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 any Part of 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 above, or its most recent update, 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 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 test demonstrates a significant effect at the critical dilution. A significant effect is defined as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival, growth, or reproduction) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. Significant lethality is defined as a statistically significant difference in survival at the critical dilution when compared to the survival in the control. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction in the control.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. 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 the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of item 4.a. are suspended upon completion of the two retests and submittal of the TRE Action Plan and Schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in item 4.a.

demonstrates significant lethality, the permittee shall again perform two retests as stipulated in item 4.a.

d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.

e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a General Outline for initiating a Toxicity Reduction Evaluation (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, or within 90 days of being so instructed due to multiple toxic events, 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 item 1.b. As 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, "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F), 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 specific pollutant(s) and source(s) of effluent

toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant(s) and source(s) 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, as well as 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 with due diligence.

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(s) 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(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which 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 (herein as defined below) 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. The permittee may only apply the "cessation of lethality" provision once.

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 which 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and to specify CS limits.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected — 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%	26%	35%	46%	62%	82%
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 (82%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent					
Time of Reading	0%	26%	35%	46%	62%	82%
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 (82%): _____ 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 — 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

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
26%							
35%							
46%							
62%							
82%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

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 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 (82%): _____ 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	
10%									
26%									
35%									
46%									
62%									
82%									

* 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 (82%): _____ 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

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to 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 the Surface Water Quality Standard, 307.6(e)(2)(B), of 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 utilizing 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 in 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 in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, and then repeat, an invalid test during the same reporting period. The repeat test shall include the control and the 100% effluent dilution and use the appropriate number of organisms and replicates, as specified above. An invalid test is herein 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 (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation 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 item 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 samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. 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 samples shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of 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 above, or its most recent update thereof, 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 January 20th and July 20th for biomonitoring conducted during the previous 6 month period.

2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.

c. Enter the following codes on 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 a "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 a "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 a "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 a "1."

4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 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 additional 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 item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

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 Toxicity Reduction Evaluation (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 item 1.b. As 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 specific pollutant(s) and source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant(s) and source(s) 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, as well as 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 with due diligence.

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(s) 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(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which 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 (herein as defined below) 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. The permittee may only apply the "cessation of lethality" provision once.

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 which 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also

specify a corrective action schedule for implementing the selected control mechanism(s). 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 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 307.6.(e)(2)(B) may be exempted upon proof 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, the 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, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and to specify a CS 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%
24hr	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

Tomball North and South WWTP
Critical Needs Assessment

July 5, 2016

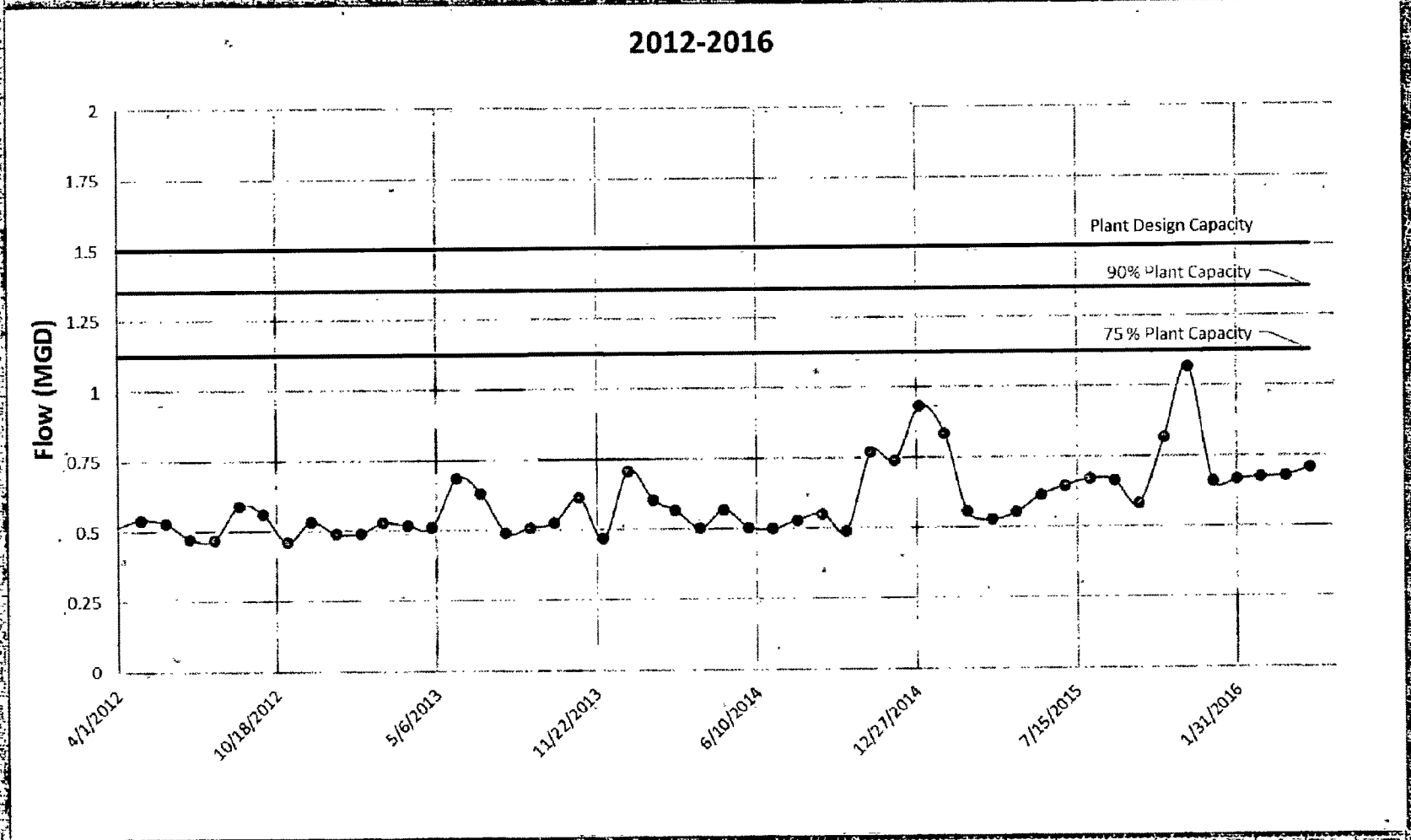
FREESE AND NICHOLS

Outline

- North & South WWTP – Background & Overview
- Risk Based Condition Assessment Methodology
- Critical Needs Assessment Results
  - Condition and Criticality Scores
  - Recommended Improvements
  - Risk Rating Summary
  - Cost Estimate Summary
- Phasing of Improvements

