump

4) Portable pump_____ Yes or √_____ No

 2. If by gravity:

A. _____ Headgate _____ Diversion Dam _____ Maximum gpm

B. _____ Other method (explain fully - use additional sheets if necessary)

7) The drainage area above the diversion point is _____ acres or 1744.35_____ square miles.



TPDES PERMIT NO.
WQ0010277003
[For TCEQ office use only - EPA I.D.
No. TX0103535]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

This is a renewal that replaces TPDES
Permit No. WQ0010277003 issued on
November 5, 2013.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

City of Seguin

whose mailing address is

205 North River Street
Seguin, Texas 78155

is authorized to treat and discharge wastes from the Geronimo Creek Wastewater Treatment
Facility, SIC Code 4952

located at 450 Seitz Road in Guadalupe County, Texas 78155

via an 18-inch pipe to Geronimo Creek at a point 290 feet upstream from the confluence of
Geronimo Creek and the Guadalupe River Below Comal River in Segment No. 1804 of the
Guadalupe River Basin at the current outfall location for Interim Phase; directly to Guadalupe
River Below Comal River in Segment No. 1804 of the Guadalupe River Basin at the proposed
downstream outfall location for Final phase

only according to effluent limitations, monitoring requirements, and other conditions set forth
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does
not grant to the permittee the right to use private or public property for conveyance of
wastewater along the discharge route described in this permit. This includes, but is not limited
to, property belonging to any individual, partnership, corporation, or other entity. Neither does
this permit authorize any invasion of personal rights nor any violation of federal, state, or local
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be
necessary to use the discharge route.

This permit shall expire at midnight, **February 1, 2020.**

ISSUED DATE: May 19, 2016


For the Commission

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through date of discharge from the new outfall location (see Attachment A), the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 2.13 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 3,000 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	20 (355)	30	45	65	Two/week	Composite
Total Suspended Solids	20 (355)	30	45	65	Two/week	Composite
<i>E. coli</i> , colony forming units or most probable number per 100 ml	126	N/A	399	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l	Daily Max mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Lethal and Sublethal Whole Effluent Toxicity (WET) limits (Parameter 22414) ² <i>Ceriodaphnia dubia</i> (7-day chronic NOEC ¹)	Report	Report	1/quarter	Composite
Lethal and Sublethal Whole Effluent Toxicity (WET) limits (Parameter 22414) ² <i>Pimephales promelas</i> (7-day chronic NOEC ¹)	Report	Report	1/quarter	Composite
Lethal and Sublethal Whole Effluent Toxicity (WET) limits 53% (Parameter 22414) ² <i>Ceriodaphnia dubia</i> (7-day chronic NOEC ¹)	53%	53%	1/quarter	Composite
Lethal and Sublethal Whole Effluent Toxicity (WET) limits 53% (Parameter 22414) ² <i>Pimephales promelas</i> (7-day chronic NOEC ¹)	53%	53%	1/quarter	Composite

¹ The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. A significant effect is defined as a statistically significant difference between a specified effluent dilution and the control for toxicity (lethal or sublethal effects, whichever is specified).

² The WET limits become effective on September 5, 2016.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of discharge from the new outfall location (see Attachment A) and lasting through date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 2.13 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 3,000 gpm.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	20 (355)	30	45	65	Two/week	Composite
Total Suspended Solids	20 (355)	30	45	65	Two/week	Composite
<i>E. coli</i> , colony forming units or most probable number per 100 ml	126	N/A	399	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 2.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
 - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the n th root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
 - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
 - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved self-report form that is signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period

of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

- c. Records of monitoring activities shall include the following:
 - i. date, time and place of sample or measurement;
 - ii. identity of individual who collected the sample or made the measurement.
 - iii. date and time of analysis;
 - iv. identity of the individual and laboratory who performed the analysis;
 - v. the technique or method of analysis; and
 - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
 - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
 - i. Unauthorized discharges as defined in Permit Condition 2(g).
 - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
 - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
 - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
 - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

- i. One hundred micrograms per liter (100 µg/L);
 - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. Five hundred micrograms per liter (500 µg/L);
 - ii. One milligram per liter (1 mg/L) for antimony;
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
 - iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:
 - a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
 - c. For the purpose of this paragraph, adequate notice shall include information on:
 - i. The quality and quantity of effluent introduced into the POTW; and
 - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
 - i. Violation of any terms or conditions of this permit;
 - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.

- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
 - i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).
3. Inspections and Entry
- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
 - b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.
4. Permit Amendment and/or Renewal
- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or

- ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;
 - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
 - c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
 - d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
 - e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
 - f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
 - i. the permittee;
 - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
 - iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
 - i. the name of the permittee and the permit number(s);
 - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
 - iii. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
 - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
 - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).
7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not

confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
 - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 169) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
 - c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and

related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any than existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
 - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
 - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
 - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Environmental Cleanup Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
 - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
 - e. The term “industrial solid waste management unit” means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
 - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
 - i. Volume of waste and date(s) generated from treatment process;
 - ii. Volume of waste disposed of on-site or shipped off-site;

- iii. Date(s) of disposal;
- iv. Identity of hauler or transporter;
- v. Location of disposal site; and
- vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

- 12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

TCEQ Revision 08/2008

SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site or co-disposal landfill. **The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A or Class AB Sewage Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

B. Testing Requirements

1. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 13) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 13) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> (Milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B pathogen requirements.

- a. For sewage sludge to be classified as Class A with respect to pathogens, the density of fecal coliform in the sewage sludge be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB with respect to pathogens, the density of fecal coliform in the sewage sludge be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB sewage sludge may be classified a Class A sewage sludge if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Sewage sludge shall be injected below the surface of the land.
 - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
 - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10 -
- i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
 - ii. When sewage sludge that is incorporated into the soil is Class A or Class AB with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test - annually
 PCBs - annually

All metal constituents and fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) *The amount of bulk sewage sludge applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

*Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
 - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
 - a. The location, by street address, and specific latitude and longitude, of each land application site.
 - b. The approximate time period bulk sewage sludge will be applied to the site.
 - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

E. Record keeping Requirements

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at

the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B sludge, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
 - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
 - b. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
 - c. The number of acres in each site on which bulk sludge is applied.
 - d. The date and time sludge is applied to each site.

- e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
- f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 13) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. that applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
11. Level of pathogen reduction achieved (Class A, Class AB or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.
16. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.

17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
 - a. The location, by street address, and specific latitude and longitude.
 - b. The number of acres in each site on which bulk sewage sludge is applied.
 - c. The date and time bulk sewage sludge is applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
 - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE
DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.
- D. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 13) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 13) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 13) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION IV. REQUIREMENTS APPLYING TO SLUDGE TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

These provisions apply to sludge that is transported to another wastewater treatment facility or facility that further processes sludge. These provisions are intended to allow transport of sludge to facilities that have been authorized to accept sludge. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge, nor do they limit the ability of the receiving facility to request additional testing or documentation.

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge may only be transported using a registered transporter or using an approved pipeline.

B. Record Keeping Requirements

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
 - a. the amount of sludge transported;
 - b. the date of transport;
 - c. the name and TCEQ permit number of the receiving facility or facilities;
 - d. the location of the receiving facility or facilities;
 - e. the name and TCEQ permit number of the facility that generated the waste; and
 - f. copy of the written agreement between the permittee and the receiving facility to accept sludge.
2. For sludge transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 13) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year:

1. the annual sludge production;
2. the amount of sludge transported;
3. the owner of each receiving facility;
4. the location of each receiving facility; and
5. the date(s) of disposal at each receiving facility.

TCEQ Revision 6/2015

OTHER REQUIREMENTS

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and, in particular, 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category B facility must be operated by a chief operator or an operator holding a Category B license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as 300 feet downstream and 100 feet upstream from the point of discharge.
4. The permittee is hereby placed on notice that this permit may be reviewed by the TCEQ after the completion of any new intensive water quality survey on Segment No. 1804 of the Guadalupe River Basin and any subsequent updating of the water quality model for Segment No. 1804 to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC § 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TCEQ Continuing Planning Process.
5. The Outfalls authorized by this permit are shown in Attachment A as "OUTFALL LOCATION".
6. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as 300 feet downstream and 100 feet upstream from the point of discharge.
7. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
8. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
9. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director

finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, 1/week may be reduced to 2/month in the Interim phase and Final phase. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

10. The permittee shall notify the TCEQ Regional Office (MC Region 13) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five (45) days prior to the completion of the new location of Outfall 001 on Notification of Completion Form 20007.
11. The permittee shall comply with the Whole Effluent Toxicity (WET) limits on page 2a starting September 5, 2016.

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The permittee shall operate an industrial pretreatment program in accordance with Sections 402(b)(8) and (9) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403), and the approved **City of Seguin** POTW pretreatment program submitted by the permittee. The pretreatment program was approved on **May 21, 2002**, modified on **April 29, 2010** to add a waste hauler program, and on **June 17, 2011** (Streamlining Rule nonsubstantial modification).

The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

- a. Industrial user (IU) information shall be kept current according to 40 CFR § 403.8(f)(2)(i) and (ii) and updated at a frequency set forth in the approved pretreatment program to reflect the accurate characterization of all IUs;
- b. The frequency and nature of IU compliance monitoring activities by the permittee shall be consistent with the approved POTW pretreatment program and commensurate with the character, consistency, and volume of waste. The permittee is required to inspect and sample the effluent from each significant industrial user (SIU) at least once per year, except as specified in 40 CFR § 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;
- c. The permittee shall enforce and obtain remedies for IU noncompliance with applicable pretreatment standards and requirements and the approved POTW pretreatment program;
- d. The permittee shall control through permit, order, or similar means, the contribution to the POTW by each IU to ensure compliance with applicable pretreatment standards and requirements and the approved POTW pretreatment program. In the case of SIUs (identified as significant under 40 CFR § 403.3(v)), this control shall be achieved through individual permits or general control mechanisms, in accordance with 40 CFR § 403.8(f)(1)(iii).

Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:

- (1) Statement of duration (in no case more than five years);
- (2) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
- (3) Effluent limits, which may include enforceable best management practices (BMPs), based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and State and local law;
- (4) Self-monitoring, sampling, reporting, notification and record keeping requirements, identification of the pollutants to be monitored (including, if applicable, the process for seeking a waiver for a pollutant neither present nor expected to be present in the IU's discharge in accordance with 40 CFR §403.12(e)(2), or a specific waived pollutant in the case of an individual control mechanism), sampling location, sampling frequency, and sample type, based on the applicable general pretreatment standards in 40 CFR Part 403, categorical pretreatment standards, local limits, and State and local law;

- (5) Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and
 - (6) Requirements to control slug discharges, if determined by the POTW to be necessary.
- e. For those IUs who are covered by a general control mechanism, in order to implement 40 CFR § 403.8(f)(1)(iii)(A)(2), a monitoring waiver for a pollutant neither present nor expected to be present in the IU's discharge is not effective in the general control mechanism until after the POTW has provided written notice to the SIU that such a waiver request has been granted in accordance with 40 CFR § 403.12(e)(2);
 - f. The permittee shall evaluate whether each SIU needs a plan or other action to control slug discharges, in accordance with 40 CFR § 403.8(f)(2)(vi). If the POTW decides that a slug control plan is needed, the plan shall contain at least the minimum elements required in 40 CFR § 403.8(f)(2)(vi);
 - g. The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and
 - h. The approved program shall not be modified by the permittee without the prior approval of the Executive Director, according to 40 CFR § 403.18.
2. The permittee is under a continuing duty to establish and enforce specific local limits to implement the provisions of 40 CFR § 403.5, develop and enforce local limits as necessary, and modify the approved pretreatment program as necessary to comply with federal, state, and local law, as amended. The permittee may develop BMPs to implement 40 CFR § 403.5(c)(1) and (2). Such BMPs shall be considered local limits and pretreatment standards. The permittee is required to effectively enforce such limits and to modify its pretreatment program, including the Legal Authority, Enforcement Response Plan, and Standard Operating Procedures (including forms), if required by the Executive Director to reflect changing conditions at the POTW. Substantial modifications will be approved in accordance with 40 CFR § 403.18, and modifications will become effective upon approval by the Executive Director in accordance with 40 CFR § 403.18.

The permittee submitted to the TCEQ on April 29, 2011, and amendments on May 27, 2011, a substantial modification to its approved pretreatment program revising the existing technically based local limits (TBLLs). On May 21, 2014, the TCEQ received a written notice from the permittee with an estimated construction date for the proposed downstream outfall location for the Geronimo Creek WWTP and confirming which portion of the original TBLLs package be reviewed by the TCEQ. The estimated construction date was delayed, and the updated timeframe was submitted to the TCEQ on November 9, 2015. The Executive Director is currently finalizing the technical review of this substantial modification.

If after review of the substantial modification submission, the Executive Director determines that the submission does not comply with applicable requirements, including 40 CFR §§ 403.8 and 403.9, the Executive Director will notify the permittee. According to 40 CFR § 403.11(c), the notification will include suggested modifications to bring the substantial modification submission into compliance with applicable requirements, including 40 CFR §§ 403.8(b) and (f) and 403.9(b). In such a case, revised information will be necessary for the

Executive Director to make a determination on whether to approve or deny the permittee's substantial modification submission.

Upon approval by the Executive Director of the substantial modification to this approved POTW pretreatment program, the requirement to develop and enforce specific prohibitions and/or limits to implement the prohibitions and limits set forth in 40 CFR § 403.5(a)(1), (b), (c)(1) and (3), and (d) is a condition of this permit. The specific prohibitions set out in 40 CFR §403.5(b) shall be enforced by the permittee unless modified under this provision.

3. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in the Texas Surface Water Quality Standards [30 TAC Chapter 307], and in 40 CFR Part 122, Appendix D, Table II at least **once per twelve months** and the toxic pollutants listed in 40 CFR Part 122, Appendix D, Table III at least **once per six months**. If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in 40 CFR Part 122, Appendix D, Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least **once per six months** on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24-hour period and composited according to flow. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR Part 136, as amended; as approved by the EPA through the application for alternate test procedures; or as suggested in Tables E-1 and E-2 of the *Procedures to Implement the Texas Surface Water Quality Standards* (RG-194), June 2010, as amended and adopted by the TCEQ. The effluent samples shall be analyzed to the minimum analytical level (MAL). Where composite samples are inappropriate due to sampling, holding time, or analytical constraints, at least four (4) grab samples shall be taken at equal intervals over a representative 24-hour period.

4. The permittee shall prepare annually a list of IUs which, during the preceding twelve (12) months, were in significant noncompliance (SNC) with applicable pretreatment requirements. For the purposes of this section of the permit, "CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS," SNC shall be determined based upon the more stringent of either criteria established at 40 CFR § 403.8(f)(2)(viii) [rev. 10/14/05] or criteria established in the approved POTW pretreatment program. This list is to be published annually during the month of **May** in a newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW.

In addition, each **May** the permittee shall submit an updated pretreatment program annual status report, in accordance with 40 CFR §§ 403.12(i) and (m), to the TCEQ Stormwater & Pretreatment Team (MC148) of the Water Quality Division. The report summary shall be submitted on the Pretreatment Performance Summary (PPS) form [TCEQ-20218]. The report shall contain the following information as well as the information on the tables in this section:

- a. An updated list of all regulated IUs as indicated in this section. For each listed IU, the following information shall be included:
 - (1) Standard Industrial Classification (SIC) or North American Industry

Classification System (NAICS) code *and* categorical determination.

- (2) If the pretreatment program has been modified and approved to incorporate reduced monitoring for any of the categorical IUs as provided by 40 CFR Part 403 [rev. 10/14/05], then the list must also identify:
 - categorical IUs subject to the conditions for reduced monitoring and reporting requirements under 40 CFR § 403.12(e)(1) and (3);
 - those IUs that are non-significant categorical industrial users (NSCIUs) under 40 CFR § 403.3(v)(2); and
 - those IUs that are middle tier categorical industrial users (MTCIUs) under 40 CFR § 403.12(e)(3).
 - (3) Control mechanism status.
 - Indicate whether the IU has an effective individual or general control mechanism, and the date such control mechanism was last issued, reissued, or modified;
 - Indicate which IUs were added to the system, or newly identified, during the pretreatment year reporting period;
 - Include the type of general control mechanisms; and
 - Report all NSCIU annual evaluations performed, as applicable.
 - (4) A summary of all compliance monitoring activities performed by the POTW during the pretreatment year reporting period. The following information shall be reported:
 - Total number of inspections performed; and
 - Total number of sampling events conducted.
 - (5) Status of IU compliance with effluent limitations, reporting, and narrative standard (which may include enforceable BMPs, narrative limits, and/or operational standards) requirements. Compliance status shall be defined as follows:
 - Compliant (C) - no violations during the pretreatment year reporting period;
 - Non-compliant (NC) - one or more violations during the pretreatment year reporting period but does not meet the criteria for SNC; and
 - Significant Noncompliance (SNC) - in accordance with requirements described above in this section.
 - (6) For noncompliant IUs, indicate the nature of the violations, the type and number of actions taken (notice of violation, administrative order, criminal or civil suit, fines or penalties collected, etc.) and the current compliance status. If any IU was on a schedule to attain compliance with effluent limits or narrative standards, indicate the date the schedule was issued and the date compliance is to be attained.
- b. A list of each IU whose authorization to discharge was terminated or revoked during the pretreatment year reporting period and the reason for termination.