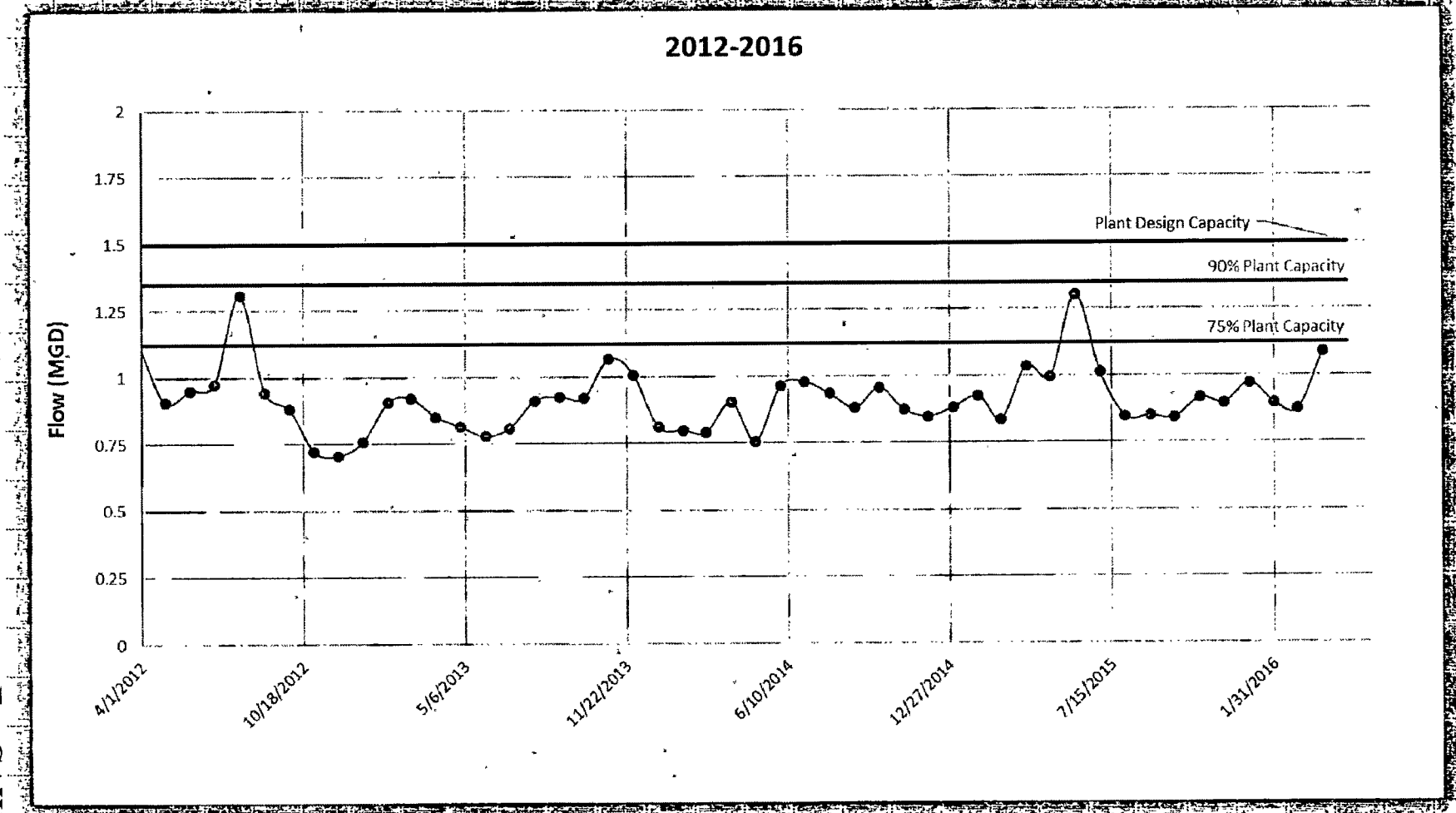
North WWTP Overview

North WWTP - Average Daily Flow



South WWTP Overview

South WWTP – Average Daily Flow



Direct Testimony of Glen Williams
COT1221

Ex. GAW-7

Risk Based Condition Assessment Methodology Overview

- **Condition Rating**

Condition Rating	Scoring Guidelines
1	**Very Good** condition; no improvements recommended to maintain function
2	**Good** condition; minor improvements recommended to enhance performance
3	**Fair** condition; improvements recommended to improve performance or efficiency
4	**Poor** condition; improvements recommended to maintain operation reliability
5	**Very Poor** condition; rehabilitation or replacement required

Condition Scoring

- **Example Condition Rating Component Groups & Weightings**

Component Group	Condition Rating (1-5)	Weight Factor*	Weighted Component Rating
Electrical		15%	
Mechanical Equipment		40%	
Structure		30%	
Piping Valves		15%	
Total Weighting		**100%**	

*Example weight factors which change per unit investigated.

Criticality Scoring

- **Example Criticality Rating Component Parameters & Weightings**

Criticality Parameters	Component Criticality Rating (1-5)	Weight Factor*	Weighted Component Rating
Capacity Affected		30%	
Process & Regulatory Impact		40%	
Safety		15%	
Outage Duration		15%	
Overall Criticality Rating		**100%**	

*Weight factors are consistent for all units.

Risk Assessment

- Risk Assessment Score Ranges & Matrix

Criticality	Condition				
	Very Good	Good	Fair	Poor	Very Poor
Very Low Impact	LOW RISK				
Low Impact					
Moderate Impact		MODERATE RISK			
High Impact					
Very High Impact					HIGH RISK

North WWTP - Critical Needs Assessment Summary

Risk Based Assessment Summary						
Facility	Condition Score	Condition Rating	Criticality Score	Criticality Rating	Risk Rating	Risk Category
Centrifuge	3.90	Poor	4.93	Very High Impact	8.83	[redacted]
Electrical Manholes	4.50	Very Poor	4.00	High Impact	8.50	[redacted]
Grit Removal	4.40	Very Poor	3.55	High Impact	7.95	[redacted]
Clarifiers	3.78	Poor	3.95	High Impact	7.73	[redacted]
Screens	3.63	Poor	3.85	High Impact	7.48	[redacted]
Admin/Lab Bldg	3.70	Poor	3.85	High Impact	7.55	[redacted]
Aeration Basins	3.50	Poor	3.95	High Impact	7.45	[redacted]
Raw Sewage Lift Station	3.48	Fair	3.05	Moderate Impact	6.53	Moderate
RAS Pumps	3.08	Fair	2.88	Moderate Impact	5.95	Moderate
NPW System	2.90	Fair	2.75	Moderate Impact	5.65	Moderate
Dechlorination System	2.95	Fair	2.70	Moderate Impact	5.65	Moderate
Aerobic Digester	3.28	Fair	2.25	Low Impact	5.53	Moderate
Blowers	2.70	Fair	2.73	Moderate Impact	5.42	Moderate
Chlorination System	2.70	Fair	2.55	Moderate Impact	5.25	Moderate
Flow Measuring Str	3.10	Fair	1.95	Low Impact	5.05	Moderate
Sludge Thickener	2.72	Fair	2.30	Low Impact	5.02	Moderate
Chlorine Contact Basins	2.00	Good	2.70	Moderate Impact	4.70	Moderate
Generator	1.20	Very Good	1.75	Low Impact	2.95	[redacted]

Direct Testimony of Glen Williams
COT1226

Ex. GAW-7

North WWTP - Cost Estimate Summary

Facility	Risk Category	Critical Improvements	Timeline	
		Description	1-2 yrs	3+ yrs
Centrifuge	[illegible]	Replace centrifgue	-	$664,000
Electrical Manholes	[illegible]	Replace Conductors	$162,000	-
Clarifiers	High	Replace clarifier equipment	$1,073,000	-
Screen	High	Refurbish existing screen	(To be done in-house)	-
Admin/Lab Bldg	High	Replace MCCs	$476,000	-
Aeration Basins	High	Blower Improvements	$98,000	-
Raw Sewage Lift Station	Moderate	Replace existing pumps	$507,000	-
RAS Pumps	Moderate	Replace all air lift pumps	-	$170,000
NPW System	Moderate	Inspect and rehab hydro tank	$25,000	-
Aerobic Digester	Moderate	Air lift Pump Controls, New sluice gates	$60,000	-
Dechlorination System	Moderate	Replace electrical enclosures & conduits	$16,000	-
Flow Measuring Str	Moderate	Install sump pumps	$60,000	-
Chlorination System	Moderate	New ton cylinder scale; Replace electrical enclosures and conduits	$44,000	-
Sludge Thickener	Moderate	Misc. Improvements	$17,000	-
		Engineering Services for Design of Improvements:	$380,700	$125,100
		Wastewater System Master Planning:	$150,000	-
		TOTAL:	$3,068,700	$959,100

Direct Testimony of Glen Williams
COT1227

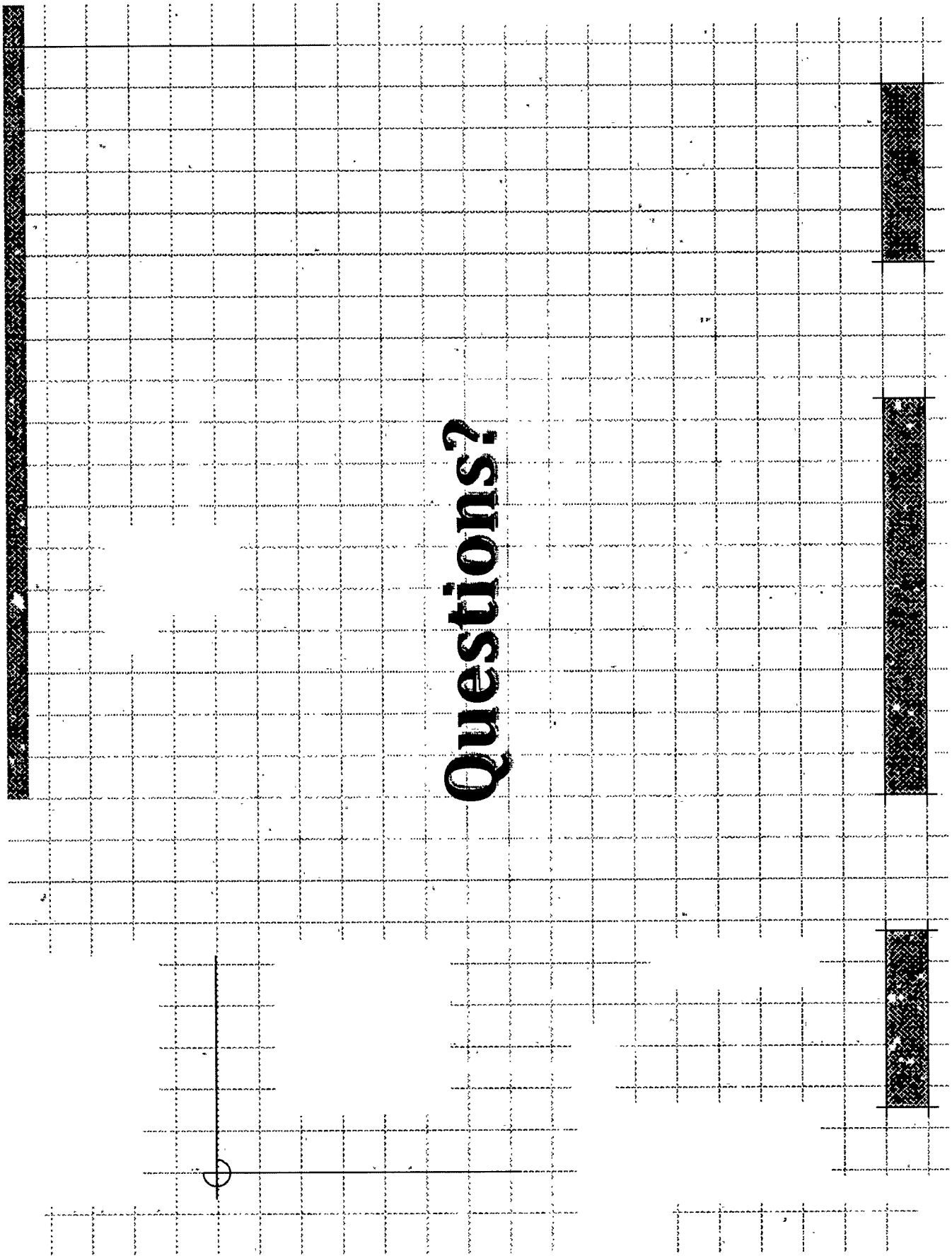
Ex. GAW-7

South WWTP - Critical Needs Assessment Summary

Risk Based Assessment Summary						
Facility	Condition Score	Condition Rating	Criticality Score	Criticality Rating	Risk Rating	Risk Category
NPW System	3.88	Poor	3.20	Moderate Impact	7.08	High
Centrifuge	2.60	Fair	3.70	High Impact	6.30	Moderate
Grit Removal	2.68	Fair	3.40	Moderate Impact	6.08	Moderate
Influent Lift Station	2.73	Fair	3.05	Moderate Impact	5.78	Moderate
MCC D&E Bldg.	2.80	Fair	2.80	Moderate Impact	5.60	Moderate
Oxidation Ditch	2.35	Good	3.25	Moderate Impact	5.60	Moderate
Clarifiers	2.15	Good	3.25	Moderate Impact	5.40	Moderate
Screens	1.66	Good	3.55	High Impact	5.21	Moderate
Blowers	2.84	Fair	2.25	Low Impact	5.09	Moderate
RAS Pumps	2.57	Fair	2.45	Low Impact	5.02	Moderate
MMC F Bldg.	2.20	Good	2.80	Moderate Impact	5.00	Moderate
Chlorination System	2.30	Good	2.70	Moderate Impact	5.00	Moderate
MCC A&B Bldg.	2.44	Good	2.50	Moderate Impact	4.94	Moderate
Dechlorination System	2.19	Good	2.70	Moderate Impact	4.89	Moderate
Aerobic Digesters	2.34	Good	2.55	Moderate Impact	4.89	Moderate
Generator	2.20	Good	2.60	Moderate Impact	4.80	Moderate
Rotary Drum Thickener	1.97	Good	2.75	Moderate Impact	4.72	Moderate
Chlorine Contact Basins	2.05	Good	2.65	Moderate Impact	4.70	Moderate
Administration/Lab Bldg.	1.63	Good	1.30	Very Low Impact	2.93	Low

South WWTP - Cost Estimate Summary

Facility	Risk Category	Critical Improvements	Timeline	
		Description	1-2 yrs	3 + yrs
NPW System	High	Replace skid with new vertical turbine NPW pumps	$162,000	-
Influent Lift Station	Moderate	Replace two (2) pumps; Control improvements	$158,000	-
Centrifuge	Moderate	New building with belt press	-	$1,418,000
MCC D&E Bldg.	Moderate	Seal leaks in building	(To be done in-house)	-
Oxidation Ditch	Moderate	Actuator on effluent weir gate; VFDs on rotors	$215,000	
Grit Removal	Moderate	New grit classifier	-	$170,000
RAS Pumps	Moderate	Extend WAS pipe; Relocate flow meters	$4,000	-
Chlorination System	Moderate	New intake fan and exhaust vent	$16,000	-
MCC F Bldg.	Moderate	Seal leaks in the building	(To be done in-house)	-
Clarifiers	Moderate	Install scum beach spray nozzles	(To be done in-house)	-
Administration/Lab Bldg.	[redacted]	Renovate building to include breakroom and MCC work	$120,000	-
		Total Construction Cost:	$675,000	$1,588,000
		Engineering Services for Design of Improvements:	$101,250	$238,200
		TOTAL:	$776,250	$1,826,200


Questions?

	A	B	C	D	E	F	G	H	I	J
1	Full Name	LAST 4	WW	EXPIRES	LICENSE #	WG	EXPIRES	LICENSE #	CDL	EXP
2	UPDATED 4/20/17									
3										
4	Danny Hitchcock	1211	B	01/26/18	WW0036832	B	12/28/18	WG0011995		
5	John Escamilla	1958	B	01/26/18	WW0036826	B	7/28/18	WG0011999		
6	Randy Warren	7209	B	01/26/19	WW0040428	B	7/28/18	WG0011998		
7	Dewayne Osgood	5275	B	09/29/18	WW0038642	B	5/21/18	WG0011765		
8	William Goff	0023	B	10/05/18	WW0039435	B	8/15/17	WG0011524		
9	Carl Singleton	5240	B	09/29/18	WW0040055	C	3/17/18	WG0010018		
10	Timothy Negrete	5949	C	05/09/20	WW0035872	C	12/7/19	WG0011092	YES	
11	Justin Pruitt	2565	C	05/12/18	WW0039103	C	12/17/17	WG0011527	YES	1/7/2019
12	Tracy Walton	9384	B	09/29/18	WW0038644	B	12/28/18	WG0012363		
13	Robert Sindlinger	1843	B	01/26/18	WW0038643	B	5/20/18	WG0011997		
14	Bradley Janisch	3572	B	09/30/19	WW0042975	B	9/17/19	WG0013015	YES	10/6/2017
15	Cody Palmer	3409	C	10/06/18	WW0040503	C	8/6/18	WG0012075		
16	Tom Borcky-Noblet	0829	C	10/05/18	WW0040486	C	8/21/18	WG0012174		
17	Alan Martin	8653	C	05/25/19	WW0041940	C	9/17/19	WG0013016		
18	Glen Williams	6850	A	02/23/20	WW0017401	B	11/13/17	WG0008337		
19	Justin Stancil	9107	C	10/05/18	WW0050217	C	9/10/17	WO0034199		
20	Wesley Patten	4211	C	10/05/18	WW0051593	C	2/18/18	WG0015266		
21	James Linney	6096	B	12/15/17	WW0045632	C	3/8/19	WG0000708		
22	Jake Colburn	7916	C	08/04/19	WW0052836	C	6/24/18	WO0036105		
23	Justin Parker	8384	C	11/18/18	WW0054584	C	5/12/19	WG0015994		
24	Jacob Carbo	3321	C	08/03/19	WW0052835	D	1/13/18	WO0036030		
25	Jeremy Dueitt	0390	D	09/06/19	WW0056362	D	04/26/19	WG00038565		
26	Danny Lowers		D	08/04/19	WW0055439	D	4/27/19	WG0039026		
27	Mike Worsham		C	02/02/19	WW0054644	C	4/3/20	WG0016223		
28										
29										
30	Wayne Smith								YES	1/31/2017
31	Gary Robeck								YES	7/27/2016
32	Kevin Rucker								YES	7/20/2019
33	Mike Lewis								YES	8/4/2015
34	Vicente Cazares								BUS	7/13/2018
35	Tom Mills								YES	8/19/2016
36	Gary Lane								BUS	3/11/2019
37	Richard Adzgery									
38	Marion Baranosky									
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City of Tomball

HUMAN RESOURCES HANDBOOK

Direct Testimony of Glen Williams **Ex. GAW-9**

City of Tomball
Human Resources Handbook
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3.17 DRUG-FREE AND ALCOHOL-FREE WORKPLACE

The presence or use of illegal drugs or alcohol on the job is prohibited. It is the policy of the City of Tomball to:

- Maintain a safe, drug-free and alcohol-free work environment for its employees, conducive to effective city government operations, and to make a good faith effort to comply with the Federal Drug-Free Workplace Act of 1988, as amended.
- Prohibit the manufacture, distribution, dispensation, possession, sale or use of controlled substance drugs, intoxicants by employees at any time on-or off duty.
- Ensure that while on duty for or acting on behalf of the City, while wearing a City uniform and/or in a City vehicle, while on City premises, that employees will not be impaired by alcohol, intoxicants, or have controlled substances present in their systems not prescribed by a licensed physician.
- Require employees taking prescription medications that would impair their ability to operate vehicles, machinery, or equipment in a safe manner, to inform their supervisor of the potential danger.
- Subject employees to drug and alcohol testing when a supervisor has reasonable suspicion of drug or alcohol use; after certain accidents; when returning to duty as a result of self-referral; as follow-up after a determination that an employee was in need of assistance in resolving drug or alcohol problems; when promoted to a safety sensitive position; and for random testing if the employee is in a safety-sensitive position.

For further information, please refer to the City of Tomball's Substance Abuse and Alcohol Misuse Prevention Policy.