- c. A report on any interference, pass through, upset, or POTW permit violations known or suspected to be caused by IUs and response actions taken by the permittee.
 - d. The results of all influent and effluent analyses performed pursuant to Item 3 of this section.
 - e. An original newspaper public notice, or copy of the newspaper publication with official affidavit, of the list of IUs that meet the criteria of SNC, giving the name of the newspaper and date the list was published.
 - f. The daily average water quality based effluent concentrations (from the TCEQ's Texas Toxicity Modeling Program (TexTox)) necessary to attain the Texas Surface Water Quality Standards, 30 TAC Chapter 307, in water in the state.
 - g. The maximum allowable headworks loading (MAHL) in pounds per day (lb/day) of the approved TBLLs or for each pollutant of concern (POC) for which the permittee has calculated a MAHL. In addition, the influent loading as a percent of the MAHL, using the annual average flow of the wastewater treatment plant in million gallons per day (MGD) during the pretreatment year reporting period, for each pollutant that has an adopted TBLL or for each POC for which the permittee has calculated a MAHL. (*See Endnotes No. 2 at the end of this section for the influent loading as a percent of the MAHL equation.*)
 - h. The permittee may submit the updated pretreatment program annual status report information in tabular form using the example table format provided. Please attach, on a separate sheet, explanations to document the various pretreatment activities, including IU permits that have expired, BMP violations, and any sampling events that were not conducted by the permittee as required.
 - i. A summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority.
5. The permittee shall provide adequate written notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days of the permittee's knowledge of the following:
- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if the indirect discharger was directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Adequate notice shall include information on the quality and quantity of effluent to be introduced into the treatment works, and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised March 2014

TPDES Pretreatment Program Annual Report Form for Updated Industrial Users List

Reporting month/year: _____, _____ to _____, _____

TPDES Permit No.: _____ Permittee: _____ Treatment Plant: _____

PRETREATMENT PROGRAM STATUS REPORT UPDATED INDUSTRIAL USERS ¹ LIST																
Industrial User Name	SIC or NAICS Code	CIU ²	CONTROL MECHANISM				New User ³ (Y or N)	Times Inspected by the CA	Times Sampled by the CA	COMPLIANCE STATUS During the Pretreatment Year Reporting Period ⁴ (C = Compliant, NC = Noncompliant, SNC= Significant Noncompliance)						
			Y/N or NR ⁵	IND or GEN or NR	Last Action ⁶	TBLLs or TBLLs only ⁷				REPORTS				NSCIU Certifications	Effluent Limits	Narrative Standards
										BMR	90-Day	Semi-Annual	Self-Monitoring ⁸			

- 1 Include all significant industrial users (SIUs), non-significant categorical industrial users (NSCIUs) as defined in 40 CFR § 403.3(v)(2), and/or middle tier categorical industrial users (MTCIUs) as defined in 40 CFR § 403.12(e)(3). Please do not include non-significant noncategorical IUs that are covered under best management practices (BMPs) or general control mechanisms.
- 2 Categorical determination (include 40 CFR citation and NSCIU or MTCIU status, if applicable).
- 3 Indicate whether the IU is a new user. If the answer is No or N, then indicate the expiration date of the last issued IU permit.
- 4 The term SNC applies to a broader range of violations, such as daily maximum, long-term average, instantaneous limits, and narrative standards (which may include enforceable BMPs, narrative limits and/or operational standards). Any other violation, or group of violations, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment Program now includes BMP violations (40 CFR § 403.8(f)(2)(viii)(H)).
- 5 Code NR= None required (NSCIUs only); IND = individual control mechanism; GEN = general control mechanism. Include as a footnote (or on a separate page) the name of the general control mechanism used for similar groups of IUs, identify the similar types of operations and types of wastes that are the same for each general control mechanism. Any BMPs through general control mechanisms that are applied to nonsignificant IUs need to be reported separately, e.g. the sector type and BMP description.
- 6 Permit or NSCIU evaluations as applicable.
- 7 According to 40 CFR § 403.12(i)(1), indicate whether the IU is subject to technically based local limits (TBLLs) that are more stringent than categorical pretreatment standards, e.g. where there is one end-of-pipe sampling point at a CIU, and you have determined that the TBLLs are more stringent than the categorical pretreatment standards for any pollutant at the end-of-pipe sampling point; **OR** the IU is subject only to local limits (TBLLs only), e.g. the IU is a non-categorical SIU subject only to TBLLs at the end-of-pipe sampling point.
- 8 For those IUs where a monitoring waiver has been granted, please add the code "W" (after either C, NC, or SNC codes) and indicate the pollutant(s) for which the waiver has been granted.

**TPDES Pretreatment Program Annual Report Form for
Industrial User Inventory Modifications**

Reporting month/year: _____, _____ to _____, _____

TPDES Permit No: _____ Permittee: _____ Treatment Plant: _____

INDUSTRIAL USER INVENTORY MODIFICATIONS					
FACILITY NAME, ADDRESS AND CONTACT PERSON	ADD, CHANGE, DELETE (Including categorical reclassification to NSCIU or MTCIU)	IF DELETION: Reason For Deletion	IF ADDITION OR SIGNIFICANT CHANGE:		
			PROCESS DESCRIPTION	POLLUTANTS (Including any sampling waiver given for each pollutant not present)	FLOW RATE ⁹ (In gpd) R = Regulated U = Unregulated T = Total

9 For NSCIUs, total flow must be given, if regulated flow is not determined.

TPDES Pretreatment Program Annual Report Form for Enforcement Actions Taken

Reporting month/year: _____, _____ to _____, _____

TPDES Permit No: _____ Permittee: _____ Treatment Plant: _____

Overall SNC ____% SNC ¹⁰ based on: Effluent Violations ____%
 Reporting Violations ____% Narrative Standard Violations ____%

Noncompliant Industrial Users - Enforcement Actions Taken															
Industrial User Name	Nature of Violation ¹¹				Number of Actions Taken					Penalties Collected (Do not include Surcharge)	Compliance Schedule			Current Status Returned to Compliance: (Y or N)	Comments
	Effluent Limits	Reports	NSCIU Certifications	Narrative Standards	NOV	A.O.	Civil	Criminal	Other		Y or N	Date Issued	Date Due		

¹⁰ # %
 ___ ___ Pretreatment Standards [WENDB-PSNC] (Local Limits/Categorical Standards)
 ___ ___ Reporting Requirements [WENDB-PSNC]
 ___ ___ Narrative Standards

¹¹ Please specify a separate number for each type of violation, e.g. report, notification, and/or NSCIU certification.

**TPDES Pretreatment Program Annual Report Form for
Influent and Effluent Monitoring Results¹**

Reporting month/year: _____, _____ to _____, _____

TPDES Permit No.: _____ Permittee: _____ Treatment Plant: _____

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
METALS, CYANIDE AND PHENOLS											
Antimony, Total											
Arsenic, Total											
Beryllium, Total											
Cadmium, Total											
Chromium, Total											
Chromium (Hex)											
Chromium (Tri) ⁵											
Copper, Total											
Lead, Total											
Mercury, Total											
Nickel, Total											
Selenium, Total											
Silver, Total											
Thallium, Total											
Zinc, Total											
Cyanide, Available ⁶											
Cyanide, Total											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Phenols, Total											
VOLATILE COMPOUNDS											
Acrolein											
Acrylonitrile											
Benzene											
Bromoform							See TTHM				
Carbon Tetrachloride											
Chlorobenzene											
Chlorodibromomethane							See TTHM				
Chloroethane											
2-Chloroethylvinyl Ether											
Chloroform							See TTHM				
Dichlorobromomethane							See TTHM				
1,1-Dichloroethane											
1,2-Dichloroethane											
1,1-Dichloroethylene											
1,2-Dichloropropane											
1,3-Dichloropropylene											
Ethyl benzene											
Methyl Bromide											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Methyl Chloride											
Methylene Chloride											
1,1,2,2-Tetra-chloroethane											
Tetrachloroethylene											
Toluene											
1,2-Trans-Dichloroethylene											
1,1,1-Trichloroethane											
1,1,2-Trichloroethane											
Trichloroethylene											
Vinyl Chloride											
ACID COMPOUNDS											
2-Chlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
4,6-Dinitro-o-Cresol											
2,4-Dinitrophenol											
2-Nitrophenol											
4-Nitrophenol											
P-Chloro-m-Cresol											
Pentachlorophenol											
Phenol											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
2,4,6-Trichlorophenol											
BASE/NEUTRAL COMPOUNDS											
Acenaphthene											
Acenaphthylene											
Anthracene											
Benzidine											
Benzo(a)Anthracene											
Benzo(a)Pyrene											
3,4-Benzofluoranthene											
Benzo(ghi)Perylene											
Benzo(k)Fluoranthene											
Bis(2-Chloroethoxy)Methane											
Bis(2-Chloroethyl)Ether											
Bis(2-Chloroisopropyl)Ether											
Bis(2-Ethylhexyl)Phthalate											
4-Bromophenyl Phenyl Ether											
Butylbenzyl Phthalate											
2-Chloronaphthalene											
4-Chlorophenyl Phenyl Ether											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Chrysene											
Dibenzo(a,h)Anthracene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
3,3-Dichlorobenzidine											
Diethyl Phthalate											
Dimethyl Phthalate											
Di-n-Butyl Phthalate											
2,4-Dinitrotoluene											
2,6-Dinitrotoluene											
Di-n-Octyl Phthalate											
1,2-Diphenyl Hydrazine											
Fluoranthene											
Fluorene											
Hexachlorobenzene											
Hexachlorobutadiene											
Hexachloro-cyclopentadiene											
Hexachloroethane											
Indeno(1,2,3-cd)pyrene											
Isophorone											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Naphthalene											
Nitrobenzene											
N-Nitrosodimethylamine											
N-Nitrosodi-n-Propylamine											
N-Nitrosodiphenylamine											
Phenanthrene											
Pyrene											
1,2,4-Trichlorobenzene											
PESTICIDES											
Aldrin											
Alpha-hexachlorocyclohexane (BHC)											
beta-BHC											
gamma-BHC (Lindane)											
delta-BHC											
Chlordane											
4,4-DDT											
4,4-DDE											
4,4-DDD											
Dieldrin											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
alpha-Endosulfan											
beta-Endosulfan											
Endosulfan Sulfate											
Endrin											
Endrin Aldehyde											
Heptachlor											
Heptachlor Epoxide											
Polychlorinated biphenols (PCBs) <i>The sum of PCB concentrations not to exceed daily average value.</i>											
PCB-1242							See PCBs				
PCB-1254							See PCBs				
PCB-1221							See PCBs				
PCB-1232							See PCBs				
PCB-1248							See PCBs				
PCB-1260							See PCBs				
PCB-1016							See PCBs				
Toxaphene											
ADDITIONAL TOXIC POLLUTANTS REGULATED UNDER 30 TAC CHAPTER 307											
Aluminum											
Barium											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Bis(chloromethyl) ether ⁷											
Carbaryl											
Chloropyrifos											
Cresols											
2,4-D											
Danitol ⁸											
Demeton											
Diazinon											
Dicofol											
Dioxin/Furans ⁹											
Diuron											
Fluoride											
Guthion											
Hexachlorophene											
Malathion											
Methoxychlor											
Methyl Ethyl Ketone											
Mirex											
Nitrate-Nitrogen											
N-Nitrosodiethylamine											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
N-Nitroso-di-n-Butylamine											
Nonylphenol											
Parathion											
Pentachlorobenzene											
Pyridine											
1,2-Dibromoethane											
1,2,4,5-Tetrachlorobenzene											
2,4,5-TP (Silvex)											
Tributyltin ⁹											
2,4,5-Trichlorophenol											
TTHM (Total Trihalomethanes)											

Endnotes:

1. It is advised that the permittee collect the influent and effluent samples considering flow detention time through each wastewater treatment plant (WWTP).
2. The MAHL of the approved TBLLs or for each pollutant of concern (POC) for which the permittee has calculated a MAHL. Only complete the column labeled "Average Influent % of the MAHL" as a percentage, for pollutants that have approved TBLLs or for each POC for which the permittee has calculated a MAHL (U.S. Environmental Protection Agency *Local Limits Development Guidance*, July 2004, EPA933-R-04-002A).

The % of the MAHL is to be calculated using the following formulas:

Equation A: $L_{INF} = (C_{POLL} \times Q_{WWTP} \times 8.34) / 1000$

Equation B: $L_{\%} = (L_{INF} / MAHL) \times 100$

Where:

- L_{INF} = Current Average (Avg) influent loading in lb/day
- C_{POLL} = Avg concentration in µg/L of all influent samples collected during the pretreatment year.
- Q_{WWTP} = Annual average flow of the WWTP in MGD, defined as the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months (or during the pretreatment year), and as described in the Definitions and Standard Permit Conditions section.
- $L_{\%}$ = % of the MAHL
- MAHL = Calculated MAHL in lb/day
- 8.34 = Unit conversion factor

3. Daily average effluent limit (metal values are for total metals) as derived by the Texas Toxicity Modeling Program (TexTox). Effluent limits as calculated are designed to be protective of the Texas Surface Water Quality Standards. The permittee shall determine and indicate which effluent limit is the most stringent between the 30 TAC Chapter 319, Subchapter B (Hazardous Metals), TexTox values, or any applicable limit in the Effluent Limitations and Monitoring Requirements Section of this permit. Shaded blocks need not be filled in unless the permittee has received a permit requirement/limit for the particular parameter.
4. Minimum analytical levels (MALs) and analytical methods as suggested in Tables E-1 and E-2 of the *Procedures to Implement the Texas Surface Water Quality Standards (June 2010)*, as amended and adopted by the TCEQ. Pollutants that are not detectable above the MAL need to be reported as less than (<) the MAL numeric value.
5. Report result by subtracting Hexavalent Chromium from Total Chromium.
6. Either the method for Amenable to Chlorination or Weak-Acid Dissociable is authorized.
7. Hydrolyzes in water. Will not require permittee to analyze at this time.
8. EPA procedure not approved. Will not require permittee to analyze at this time.
9. Analyses are not required at this time for these pollutants unless there is reason to believe that these pollutants may be present.

BIOMONITORING REQUIREMENTS

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 (interim phase) for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
 - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
 - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations (interim phase) and a control in each toxicity test. These effluent dilution concentrations are 22%, 30%, 40%, 53%, and 71% effluent. The critical dilution, defined as 53% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a sublethal WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity to the fathead minnow. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. The lethal and sublethal No Observed Effect Concentration (NOEC) effluent limitation of not less than 53% (see the EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS section) are effective on 9/5/16 for both test

species.

- f. If either test species fails to pass the lethal or sublethal endpoint at the 53% effluent concentration after 9/5/16, the testing frequency will increase to monthly until such time compliance with the NOEC effluent limitation is demonstrated for a period of three consecutive months, at which time the quarterly testing frequency may be resumed.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
 - 1) a control mean survival of 53% or greater;
 - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
 - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
 - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
 - 5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
 - 6) a percent minimum significant difference of 47 or less for water flea reproduction; and
 - 7) a percent minimum significant difference of 30 or less for fathead minnow growth.
- b. Statistical Interpretation
 - 1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in in Part 1.b.
 - 2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.
 - 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and

reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.

- 4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 53% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.
- 6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.
- 7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.
- 8) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:
 - a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or

- b) use the closest downstream perennial water unaffected by the discharge.
 - 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
 - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days); and
 - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
 - 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- d. Samples and Composites
 - 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
 - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
 - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
 - 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

- 5) The effluent samples shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
 - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
 - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
 - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For the water flea, Parameter TOP3B, report the NOEC for survival.
 - 3) For the water flea, Parameter TXP3B, report the LOEC for survival.
 - 4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."
 - 5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.
 - 6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.
 - 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.

- 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
 - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
 - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
 - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.
- d. Enter the following codes for fathead minnow retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
- e. The permittee shall report the sublethal and lethal WET values for the 30-day average and the 7-day minimum under Parameter No. 22414 for the appropriate reporting period for the water flea. If more than one valid test was performed during the reporting period, the NOECs will be averaged arithmetically and reported as the daily average NOEC. The data submitted should reflect the lowest sublethal and lethal test results during the reporting period.