City of Tomball

***Human Resources Department* - JOB DESCRIPTION**

JOB TITLE: WASTEWATER TREATMENT PLANT SUPERVISOR

JOB NUMBER: 440

DEPARTMENT: UTILITIES – SEWER

UNIT: MID-MANAGEMENT -SUPERVISORY

FUND/ACCOUNT: 600-614-6003

SUPERVISOR: UTILITIES SUPERINTENDENT

☐ EXEMPT ☒ NON-EXEMPT

☒ FULL TIME ☐ PART TIME ☐ TEMP

DOT CLASSIFICATION: RSPA

COMPENSATION TYPE: HOURLY

PAY GRADE: 60

PAY RANGE: $48,855 - $66,098

JOB DEFINITION: To plan, coordinate, supervise, direct, and review the activities involved in the operation and maintenance of biosolids recovery facilities and reuse or disposal of residuals generated by the City Wastewater Treatment Plant. Provides professional and technical assistance in adherence to local, state and federal requirements for processing, transporting, marketing, and disposing of these products.

DISTINGUISHING CHARACTERISTICS: This single position, class is a full, first-line supervisory management classification in the Wastewater Utilities Department. Under general direction, oversees the operation and maintenance of biosolids facilities and the disposal of products from all wastewater treatment facilities.

SUPERVISION RECEIVED AND EXERCISED: General supervision is provided by the Utilities Superintendent. Technical and functional supervision may be provided by Public Works Director. Supervises Wastewater Treatment Plant Senior Operator and Wastewater Treatment Plant Operator.

ESSENTIAL FUNCTIONS: Essential functions, as defined under the Americans with Disabilities Act, may include the following tasks, knowledge, skills and other characteristics. This list of tasks is illustrative only, and is not a comprehensive listing of all functions and tasks performed by positions in this class. Incumbents in this class may not be required to perform all duties listed and may be required to perform additional, position-specific duties.

- Supervise operations and maintenance of two (2) 1.5 MGD wastewater treatment plants.
- Supervise two (2) employees.
- Maintain operating logs, records and reports as required by permit regulations.
- Interpret, analyze and monitor data on a daily basis to ensure that plants are in compliance with TECQ permit.
- Monitor and regulate chemical usage to assure cost effective utilization and compliance with regulatory rules and regulations and make any chemical adjustments needed.
- Perform routine and preventive maintenance on two (2) 1.5 mgd wastewater treatment plants.
- Clean plant components daily to maintain an environmentally safe and clean area.
- Evaluate the performance of equipment within the plants and perform necessary preventative and routine maintenance, for example, pump motor repair.
- Maintenance and operations of 11 offsite lift stations and 3 on-site lift stations.

- Perform electrical maintenance work and tracking of electrical problems related to plant operations.
- Perform weekend plant checks.
- Advise call duty employees.
- Evaluate and interpret laboratory data to ensure unit process operations are within prescribed parameters.
- Communicate with vendors and contractors regarding repair quotes and other services needed.

KNOWLEDGE AND SKILLS:

- Knowledge of principles and practices of employee supervision, training and performance management.
- Principles and practices used in operation and maintenance of biosolids facility. Local, state and federal regulations related to biosolids processing and disposal.
- Tools, materials, equipment and methods used in plant facilities maintenance work.
- Maintenance and repair of mechanical equipment, engines, motors, pumps, valves and of test instruments.
- Occupational hazards and appropriate safety precautions.
- Knowledge of basic arithmetic, including addition, subtraction, multiplication and division including the ability to do all treatment calculations including retention times and dosing.
- Knowledge of existing City ordinances, laws, and regulations governing utilities.

PREFERRED EDUCATION, EXPERIENCE AND CERTIFICATIONS:

- High school diploma or equivalent.
- Five or more years in wastewater collection and/or treatment plant operations. Two of those at a supervisory level.
- Valid Class C Texas motor vehicle operator's license required and maintained throughout employment.
- Must be "B" or better certified in Wastewater competency

EXTENT OF PUBLIC CONTACT: Internal – Department personnel and other City employees. External – Incidental public contact.

Position is considered "Essential Personnel" and is required to respond to natural and man-made disasters unless released by Department Head.

EMPLOYEE/APPLICANT SIGNATURE: _____ **DATE:** _____

DEPARTMENT HEAD APPROVE: _____ DATE: _____

CITY MANAGER APPROVE: _____ DATE: _____

HUMAN RESOURCES VERIFICATION: _____ DATE: _____
ESTABLISHED DATE: / / ; Budget Year:
REVISED: 03/17/2009, 02/2010, 06/2010, 01/2014

City of Tomball

***Human Resources Department* - JOB DESCRIPTION**

JOB TITLE: WASTEWATER TREATMENT SENIOR PLANT OPERATOR

JOB NUMBER: 445

DEPARTMENT: UTILITIES – SEWER

UNIT: MAINTENANCE UNIT - TECHNICAL

FUND/ACCOUNT: 600-614-6003

SUPERVISOR: WASTEWATER TREATMENT PLANT SUPERVISOR

☐ EXEMPT ☒ NON-EXEMPT

☒ FULL TIME ☐ PART TIME ☐ TEMP

DOT CLASSIFICATION: RSPA

COMPENSATION TYPE: HOURLY

PAY GRADE: 54

PAY RANGE: $42,127 - $56,996

JOB DEFINITION: Perform a variety of skilled and manual tasks in the installation, testing, calibration, fabrication, repair, and maintenance of highly complex wastewater system and subsystems used in the Wastewater Treatment Plant and Lift Stations.

DISTINGUISHING CHARACTERISTICS: This is an advanced journey-level in the Wastewater Maintenance Technical worker series. Positions assigned to this class are assigned significant responsibilities above journey-level and require possession of specialized skills, experience and expertise in the completion of tasks. Incumbents are assigned the more complex work requiring significant independent judgement and the exercise of initiative.

SUPERVISION RECEIVED AND EXERCISED: General supervision is provided by the Wastewater Treatment Plant Supervisor. Indirectly supervises the Wastewater Treatment Plant Operator. Technical and functional supervision may be provided by Utilities Superintendent or Public Works Director.

ESSENTIAL FUNCTIONS: Essential functions, as defined under the Americans with Disabilities Act, may include the following tasks, knowledge, skills and other characteristics. This list of tasks is illustrative only, and is not a comprehensive listing of all functions and tasks performed by positions in this class. Incumbents in this class may not be required to perform all duties listed and may be required to perform additional, position-specific duties.

- Operations of two (2) 1.5 MGD wastewater plants.
- Recording daily flows,Cl2 & S02 weights, calculate chemical feed rates, cl2, manganese and effluent residuals, do readings, cleaning clarifiers, swapping basins, running centrifuge, thickener, setting up samplers, settable solids test.
- Paperwork - lab results twice weekly, monthly DMR'S, quarterly bio-monitoring reports, yearly sludge reports, special samples, Input all information into computer, fax & mail reports to appropriate agencies, file all paperwork in various locations.
- Maintenance - changing oil in various gear boxes, generators, Replace belts on various motors, greasing various equipment, replacing chains, replacing various bearings on equipment.
- Pump & motor repairs- rebuilding pumps, impellors, bearings, seals, Wear rings, mechanical seals,

packing seals, checking pump Productions, pulling pumps and motors.

- Electrical- trouble shoot electrical problems as related to plant operations, terminate wire Connections to various motors, installing new electrical wires, Conduit, equipment, relays, verbatiums, looking at electrical Plans, checking amps on various equipment, replace various bad Relays, power supplies, phase monitors, verbatiums, stators, and Motor coils.
- Maintenance & repair water wells - repair various motors, pumps, Bearings, seals, packing, greasing equipment, various electrical Problems, installing new check valves, pumps, valves, motors.
- Lift stations - operations & maintenance, record hour readings Daily, pull pumps, install new equipment (check valves, pumps, guide Rails, piping)
- Call Duty - Perform weekend plant checks. Per state permit, must be available by telephone or pager seven days per week.
- Regulate and control chemicals used in specified wastewater treatment requirements to assure cost effective utilization and compliance with permitted parameters.
- Perform standardized quality control tests and oversee adjustment of chemical feeders and other plant equipment according to results.
- Make meter and chart readings, regularly assess water flow, turbidity, pressure, chemical use, residuals, temperatures and other pertinent data.
- Collect samples and perform field chemical analysis to assure compliance with regulatory rules and regulations.
- Observe pumping equipment.
- Clean plant components daily to reduce order and maintain an environmentally safe and clean area.
- Maintain accurate records, logs, records and reports on work performed, materials used, and associated costs, as required by permit regulations.
- Design and fabricate replacement parts and equipment.
- Participate in Storm Water Pollution Prevention Program (SWPP), which involves collecting, analyzing and documenting storm water samples for submittal to City's Environmental Engineer and TCEQ.
- Complete Industrial SWPP training and certification process.

KNOWLEDGE AND SKILLS:

- Knowledge of tools, materials, equipment and methods used in installing control devices and equipment.
- Maintenance and repair of mechanical equipment, gas and diesel engines, electric motors, pumps, and valves.
- Safety practices, methods and tasks and materials used in the mechanical trades.
- Theory and practice of the principles of electronics, computer systems, pneumatics, hydraulics, and radio.
- Occupational hazards and appropriate safety precautions.
- Knowledge of existing City ordinances, laws, and regulations governing utilities.