TABLE 1 (SHEET 1 OF 4)
 BIOMONITORING REPORTING
 CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	22%	30%	40%	53%	71%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (53%): _____ YES _____ NO

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	22%	30%	40%	53%	71%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (53%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a.) NOEC survival = _____% effluent
- b.) LOEC survival = _____% effluent
- c.) NOEC reproduction = _____% effluent
- d.) LOEC reproduction = _____% effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times
Composites
Collected

No. 1 FROM: _____ Date Time _____ TO: _____ Date Time _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
22%							
30%							
40%							
53%							
71%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (53%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)
 BIOMONITORING REPORTING
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST
 FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
22%									
30%									
40%									
53%									
71%									

* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (53%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = _____% effluent

b.) LOEC survival = _____% effluent

c.) NOEC growth = _____% effluent

d.) LOEC growth = _____% effluent

48-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 (final phase) for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update
 - 1) Acute static renewal 48-hour definitive toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.
 - 2) Acute static renewal 48-hour definitive toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and submit a valid test for each test species during the required reporting period for that species. A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution. A repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 5%, 8%, 10%, 13%, and 17% effluent. The critical dilution, defined as 13% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction
 - 1) If none of the first four consecutive quarterly tests demonstrates

significant lethal effects, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

- 2) If one or more of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant lethal effects, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:

- 1) a control mean survival of 90% or greater; and
- 2) a coefficient of variation percent (CV%) of 40 or less for both the control and critical dilution. However, if significant lethality is demonstrated, a CV% greater than 40 shall not invalidate the test. The CV% requirement does not apply when significant lethality occurs.

- b. Statistical Interpretation

- 1) For the water flea and fathead minnow tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.
- 2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 90% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 4) The NOEC is defined as the greatest effluent dilution at which no significant lethality is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference between the survival of the test

organism in a specified effluent dilution when compared to the survival of the test organism in the control.

- 5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 2.
- 6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 2 will be used when making a determination of test acceptability.
- 7) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:
 - a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
 - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
 - b) the test indicating receiving water toxicity was carried out to completion; and
 - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.

- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

- 1) The permittee shall collect a minimum of two composite samples from Outfall 001. The second composite sample will be used for the renewal of the dilution concentrations for each toxicity test.
- 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for the subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
- 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.
- 5) The effluent samples shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
 - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.

- 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
 - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter TEM3D, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For the water flea, Parameter TOM3D, report the NOEC for survival.
 - 3) For the water flea, Parameter TXM3D, report the LOEC for survival.
 - 4) For the fathead minnow, Parameter TEM6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 5) For the fathead minnow, Parameter TOM6C, report the NOEC for survival.
 - 6) For the fathead minnow, Parameter TXM6C, report the LOEC for survival.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this part apply only when a toxicity test demonstrates significant lethality. Significant lethality was defined in Part 2.b.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates significant lethality. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant

lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

- c. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
 - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
 - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

- 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
 - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical specific analyses for the identified and suspected pollutant performed during the quarter;
 - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
 - 3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;
 - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
 - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
 - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE activities report shall also be submitted to the U.S. EPA Region 6 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality. i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.
This provision accommodates situations where operational errors and upsets,

spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond their control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.
- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

TABLE 1 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

Dates and Times Composites Collected No. 1 FROM: _____ Date Time TO: _____ Date Time
 No. 2 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date
 Dilution water used: _____ Receiving water _____ Synthetic Dilution water

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	5%	8%	10%	13%	17%
24h	A						
	B						
	C						
	D						
	E						
48h	A						
	B						
	C						
	D						
	E						
Mean at test end							
CV%*							

*Coefficient of Variation = Standard Deviation x 100/mean

Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 48 hours significantly less than the control survival?

CRITICAL DILUTION (13%): _____ YES _____ NO

Enter percent effluent corresponding to the NOEC below:

1) NOEC survival = _____% effluent

2) LOEC survival = _____% effluent

TABLE 1 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

Dates and Times Composites Collected No. 1 FROM: _____ Date Time _____ TO: _____ Date Time _____
 No. 2 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	5%	8%	10%	13%	17%
24h	A						
	B						
	C						
	D						
	E						
48h	A						
	B						
	C						
	D						
	E						
Mean at test end							
CV%*							

* Coefficient of Variation = standard deviation x 100/mean

Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 48 hours significantly less than the control survival?

CRITICAL DILUTION (13%): _____ YES _____ NO

Enter percent effluent corresponding to the NOEC below:

1) NOEC survival = _____ % effluent

2) LOEC survival = _____ % effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to both Interim and Final phase Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:
 - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
 - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

2. Required Toxicity Testing Conditions

- a. Test Acceptance – The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

- c. Samples and Composites
- 1) The permittee shall collect one composite sample from Outfall 001.
 - 2) The permittee shall collect the composite samples such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
 - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
 - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
 - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
 - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the water flea, Parameter TIE3D, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."
 - 2) For the fathead minnow, Parameter TIE6C, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if

the mean survival is less than or equal to 50%, enter "1."

- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."
 - 2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
 - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations,

- treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
- 2) **Sampling Plan** - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
 - 3) **Quality Assurance Plan** - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
 - 4) **Project Organization** - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
 - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
 - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;

- 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
- 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
- 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE activities report shall also be submitted to the U.S. EPA Region 6 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report will also specify a corrective action

schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.

- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____ % effluent

TABLE 2 (SHEET 2 OF 2)
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

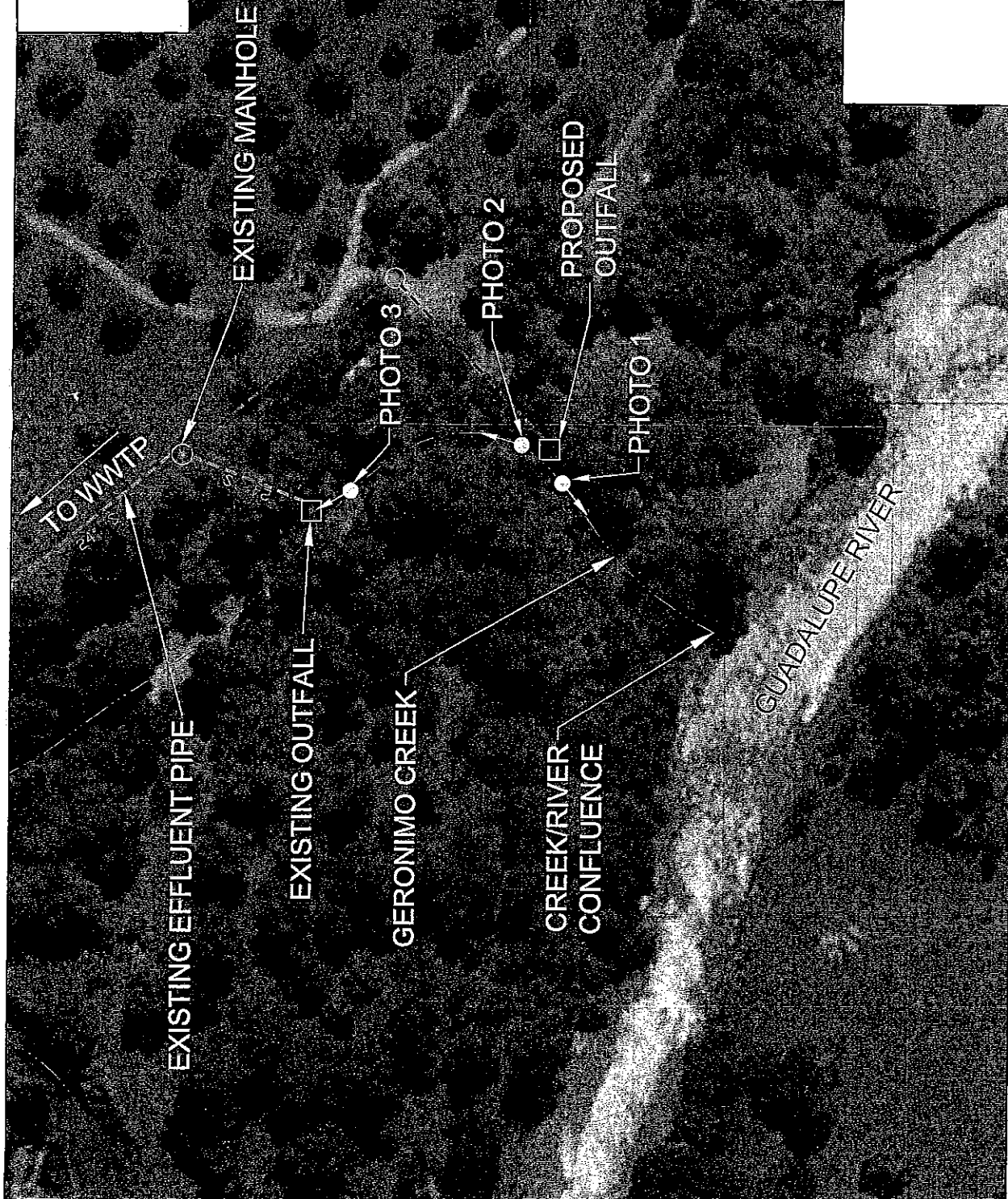
24 hour LC50 = _____% effluent

SEGUIN, TEXAS
GERONIMO CREEK WW
ORIGINAL PHOTOS
ATTACHMENT 5

SCALE: 1" = 100'