PREFERRED EDUCATION, EXPERIENCE AND CERTIFICATIONS:

- High school diploma or equivalent.
- Five years in wastewater collection and/or treatment plant operations.
- Valid Class C Texas motor vehicle operator's license required and maintained throughout employment.
- Must be "B" or better certified in Wastewater competency.

EXTENT OF PUBLIC CONTACT: Internal – Department personnel and other City employees. External – Incidental public contact.

Position is considered "Essential Personnel" and is required to respond to natural and man-made disasters unless released by Department Head.

EMPLOYEE/APPLICANT SIGNATURE: _____ **DATE:** _____

DEPARTMENT HEAD APPROVE: _____ DATE: _____

CITY MANAGER APPROVE: _____ DATE: _____

HUMAN RESOURCES VERIFICATION: _____ DATE: _____
ESTABLISHED DATE: / / . Budget Year: -
REVISED: 05/22/2001, 03/2009, 02/2010, 06/2010, 01/2014

City of Tomball

***Human Resources Department* - JOB DESCRIPTION**

JOB TITLE: WASTEWATER TREATMENT PLANT OPERATOR

JOB NUMBER: 518

DEPARTMENT: UTILITIES – SEWER

UNIT: MAINTENANCE UNIT

FUND/ACCOUNT: 600-614-6003

SUPERVISOR: WWTP SUPERVISOR

☐ EXEMPT ☒ NON-EXEMPT

☒ FULL TIME ☐ PART TIME ☐ TEMP

DOT CLASSIFICATION: RSPA

COMPENSATION TYPE: HOURLY

PAY GRADE: 50

PAY RANGE: $38,166 - $51,635

JOB DEFINITION: Perform a variety of basic technical and manual duties in the maintenance and repair work on City Wastewater Treatment Plants and Lift Stations.

DISTINGUISHING CHARACTERISTICS: This is an entry and first working level in the Wastewater Maintenance Technical worker series. Positions assigned to this class perform basic plant maintenance and facility maintenance work, while learning the more advanced plant operation assignments and skills.

SUPERVISION RECEIVED AND EXERCISED: General supervision is provided by the Wastewater Treatment Plant Supervisor. Technical and functional supervision may be provided by Utilities Superintendent. No supervisory responsibilities.

ESSENTIAL FUNCTIONS: Essential functions, as defined under the Americans with Disabilities Act, may include the following tasks, knowledge, skills and other characteristics. This list of tasks is illustrative only, and is not a comprehensive listing of all functions and tasks performed by positions in this class. Incumbents in this class may not be required to perform all duties listed and may be required to perform additional, position-specific duties.

- Perform a variety of basic maintenance assignments at City wastewater treatment plant.
- Learn to operate automatic and manually controlled equipment, motors, and pumps used in wastewater treatment.
- Learn to regulate and control the amount of chemicals used to maintain specified wastewater treatment requirements.
- Learn to take samples at established times, perform standardized quality control tests, and adjust chemical feeders and other plant equipment according to results.
- Learn to make meter and chart readings, interpreting information to determine the proper operation of treatment equipment and influent and effluent conditions.
- Learn to make regular assessments of water flow, turbidity, pressure, chemical use, residuals, temperatures, and other pertinent data to maintain proper plant operating conditions.
- Observe pumping equipment to identify possible problems and operating difficulties.
- Change chlorine cylinders, using proper safety conditions.
- Backwash filters, change recording charts as needed.

- May operate a vehicle to travel for inspection and maintenance work.
- Receive delivered materials, recording shipments and storing items.
- Maintain logs, records, and data systems for required plant reports.
- Collect samples and perform field chemical analysis to assure compliance with regulatory rules
- Clean plant components daily to reduce order and maintain an environmentally safe and clean area.
- Maintain accurate records, logs, records and reports on work performed, materials used, as required by permit regulations.
- Inspect and test components installed by contractors.
- Operate lathe, drill press, electric welder, hydraulic press, micrometer, milling machine, pipe threader, and various hand tools.
- Troubleshoot and operate emergency pumps and generators.
- Design and fabricate replacement parts and equipment.
- Maintain recording devices.
- May order necessary parts to maintain equipment or construct replacement parts.
- Perform weekend plant checks.
- Complete Industrial SWPP training and certification process..

KNOWLEDGE AND SKILLS:

- Knowledge of tools, materials, equipment and methods used in basic plant facilities maintenance work.
- Maintenance and repair of mechanical equipment, engines, motors, pumps, valves and of test instruments.
- Occupational hazards and appropriate safety precautions
- Knowledge of existing City ordinances, laws, and regulations governing utilities.

PREFERRED EDUCATION, EXPERIENCE AND CERTIFICATIONS:

- High school diploma or equivalent.
- Two year in wastewater collection and/or treatment plant operations.
- Valid Class C Texas motor vehicle operator's license.
- Must be "C" certified or better in wastewater competency.
- Must obtain and maintain a "B" certification in Wastewater within one year.

EXTENT OF PUBLIC CONTACT: Internal – Department personnel and other City employees. External – Incidental public contact.

Position is considered "Essential Personnel" and is required to respond to natural and man-made disasters unless released by Department Head.

EMPLOYEE/APPLICANT SIGNATURE: _____ **DATE:** _____

DEPARTMENT HEAD APPROVE: _____ DATE: _____

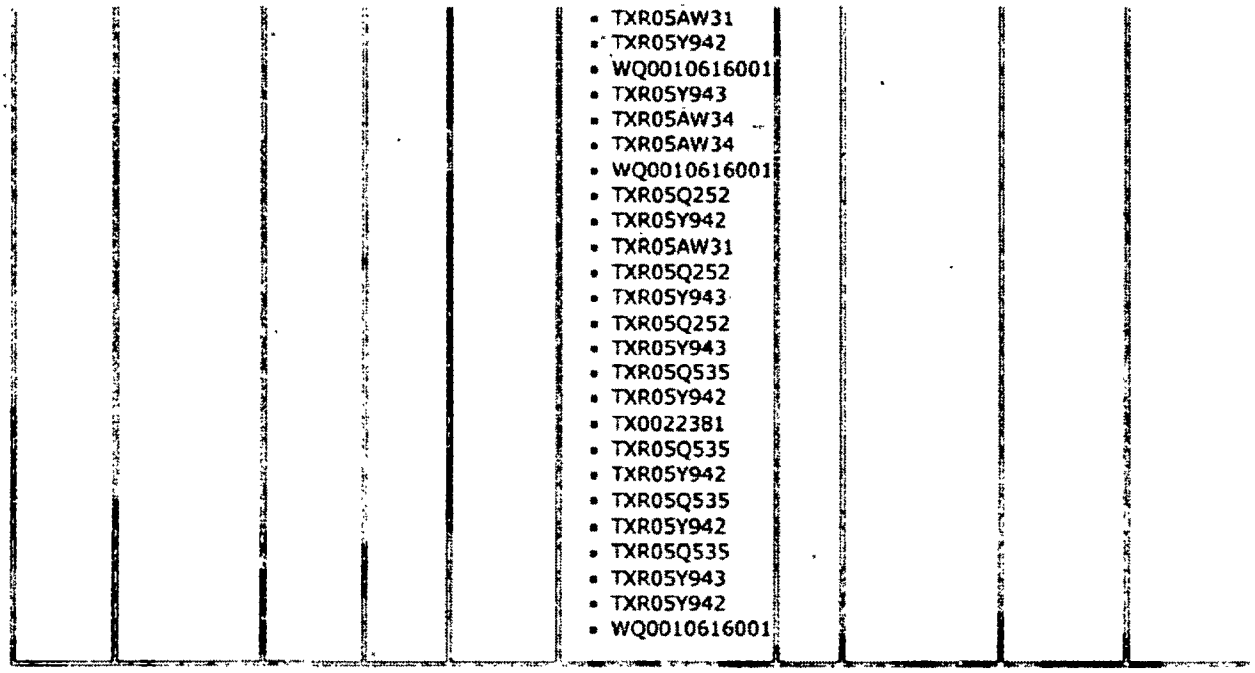
CITY MANAGER APPROVE: _____ DATE: _____

HUMAN RESOURCES VERIFICATION: _____ DATE: _____
ESTABLISHED DATE: / / ; Budget Year: -
REVISED:: 02/26/2002, 03/2009, 02/2010, 06/2010, 01/2014

TCEQ TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUBJECT INDEX
› Air › Water › Waste
› Search TCEQ Data
› Agency Organization Map

Customer	Site Associated with This Customer: Name	City or Nearest City	County	TCEQ Region	Related Numbers	Compliance History for Customer at this Site: Rating	Classification	Date Rated	Date Posted
CITY OF TOMBALL	CITY OF TOMBALL NORTH WASTEWATER TREATMENT PLANT	TOMBALL	HARRIS	REGION 12 - HOUSTON	• TXR05Q252 • TXR05Y943 • TXR05Q535 • TXR05Y943 • TXR05AW34 • WQ0010616001 • TX0022381 • TXR05Q535 • TXR05AW34 • TXR05Q252 • TXR05AW31 • TXR05Q535 • TXR05Y943 • TX0022381 • TXR05AW31 • TXR05Y942 • TX0022381 • TXR05Q252 • TXR05AW34 • TX0022381 • TXR05Y942 • TX0022381 • TXR05Q252 • TXR05Y943 • TX0022381 • TXR05Q252 • TXR05AW31 • TXR05Y942 • TXR05AW34 • WQ0010616001 • TXR05AW31 • TXR05AW34 • WQ0010616001 • TXR05Y943 • TXR05AW34 • TX0022381 • TXR05AW31 • WQ0010616001 • TXR05AW34 • WQ0010616001 • TXR05Q535 • TXR05AW31 • WQ0010616001 • TX0022381 • TXR05Q535 • TXR05Q252 • TXR05AW31	0.86	SATISFACTORY	09/01/2009	11/15/2016



What's a "site"?