TRC ENGINEERS, INC.
505 E. HUNTLAND DRIVE, STE. 250 AUSTIN, TX
78752 T.B.P.E. FIRM REGISTRATION # F-2632
(512) 454 - 8716



City of Seguin
TPDES Permit No. WQ0010277003

ATTACHMENT A

Geronimo Creek TPDES Permit WQ0010277003 Issued May 19, 2016

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niemann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 9, 2016

Mr. James L Machin, P.E.
TRC Solutions
505 E Huntland Dr, Suite 250
Austin, TX 78752

CERTIFIED MAIL

91 7199 9991 7033 2845 7180

RE: City of Seguin
ADJ 3839
CN600342257, RN102074192
Application No. 18-3839C to Amend Certificate of Adjudication No. 18-3839
Texas Water Code §§ 11.042, 11.122, Requiring Limited Mailed Notice
Guadalupe River, Guadalupe River Basin
Guadalupe County

Dear Mr. Machin:

This acknowledges the receipt, on March 9, 2016, of the referenced application and the amended supplemental information.

Additional information and fees are required before the application can be declared administratively complete.

1. Clarify the request for authorization to use the bed and banks of the Guadalupe River and its tributaries (Walnut Branch and Geronimo Creek) to convey groundwater based return flows for reuse. Staff notes that the requested diversion points are located upstream of the discharge locations for the return flows.
2. Clarify the volume of groundwater based return flows requested for bed and banks conveyance and diversion. On Pages 4 and 5, the volume is identified as 54% of the maximum annual discharges. However, on Page 7 of the supplement to the application, the volume is identified as 1,627 acre-feet per year.
3. Provide an estimate of the losses due to transportation, evaporation, seepage and channel or other associated carriage losses from the point of discharge to the point of diversion and the method used to calculate the losses (Title 30 Texas Administrative Code (TAC) § 295.112). Staff notes that the Guadalupe Basin WAM identifies losses within the reaches identified in the application.
4. Indicate how effects on interjacent water rights will be addressed.

5. Provide the following additional information in support of the request for authorization to use the bed and banks of the Guadalupe River and its tributaries for conveyance of groundwater based return flows for reuse:
 - a. USGS 7.5 minute topographic map (or equivalent map) showing the specific reach of the watercourse for which authorization is requested defined by the beginning or upstream point (discharge point) and the end or downstream point (diversion point);
 - b. Latitude and longitude for the beginning and endpoints of the reach (Include coordinates in decimal degrees to six decimal places);
 - c. Names of all watercourses which will be used to transport water within the reach;
 - d. Length of the reach. Provide the distance in river miles from the discharge point to the point of diversion;
 - e. Average estimated travel time; and
 - f. An assessment of the adequacy of the quantity and quality of the flows remaining after the proposed diversion to meet instream flow needs and bay and estuary freshwater inflow needs.
6. Provide completed *Supplemental Diversion Point Information Sheet* (enclosed) for any diversion points. Include coordinates in decimal degrees to six decimal places.
7. Confirm the drainage area above the existing diversion point. Staff has calculated a drainage area of 1,744.35 square miles for this point.
8. Confirm the bearing and distance of the proposed discharge points from the original corner survey. Staff has calculated the bearing and distance to be:
 - a. Discharge Point No. 1 - N 40°W, 6,243 feet from the SE corner of the Humphrys Branch Original Survey, Abstract No. 6 in Guadalupe County; and
 - b. Discharge Point No. 2 - N 34°E, 274 feet from the SE corner of the John Sowell Original Survey, Abstract No. 35 in Guadalupe County.
9. Provide a current copy of the TPDES Permit No. WQ 0010277003. The permit provided with the application expired February 1, 2016.
10. Provide five years of discharge data for the Geronimo Branch and Walnut Branch facilities in electronic format (spreadsheet or database).

11. Remit fees in the amount of **\$131.33** as described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.

Filing (Amendment)	\$ 100.00
Recording (\$1.25 x 1 page)	\$ 1.25
Notice Fee (\$0.94 x 32)	\$ 30.08
Total Fees	\$ 131.33
Fees Received	\$ 0.00
Fees Due	\$ 131.33

Please submit the requested information and fees by **January 11, 2017** or the application may be returned pursuant to Title 30 TAC § 281.18.

Note that additional information will be required before technical review of the application can be completed.

12. Submit an accounting plan that demonstrates compliance with the terms and conditions of any authorization prior to completion of technical review. The accounting plan should demonstrate that diversions do not exceed discharges of groundwater based return flows less losses at any time. The accounting plan should include:

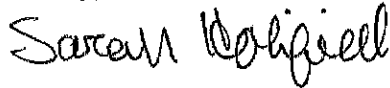
- a. A text file containing:
 - i. A detailed description of the accounting plan;
 - ii. A summary of all authorizations under the water right;
 - iii. A summary of the accounting plan;
 - iv. A narrative explanation of each worksheet, table and column (including the name and number of the column as it appears in the spreadsheet); and
 - v. The source(s) of the data, and explanations of the calculations.
- b. An Excel spreadsheet containing:
 - i. Columns to account for basic daily data, including discharges and diversions by location, discharge and diversion rates and volumes, any lag time or conveyance losses, any applicable instream flow requirements, and applicable gage-flows;
 - ii. The units actually used to measure diversions, and conversion calculations to acre-feet, cfs, and any other units used; and

City of Seguin
Application No. 18-3839C
December 9, 2016
Page 4 of 4

- iii. Running total calculations indicating the total annual authorized diversion and use in acre-feet.

If you have any questions concerning this matter please contact me via email at sarah.holifield@tceq.texas.gov or by telephone at (512) 239-4022.

Sincerely,



Sarah Holifield, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Enclosures

Supplemental Diversion Point Information Sheet

Diversion Point No. _____.

1) Watercourse: _____

2) Location of point of diversion at Latitude _____ N, Longitude _____ W, also bearing _____°, _____, _____ feet (distance) from the _____ corner of the _____ Original Survey No. _____, Abstract No. _____, in _____ County, Texas. (Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location)

3) Location from County Seat: _____ miles in a _____ direction from _____ County, Texas. Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

4) The diversion will be (check all appropriate boxes and if applicable, indicate whether existing or proposed):

	Existing	Proposed
Directly from stream		
From an on-channel reservoir		
From a stream to an off-channel reservoir		
From a stream to an on-channel reservoir		
From an off-channel reservoir		
Other method (explain fully, use additional sheets if necessary)		

5) Rate of Diversion (Check (%) applicable provision):

___ 1. Diversion Facility:

A. _____ Maximum gpm (gallons per minute)

- 1) _____ Number of pumps
- 2) _____ Type of pump
- 3) _____ gpm, Pump capacity of each pump
- 4) Portable pump _____ Yes or _ No

___ 2. If by gravity:

A. _____ Headgate _____ Diversion Dam _____ Maximum gpm

B. _____ Other method (explain fully - use additional sheets if necessary)

6) The drainage area above the diversion point is _____ acres or _____ square miles.

Melissa Carugati

From: Iliana Delgado
Sent: Tuesday, March 15, 2016 8:50 AM
To: Melissa Carugati
Cc: [REDACTED] Iliana Delgado
Subject: FW: amendment application
Attachments: SEGUIN SUPPLEMENTAL INFORMATION-revised.docx

Thank you James, it will be added to the file

From: Machin, James [REDACTED]
Sent: Wednesday, March 09, 2016 3:03 PM
To: Iliana Delgado <iliana.delgado@tceq.texas.gov>
Subject: RE: amendment application

Iliana,
I dropped it off at 11:29. However, I discovered that the wrong version of the Supplemental Information page was included (Page 7). I apologize for that. Could you please remove and replace that page with the attached version?

James L. Machin, P.E., CPESC
Senior Engineer
[REDACTED]



505 E. Huntland Dr., Suite 250, Austin, TX 78752
Off: 512.329.6080 ext. 11189 | Dir: 512.684.3189 | Fax: 512.329.8750
TBPE Firm F-3775
[LinkedIn](#) | [Twitter](#) | [Blog](#) | www.trcsolutions.com

From: Machin, James
Sent: Wednesday, March 09, 2016 8:51 AM
To: 'Iliana Delgado' <iliana.delgado@tceq.texas.gov>
Subject: RE: amendment application

Iliana,
I am coming to TCEQ late morning for a meeting. The application package is ready, so I will hand deliver it at that time. Third floor?

James L. Machin, P.E., CPESC
Senior Engineer
[REDACTED]



505 E. Huntland Dr., Suite 250, Austin, TX 78752
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TBPE Firm F-3775
[LinkedIn](#) | [Twitter](#) | [Blog](#) | www.trcsolutions.com

From: Iliana Delgado [mailto:iliana.delgado@tceq.texas.gov]
Sent: Wednesday, March 02, 2016 2:51 PM
To: Machin, James [REDACTED]
Subject: RE: amendment application

James,

Fees are detailed in Title 30 Texas Administrative Code 295, Subchapter B.
You can either calculate the fees and submit them with the application, or staff will calculate the fees upon receipt of the application and request them in an RFI.

From: Machin, James [REDACTED]
Sent: Thursday, February 25, 2016 3:09 PM
To: Iliana Delgado <iliana.delgado@tceq.texas.gov>
Subject: amendment application

Iliana,
We are almost ready with the Seguin indirect reuse application. Does any fee have to be submitted with the application?

James L. Machin, P.E., CPESC
Senior Engineer
[REDACTED]



505 E. Huntland Dr., Suite 250, Austin, TX 78752
Off: 512.329.6080 ext. 11189 | Dir: 512.684.3189 | Fax: 512.329.8750
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SEGUIN SUPPLEMENTAL INFORMATION (30 TAC 295.112 subsections indicated where appropriate)

An accounting plan will be prepared upon request from TCEQ. It is anticipated that the accounting plan will document on a daily basis the percent of groundwater used and subsequently the amount of groundwater-based effluent discharged from each WWTP. This is the amount that will be available to divert at the City's water treatment plant intake ("diversion point").

The Walnut Branch WWTP outfall is 0.78 river miles downstream of the water treatment plant diversion point. Geronimo Creek, which receives the effluent from the Geronimo Creek WWTP a short distance above the mouth, joins the Guadalupe River 7.66 miles downstream of the diversion point. There is one water right downstream of Walnut Branch and upstream of Geronimo Creek: GBRA TP-5 (water right 18-5488), which is at Nolte Island 4.81 miles downstream of the diversion point and is a hydropower right. It is recognized that this is an uncommon request, but is akin to requesting an alternate diversion point for a water right.

(b)(3): Based on 2010-2014 data, for its municipal supply, Seguin has used 52-56% groundwater on an annual basis, with an average of 54% (Table 3). Flows discharged to the Guadalupe River from Walnut Branch (does not include reuse) have averaged 1.51 MGD or 1,689 ac-ft/yr (Table 1). Flows discharged from Geronimo Creek have averaged 1.22 MGD or 1,324 ac-ft/yr (Table 2). Therefore, the total average discharge is 3,013 ac-ft/yr. Based on 54% of that being groundwater based, the average expected to be eligible for diversion in the near future is 1,627 ac-ft/yr. At this time, the plants are operating at roughly 50% of their permitted hydraulic capacity.

(b)(4): The quality of water of the discharges from the two WWTPs is regulated by the TPDES permits. Relevant permit limitations are:

- Walnut Branch: 10/15/3 (CBOD/TSS/NH3-N, mg/L)
- Geronimo Creek: 20/20 (CBOD/TSS, mg/L)

(b)(5): The Walnut Branch WWTP came on line around 1951. The Geronimo Creek WWTP came on line in 1989. The City has always used groundwater as part of its water supply, so groundwater discharges have always been a component of the wastewater discharges.

(b)(6): It is assumed that channel losses over this short reach will be negligible. There is only one intervening water right in this reach (GBRA). It is anticipated that diversions attributable to Geronimo Creek will only be allowed if there is instream flow in excess of GBRA's water right amount. If it is determined that there are significant channel losses between the diversion point and the GBRA water right location, the volume attributable to Geronimo Creek will be reduced accordingly. Since the Walnut Branch outfall is a short distance downstream of the diversion point and there are no intervening water rights, an adjustment should not be necessary for Walnut Branch.

(b)(7): USGS gage 08169792 Guadalupe Rv at FM 1117 nr Seguin, TX has an annual average flow of 712.24 cfs, or about 516,000 ac-ft/yr. The expected average annual diversion of 1,627 ac-ft/yr represents 0.3% of the average flow. Also note that any increase in diversions will likely result in an increase in return flows, which would reduce this small impact further. Instream uses and bay and estuary freshwater inflow needs are unlikely to be impacted



Texas Commission on Environmental Quality

PO Box 13087, MC-160, Austin, Texas 78711-3087
Telephone (512) 239-4691, FAX (512) 239-4770

APPLICATION FOR AMENDMENT TO A WATER RIGHT

Notice: This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol.

Customer Reference Number (if issued): CN 600342257

Note: If you do not have a Customer Reference Number, complete Section II of the Core Data Form (TCEQ-10400) and submit it with this application.

1. Name: City of Seguin
Address: P.O. Box 591, Seguin, TX 78156
Phone Number: 830-379-3212 Fax Number: _____
Email Address: [REDACTED]

2. Applicant owes fees or penalties?
 Yes No
If yes, provide the amount and the nature of the fee or penalty as well as any identifying number:

3. Permit No. _____ Certificate of Adjudication No. 18-3839B
Stream: Guadalupe River Watershed: Guadalupe River Basin
Reservoir (present condition, if one exists): Lake Seguin
County: Guadalupe

4. Proposed Changes To Water Right Authorizations:
Bed and banks authorization for indirect reuse of groundwater-based effluent (30 TAC 295.112).
See attached Supplemental Information, and aerial photo and USGS map (Figures 1 and 2).
(Attach additional page as necessary, attach map/plot depicting project location, diversion point, place of use, and other pertinent data).

5. I understand the Agency may require additional information in regard to the requested amendment before considering this application.

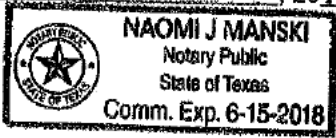
Douglas G. Faseler
Name (sign)

Name (sign)

Douglas G. Faseler, City Manager
Name (print)

Name (print)

Subscribed and sworn to me as being true and correct before me this 7th day of March, 2016.



Naomi J. Manski
Notary Public, State of Texas

9-MAR-16 PM 1:22

NOT APPLICABLE

Supplemental Diversion Point Information Sheet

Diversion Point No. _____.

1) Watercourse: _____

Location of point of diversion at Latitude _____°N, Longitude _____°W, also, bearing _____°, _____ feet (distance) from the _____ corner of the _____ Original Survey No. _____, Abstract No. _____, in _____ County, Texas. (Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places. Indicate the method used to calculate the diversion point location).

3) Location from County Seat: _____ miles in a _____ direction from _____ County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

4) Zip Code: _____

5) The diversion will be (check (✓) all appropriate boxes and if applicable, indicate whether existing or proposed):

	Existing	Proposed
Directly from stream		
From an on-channel reservoir		
From a stream to an off-channel reservoir		
From a stream to an on-channel reservoir		
From an off-channel reservoir		
Other method (explain fully, use additional sheets if necessary)		

6) Rate of Diversion (Check (✓) applicable provision):

___ 1. Diversion Facility:

A. _____ Maximum gpm (gallons per minute)

- 1) _____ Number of pumps
- 2) _____ Type of pump
- 3) _____ gpm, Pump capacity of each pump
- 4) Portable pump _____ Yes or _____ No

___ 2. If by gravity:

A. _____ Headgate _____ Diversion Dam _____ Maximum gpm

B. _____ Other method (explain fully - use additional sheets if necessary)

7) The drainage area above the diversion point is _____ acres or _____ square miles.

NOT APPLICABLE

Supplemental Dam/Reservoir Information Sheet

Dam (structure), Reservoir and Watercourse Data

A. Type of Storage Reservoir (indicate by checking (✓) all applicable)

on-channel off-channel existing structure proposed structure* exempt structure**

*Applicant shall provide a copy of the notice that was mailed to each member of the governing body of each county and municipality in which the reservoir, or any part of the reservoir, will be located as well as copies of the certified mailing cards.