A "site" (sometimes called a "regulated entity") is any person or thing that is of environmental interest to the TCEQ. At a "site", one or more regulatory activities of interest to us occur or have occurred in the past. Some examples of sites are:

- Industrial plants, such as the Exxon Baytown Facility
- Small businesses, such as Texaco Gas Station #200 or Elroy's Dry Cleaning & Laundry
- Public facilities, such as the City of Austin's Hornsby Bend Wastewater Treatment Plant

What's a "customer"?

A "customer" owns, operates, is responsible for, or is affiliated with a regulated entity. Examples include:

- Major industrial corporations, such as Exxon USA, Exxon Inc, or Texaco Inc
- Small businesses, such as Karl Redmond dba Karl's Kleaners, which owns several dry-cleaner locations
- Governmental bodies, such as the City of Austin, the United States Air Force, or a municipal utility district
- Individuals, such as Karl A. Redmond, owner of Karl Redmond dba Karl's Kleaners

Return to top
Get a list of compliance histories
Learn more about compliance histories
Questions? E-mail comphist@tceq.texas.gov

Customer	Site Associated with This Customer					Compliance History for Customer at this Site (If no Site appears in thesame row, this is the Customer's overall compliance history.)			
	Name	City or Nearest City	County	TCEQ Region	Related Numbers	Rating	Classification	Date Rated	Date Posted
CITY OF TOMBALL	CITY OF TOMBALL SOUTH WWTP		HARRIS	REGION 12 - HOUSTON	• TX0117595 • TX0117595 • WQ0010616002 • TX0117595 • TX0117595 • WQ0010616002 • TX0117595 • WQ0010616002 • WQ0010616002 • WQ0010616002 • TX0117595 • WQ0010616002 • WQ0010616002 • WQ0010616002 • TX0117595 • TX0117595 • WQ0010616002 • TX0117595	0	HIGH	09/01/2010	11/15/2016

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- Small businesses, such as Karl Redmond dba Karl's Kleaners, which owns several dry-cleaner locations

b/c
Fwd to J.E.
DRK 12/3/12

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 3, 2012

The Honorable Gretchen Fagan
Mayor of Tomball,
501 James Street
Tomball, Texas 77375

Re: Compliance Evaluation Investigation at:
City of Tomball North Wastewater Treatment Plant, 615 East Huffsmith, Harris County, Texas
TCEQ ID No.: WQ0010616001, EPA ID No.: TX0022381

Dear Mayor Fagan:

On September 20, 2012, Thomas Barnett of the Texas Commission on Environmental Quality (TCEQ) Houston Region Office conducted an investigation of the above-referenced facility to evaluate compliance with applicable requirements for wastewater treatment. No violations are being alleged as a result of the investigation; however, two Areas of Concern were noted.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Mr. Barnett in the Houston Region Office at 713-767-3769.

Sincerely,

BSS

Barbara Sullivan
Team Leader
Water Quality Management
Houston Region Office

BSS/TOB/cs

Enclosure: Summary of Investigation Findings

(Rev 6/15/05)

Summary of Investigation Findings

CITY OF TOMBALL NORTH WASTEWATER TREATMENT PLANT Investigation # 1034469
615 E HUFSMITH RD Investigation Date: 09/20/2012
TOMBALL, HARRIS COUNTY, TX 77375

Additional ID(s): TX0022381
WQ0010616001

AREA OF CONCERN

Track No: 481634
30 TAC Chapter 317.3(e)(5)

Alleged Violation:
Investigation: 1034469 Comment Date: 11/05/2012

Failed to provide the required alarm system. Specifically, the Hunterwood lift station did not have a red flashing light. An audio-visual alarm system (red flashing light and horn) shall be provided for all lift stations. The alarm system shall be activated in case of power outage, pump failure, or a specified high water level.

Recommended Corrective Action: Submit documentation indicating that an alarm system at the lift station has been installed.

Resolution: Documentation was submitted on October 1, 2012 indicating that the violation has been resolved.

Track No: 481692
30 TAC Chapter 319.7(a)
30 TAC Chapter 319.7(c)

Alleged Violation:
Investigation: 1034469 Comment Date: 11/06/2012

Failed to document proper preservation of effluent samples. Specifically, a temperature log for the auto sampler was not being maintained. As a result, proper preservation of the effluent samples could not be verified. All records and information resulting from the required monitoring activities shall be retained for a minimum of three years.

Recommended Corrective Action: Submit a copy of a temperature log for the auto sampler that indicates that the requirements are being met.

Resolution: Documentation was submitted on October 1, 2012 indicating that the violation has been resolved.

Direct Testimony of Glen Williams

COT1251

Ex. GAW-15

TCEQ EXIT INTERVIEW FORM: Potential Violations and/or Records Requested

Regulated Entity/Site Name	Tomball North Plant		TCEQ Add. ID No. RN No. (optional)	CN600106160001	
Investigation Type	CEI	Contact Made In-House (Y/N) Y	Purpose of Investigation	Compliance	
Regulated Entity Contact	Glen Williams	Telephone No.	832-349-8027	Date Contacted	9/12/12
Title	WWTP Supervisor	Fax No.		Date Faxed	

NOTICE: The information provided in this form is intended to provide clarity to issues that have arisen during the investigation process between the TCEQ and the regulated entity named above and *does not represent final TCEQ findings related to violations*. Any potential or alleged violations discovered after the date on this form will be communicated by telephone to the regulated entity representative prior to the issuance of a notice of violation or enforcement. Conclusions drawn from this investigation, including additional violations or potential violations discovered (if any) during the course of this investigation, will be documented in a final investigation report.

Issue		For Records Request: identify the necessary records, the company contact and date due to the agency. For Alleged and Potential Violation issues: include the rule in question with the clearly described potential problem. Other type of issues: fully describe.	
No.	Type[1]	Rule Citation (if known)	Description of Issue
1	AV		Failed to provide an alarm light for the high level alarm at the Hunterwood offsite lift station
2	AV		Failed to provide a temperature log for the auto sampler

[1]Issue Type Can Be One or More of: AV (Alleged Violation), PV (Potential Violation), O (Other), or RR (Records Request)

Did the TCEQ document the regulated entity named above operating without proper authorization?	☐ Yes	☑ No
Did the investigator advise the regulated entity representative that continued operation is not authorized?	☐ Yes	☑ No

Document Acknowledgment. Signature on this document establishes only that the regulated entity (company) representative received a copy of this document and associated continuation pages on the date noted. If contact was made by telephone, document will be faxed to regulated entity; therefore, signature not required.

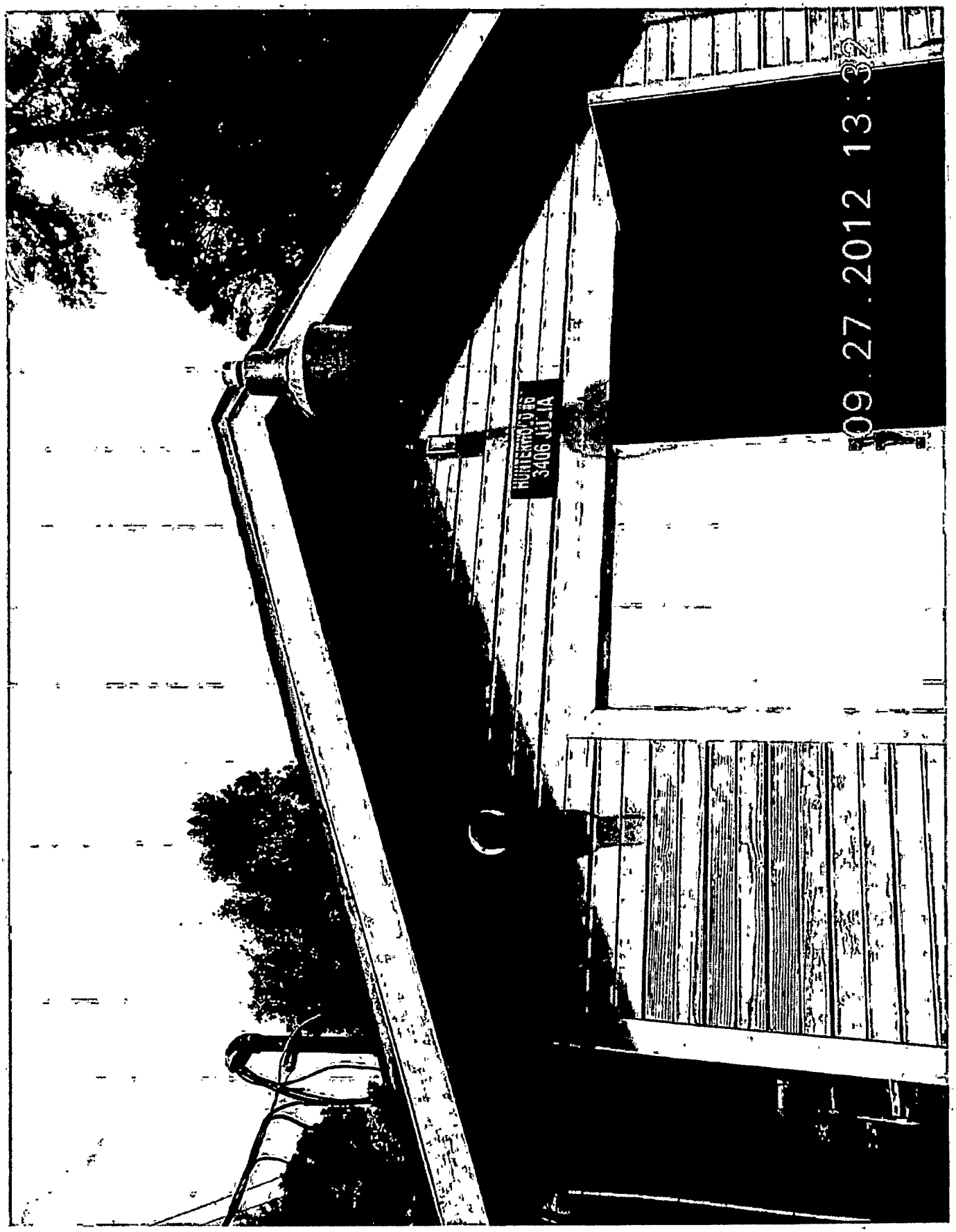
Investigator Name (Signed & Printed)	Date	Regulated Entity Representative Name (Signed & Printed)	Date
Thomas O Barnett	9/20/12	Glen Williams	9-20-12

If you have questions about any information on this form, please contact your local TCEQ Regional Office.
Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, call 512-239-3282

White Copy: Regulated Entity Representative Yellow Copy: TCEQ

TCEQ-20085 (Rev 8/07)

(Note: Use additional pages as necessary) Page 1 of 1


09.27.2012 13:3
HUNTERWOOD
3406 JUL IA

North

CITY OF TOMBALL – DAILY PROCESS REPORT

Date:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Sep 2012	17	18	19	20	21	22	23
Time:	7:44	7:41	7:32	7:30	7:58	7:00	7:00
Operator:	TW	JSW	JSW	TW	JSW	GW	GW
Rainfall	.75"	0	0	0	0	0	0
Temperature	70°	68°	69°	60°	62°	67°	69°
Effluent Totalizer	2867783 2867163	2868210 2867783	2868787 2868210	2869432 2868787	2869860 2869432	2870395 2869860	2870757 2870395
Discharge	.620	.477	.669	.503	.428	.435	.462
S02 Totalizer	47 Days 10.5 hrs	47 Days 13.9 hrs	47 Days 16.8 Hrs	47 Days 21.5 hrs	48 Days .62 hrs	48 days 2.5 hrs	48 days 5.0 hrs
Discharge	3.0 hrs	2.4 hrs	2.9 Hrs	4.7 hrs	2.7	2.3 hrs	2.5 hrs
Contact Mix #1/Color	off	off	off	off	off	off	off
SV30	/	/	/	/			
Sampler temp.			/	5°C	5°C	4.5°C	5°C
Contact Mix #2/Color	BRN	BRN	Brown	BRN	Brn	Brn	Brn
SV30							
D.O.							
Contact Mix #3/Color	BRN	BRN	Brn	BRN	BRN	Brn	Brn
SV30							
D.O.							
Contact Mix #4/Color	BRN	BRN	Brn	BRN	BRN	Brn	Brn
SV30							
D.O.							
Clarifier #1	ok	OK	OK	off	off	off	off
Appearance	clear	clear	clear	/	/	/	/
Sludge Blanket							
Clarifier #2	off	off	off	OK	OK	OK	OK
Appearance	/	/		clear	clear	clr	clr
Sludge Blanket		/					
Measuring Chamber	OK	OK	OK	OK	OK	OK	OK
Appearance	clear	clear	clear	clear	clear	clr	clr
D.O./pH							
CL2 Residual	3.8	2.8	1.7	3.8	2.7	2.2	2.9
Comments:							

Daily Process Report
Permit Number _____

Page 1

North

CITY OF TOMBALL – DAILY PROCESS REPORT

Date:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Sept 2012	24	25	26	27	28	29	30
Time:	8:24	8:11	7:44	8:27	8:10	6:55	7:30
Operator:	JS TW	JS TW	JS TW	TW JS	TW	TW	TW
Rainfall	0	0	0	0	0	0	1.5"
Temperature	71°	71°	73°	71°	75°	75°	70°
Effluent Totalizer	2871536 2870157	2872006 2871545	2872580 2872067	2873067 2872580	2873419 2873067	2874179 2873419	2874790 2874179
Discharge	.788	.522	.493	.457	.412	.760	.611
S02 Totalizer	48 Days 7.4 HRS	48 Days 12.6 HRS	48 Days 15.2 HRS	48 Days 17.8 Hrs	48 Days 19.8 hrs	48 Days 21.9 hrs	49 Days 2.6 hrs
Discharge	2.4 Hrs	5.2	2.6	2.6	2.0 hrs	2.1 hrs	4.1 hrs
Contact Mix #1/Color	off	off	off	off	off	off	off
Sampler Temp	5.0°C	5.5°C	4.75°C	5.5°C	5.6°C	/	/
D.O.							
Contact Mix #2/Color	Brn	Brn	BRN	Brn	BRN	BRN	BRN
SV30				350			
D.O.							
Contact Mix #3/Color	Brn	Brn	Brn	Brn	BRN	BRN	BRN
SV30				350			
D.O.							
Contact Mix #4/Color	Brn	Brn	BRN	Br	BRN	BRN	BRN
SV30				400			
D.O.							
Clarifier #1	off	off	off	off	off	off	off
Appearance					/	/	/
Sludge Blanket							
Clarifier #2	ok	ok	ok	ok	ok	ok	ok
Appearance	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Sludge Blanket				8"			
Measuring Chamber	ok	ok	ok	ok	ok	ok	ok
Appearance	clr	clr	clr	clr	Clear	Clear	Clear
~~D.O.~~ DO pH					5.6 7.8		
CL2 Residual	4.1	2.0	2.0	1.0	2.4	2.0	2.2
Comments:							

Daily Process Report
Permit Number ________

Direct Testimony of Glen Williams **Ex. GAW-15**

(16)

CITY OF TOMBALL
Department of Public Works

BACKFLOW PREVENTION ASSEMBLY
TEST AND MAINTENANCE

ILLEGIBLE OR INCOMPLETE TEST REPORTS WILL NOT BE ACCEPTED

NAME OF PROPERTY: North Wash Water treatment
PROPERTY ADDRESS: 6160 E. Huffsmith
CITY: Tomball, STATE: TX, ZIP: 77375 KEY MAP: _____, PHONE: 281-210-1405
MAILING ADDRESS: 501 James St Tomball TX 77375 CONTACT BUSINESS: John S

Send This Original Report to: *Tomball Public Works Department, 501 James Street, Tomball, TX 77375*

THE BACKFLOW PREVENTION ASSEMBLY DETAILED HEREON HAS BEEN TESTED AND MAINTAINED AS REQUIRED BY TCEQ-Chapter 290, RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS, CITY'S INTERNATIONAL PLUMBING CODE, AND IS CERTIFIED TO COMPLY WITH THE REQUIREMENTS

TYPE OF ASSEMBLY

☒ REDUCED PRESSURE PRINCIPLE (RP) ☐ REDUCED PRESSURE PRINCIPLE-DETECTOR (RPD) ☐ PRESSURE VACCUM BREAKER (PVB)
☐ DOUBLE CHECK VALVE (DCV) ☐ DOUBLE CHECK VALVE PROTECTOR (DCD) ☐ SPILL-RESISTANT PRESSURE VACCUM BREAKER (SVB)

MANUFACTURER Wilks MODEL# 909M2DT SIZE 1" SERIAL NUMBER 119228
LOCATED AT: Next to build/office Center of property DATE INSTALLED: _____

Is the assembly installed in accordance with manufacturer recommendations and/or City's International Plumbing Code? Yes

	REDUCED PRESSURE PRINCIPLE ASSEMBLY			PRESSURE VACCUM BREAKER & SVB	
	DOUBLE CHECK VALVE ASSEMLY		RELIEVE VALVE	AIR INLET	CHECK VALVE
	CHECK VALVE #1	CHECK VALVE #2			
INITIAL TEST	D.C. CLOSED TIGHT ☐ RP 1.5 PSI LEAKED ☐	CLOSED TIGHT ☑ 1.5 PSI LEAKED ☐	OPENED AT 2.2 PSI DID NOT OPEN ☐	OPENED AT _____ PSI DID NOT OPEN ☐	HELD AT _____ PSI LEAKED ☐
REPAIRS** AND MATERIAL USED					
FINAL TEST	D.C. CLOSED TIGHT ☐ RP _____ PSI	CLOSED TIGHT ☐ _____ PSI	OPENED AT _____ PSI	OPENED AT _____ PSI	HELD AT _____ PSI