**TWC Section 11.143 for uses of water for other than domestic, livestock, or fish and wildlife from an existing, exempt reservoir with a capacity of 200 acre-feet or less. Please complete Paragraph 6 below if proceeding under TWC 11.143.

Date of Construction _____

B. Location of Structure No. _____.

1) Watercourse: _____

2) Location from County Seat: _____ miles in a _____ direction from _____, _____ County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

3) Zip Code: _____

4) The dam will be/is located in the _____ Original Survey No. _____, Abstract No. _____ in _____ County, Texas.

5) Station _____ on the centerline of the dam is _____° _____ (bearing), _____ feet (distance) from the _____ corner of _____ Original Survey No. _____, Abstract No. _____, in _____ County, Texas, also being at Latitude _____°N, Longitude _____°W. (Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places. Indicate the method used to calculate the diversion point location).

C. Reservoir:

1) Acre-feet of water impounded by structure at normal maximum operating level: _____

2) Surface area in acres of reservoir at normal maximum operating level: _____

D. The drainage area above the dam is _____ acres or _____ square miles.

E. Other:

1) If this is a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service (SCS)) floodwater-retarding structure, provide the Site No. _____ and watershed project name _____

2) Do you request authorization to close the "ports" or "windows" in the service spillway?

Yes No

Supplemental Discharge Point Information Sheet 1/2

Discharge Point No. or Name: Walnut Branch WWTP

1) Select the appropriate box for the source of water being discharged:

Treated effluent

Groundwater

Other _____

2) Location of discharge point will be/is at Latitude 29.558628 ° N, Longitude 97.961741 ° W, also bearing N28 ° 33'26", 1228.384 feet from the SW corner of the lot: 5 BLK 115/54 addn: river 0.1076 ACA

Original Survey No. _____, Abstract No. _____, in Guadalupe _____ County, Texas.

Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location. (i.e., GPS Unit, USGS 7.5 Topographic Map, etc.)

Existing Diversion Pt: Lat: 29.551325 N, Long: -97.971134 W. Source: Google Earth—see attached Figures 1 and 2.

3) Location from County Seat: 0.7 miles in a SSE direction from Seguin, Guadalupe County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

4) Zip Code: 78155

5) Water will be discharged into Guadalupe River stream/reservoir, (tributaries) _____, Guadalupe Basin.

6) Water will be discharged at a maximum rate of 7.58 cfs (3403 gpm) (= 4.9 MGD = permitted flow).

7) The amount of water that will be discharged is 5492 acre-feet per year. (Permitted flow)

8) The purpose of use for the water being discharged will be municipal water supply.

9) Additional information required:

For groundwater NOT APPLICABLE

1. Provide water quality analysis and 24 hour pump test for the well if one has been conducted.
2. Locate and label the groundwater well(s) on a USGS 7.5 Minute Topographic Map
3. Provide a copy of the groundwater well permit if it is located in a Groundwater Conservation District.
4. What aquifer the water is being pumped from?

For treated effluent

1. What is the TPDES Permit Number? Provide a copy of the permit. Permit # WQ0010277001 attached.
2. Provide the monthly discharge data for the past 5 years. See attached Table 1.
3. What % of treated water was groundwater, surface water? 54% of effluent is groundwater (Table 3).
4. If any original water is surface water, provide the base water right number. 18-3839B

Supplemental Discharge Point Information Sheet 2/2

Discharge Point No. or Name: Geronimo Creek WWTP

1) Select the appropriate box for the source of water being discharged:

Treated effluent

Groundwater

Other _____

2) Location of discharge point will be/is at Latitude 29.541699 ° N, Longitude 97.913673 °W,

also bearing S05 ° 58.407'E, 157.69 feet from the NE property corner of the _____

Original Survey No. John Sowell 11.93 AC, Abstract No. 35, in Guadalupe County, Texas.

Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location. (i.e., GPS Unit, USGS 7.5 Topographic Map, etc.)

Existing Diversion Pt: Lat: 29.551325 N, Long: -97.971134 W. Source: Google Earth—see attached Figures 1 and 2.

3) Location from County Seat: 3.5 miles in a SE direction from Sequin,

Guadalupe County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____

direction from _____, a nearby town shown on county highway map.

4) Zip Code: 78155

5) Water will be discharged into Geronimo Creek stream/reservoir,

(tributaries) thence to Guadalupe River,

Guadalupe Basin.

6) Water will be discharged at a maximum rate of 3.30 cfs (1479 gpm) (= 2.13 MGD = permitted flow).

7) The amount of water that will be discharged is 2388 acre-feet per year. (Permitted flow)

8) The purpose of use for the water being discharged will be municipal water supply.

9) Additional information required:

For groundwater NOT APPLICABLE

1. Provide water quality analysis and 24 hour pump test for the well if one has been conducted.
2. Locate and label the groundwater well(s) on a USGS 7.5 Minute Topographic Map
3. Provide a copy of the groundwater well permit if it is located in a Groundwater Conservation District.
4. What aquifer the water is being pumped from?

For treated effluent

1. What is the TPDES Permit Number? Provide a copy of the permit. Permit #WQ0010277003 attached.
2. Provide the monthly discharge data for the past 5 years. See attached Table 2.
3. What % of treated water was groundwater, surface water? 54% of effluent is groundwater (Table 3).
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CITY OF SEGUIN

Office of the Mayor
Post Office Box 591
Seguin, Texas 78156-0591
(830) 401-2307
1-888-4SEGUIN
FAX (830) 401-2499
www.seguintexas.gov

March 1, 2016

Ms. Iliana Delgado
Water Rights Permitting Team Leader, TCEQ
P. O. Box 13087
Austin, Texas 78711-3087

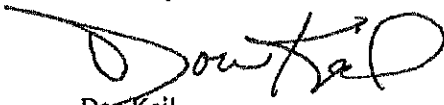
Re: Delegating Signatory Authority for Water Right Amendment

Dear Ms. Delgado:

Please be advised that the City of Seguin would like to delegate the signatory authority for the Water Right Amendment application to Mr. Douglas G. Faseler, City Manager, as Primary Signatory Authority and Mr. Rick Cortes, Assistant City Manager, as Alternate Signatory Authority.

Please contact Douglas Faseler at (830) 401-2302 with any questions or concerns.

Sincerely,



Don Keil
Mayor

cc: Douglas G. Faseler, City Manager
Rick Cortes, Assistant City Manager
Emery Gallagher, Director of Utilities
Craig Bell, P.E., TRC
File

SEGUIN SUPPLEMENTAL INFORMATION (30 TAC 295.112 subsections indicated where appropriate)

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(b)(3): Based on 2010-2014 data, for its municipal supply, Seguin has used 52-56% groundwater on an annual basis, with an average of 54% (Table 3). Flows discharged to the Guadalupe River from Walnut Branch (does not include reuse) have averaged 1.51 MGD or 1,689 ac-ft/yr (Table 1). Flows discharged from Geronimo Creek have averaged 1.22 MGD or 1,324 ac-ft/yr (Table 2). Therefore, the total average discharge is 3,013 ac-ft/yr. Based on 54% of that being groundwater based, the average expected to be eligible for diversion in the near future is 1,627 ac-ft/yr. At this time, the plants are operating at roughly 50% of their permitted hydraulic capacity.

(b)(4): The quality of water of the discharges from the two WWTPs is regulated by the TPDES permits. Relevant permit limitations are:

- Walnut Branch: 10/15/3 (CBOD/TSS/NH3-N, mg/L)
- Geronimo Creek: 20/20 (CBOD/TSS, mg/L)

(b)(5): The Walnut Branch WWTP came on line around 1951. The Geronimo Creek WWTP came on line in 1989. The City has always used groundwater as part of its water supply, so groundwater discharges have always been a component of the wastewater discharges.

(b)(6): It is assumed that channel losses over this short reach will be negligible. There is only one intervening water right in this reach (GBRA). If it is determined that there are significant channel losses between the diversion point and the GBRA water right location, the volume attributable to Geronimo Creek will be reduced accordingly. Since the Walnut Branch outfall is a short distance downstream of the diversion point and there are no intervening water rights, an adjustment should not be necessary for Walnut Branch.

(b)(7): USGS gage 08169792 Guadalupe Rv at FM 1117 nr Seguin, TX has an annual average flow of 712.24 cfs, or about 516,000 ac-ft/yr. The expected average annual diversion of 1,627 ac-ft/yr represents 0.3% of the average flow. Also note that any increase in diversions will likely result in an increase in return flows, which would reduce this small impact further. Instream uses and bay and estuary freshwater inflow needs are unlikely to be impacted.