TEST GUAGE USED: MODEL/MAKE: Apollo TK5 S/N: 0209377 CALIBRATION DATE: 8/3/11 (Tested annually)
REMARKS: Initial Test passed

THE ABOVE TEST IS CERTIFIED TO BE TRUE AT THE TIME OF TESTING
Backflow Test Status ☒ Pass ☐ Fail

CONTRACTOR's FIRM NAME: _____
FIRM ADDRESS: _____
FIRM PHONE#: _____

CERTIFIED TESTER NAME: Cheryl Esparza
CERTIFIED TESTER NO.: BP0101668
TEST DATE: 11-3-11
C.O.T WITNESS: _____ BADGE #: _____

TEST REPORTS MUST BE KEPT FOR THREE YEARS.
TESTING IS REQUIRED UPON INSTALLATION, REPAIR, OR RELOCATION AND ANNUALLY THEREAFTER
MUST USE ONLY MANUFACTURERS' REPLACEMENT PARTS.

Ex. GAW-15

Direct Testimony of Glen Williams COT1259

Direct Testimony of Glen Williams

COT1261

Ex. GAW-16

TCEQ EXIT INTERVIEW FORM: Potential Violations and/or Records Requested

Regulated Entity/Site Name	Tomball South Plant		TCEQ Add. ID No. RN No. (optional)	WQ0010616002	
Investigation Type	CEI	Contact Made In-House (Y/N) Y	Purpose of Investigation	Compliance	
Regulated Entity Contact	Glen Williams	Telephone No.	832-349-8027	Date Contacted	9/12/12
Title	WWTP Supervisor	Fax No.		Date Faxed	

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Issue		For Records Request: identify the necessary records, the company contact and date due to the agency. For Alleged and Potential Violation issues: include the rule in question with the clearly described potential problem. Other type of issues: fully describe.	
No.	Type[1]	Rule Citation (if known)	Description of Issue
1	AV		The ~~Ato~~ highlevel alarm light was not working at the offsite lift station located at Huffsmith Road
2	AV		Failed to provide a temperature log for the auto sampler

[1]Issue Type Can Be One or More of: AV (Alleged Violation), PV (Potential Violation), O (Other), or RR (Records Request)

Did the TCEQ document the regulated entity named above operating without proper authorization?	☐ Yes	☑ No
Did the investigator advise the regulated entity representative that continued operation is not authorized?	☐ Yes	☐ No

Document Acknowledgment. Signature on this document establishes only that the regulated entity (company) representative received a copy of this document and associated continuation pages on the date noted. If contact was made by telephone, document will be faxed to regulated entity; therefore, signature not required.

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Thomas O'Barnett	9/20/12	Glen Williams	9-20-12

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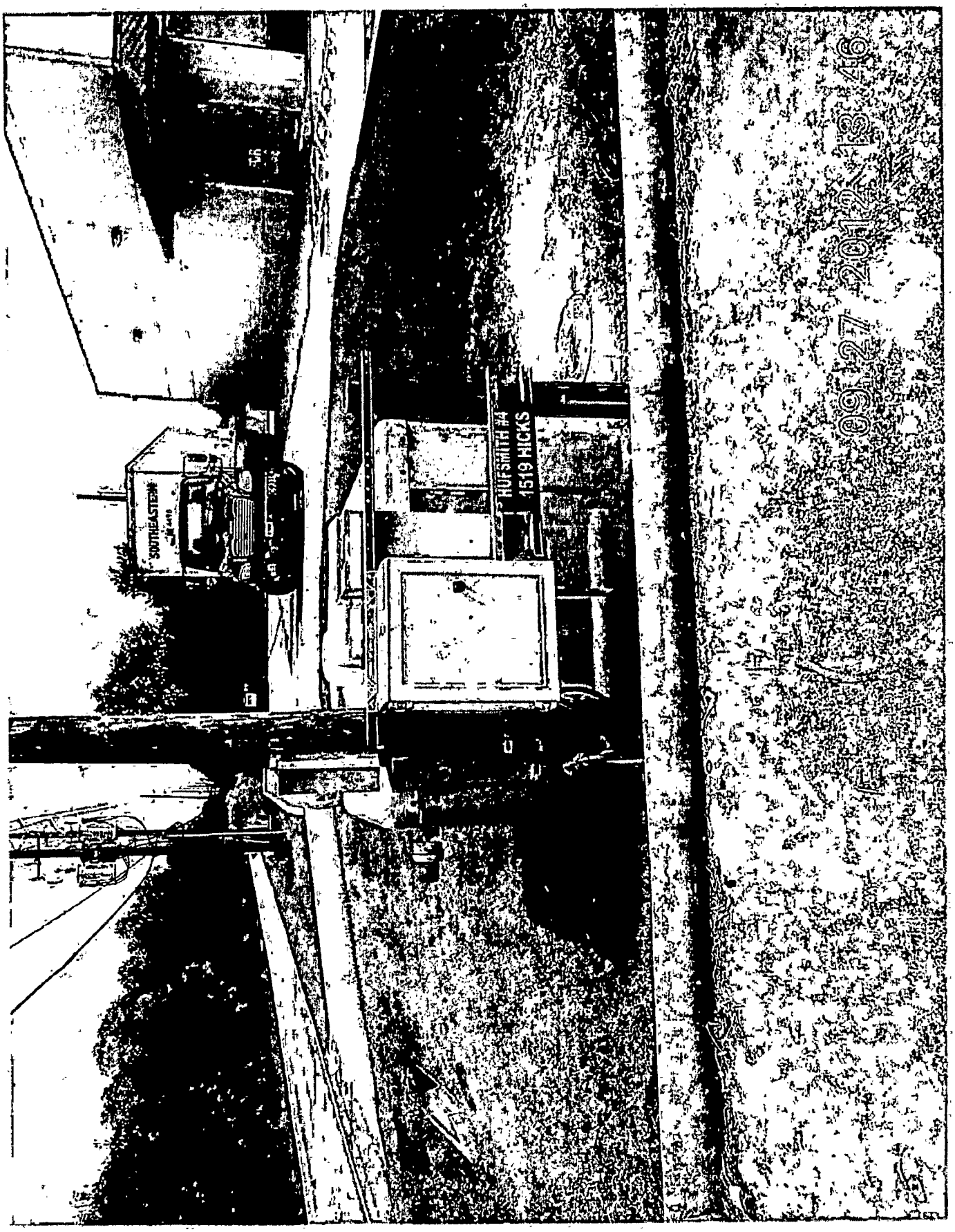
White Copy: Regulated Entity Representative Yellow Copy: TCEQ

TCEQ-20065 (Rev. 8/07)

(Note: Use additional pages as necessary) Page 1 of 1


SOUTHEASTERN
HUTSMITH #4
1519 HICKS

South

CITY OF TOMBALL – DAILY PROCESS REPORT

Date:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Sep 2012	17	18	19	20	21	22	23
Time:	7:00	7:00	7:00	7:00	7:05	8:20	8:10
Operator:	TW	TW	TW	TW	JS	GW	GW
Rainfall	.5"	0	0	0	0	0	0
Temperature	70°	71°	71°	60°	41°	65°	70°
Effluent Totalizer	378360 377368	379228 378360	380050 379228	380792 380050	381556 380792	382287 381556	383019 382287
Discharge	.992	.868	.822	.742	.764	.731	.732
S02 Totalizer							
Discharge							
ROTOR #1	ON	ON	ON	off	off	off	off
SV30							
D.O.							
ROTOR #2	ON	ON	ON	ON	ON	ON	ON
SV30							
D.O.							
ROTOR #3	off	off	off	ON	ON	ON	ON
SV30							
D.O.							
~~Contact Mbr #4 Color~~ Sample Temp				3.5°C	3.5°C	3.0°C	3.5°C
SV30							
D.O.							
Clarifier #1	OK	OK	OK	OK	OK	OK	OK
Appearance	CLEAR	CLEAR	CLEAR	CLEAR	Clear	Clr	Clr
Sludge Blanket							
Clarifier #2	OK	OK	OK	OK	OK	OK	OK
Appearance	CLEAR	CLEAR	CLEAR	CLEAR	Clear	Clr	Clr
Sludge Blanket							
Measuring Chamber	OK	OK	OK	OK	OK	OK	OK
Appearance	CLEAR	CLEAR	CLEAR	CLEAR	Clear	Clr	Clr
D.O. PH	2.8						
CL2 Residual	3.3	3.0	3.5	3.5	2.9	2.7	3.1
Comments: 3/T 3.5							

Daily Process Report
Permit Number _____

Page 1

South

CITY OF TOMBALL – DAILY PROCESS REPORT

Date:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Sep 2012	24	25	26	27	28	29	30
Time:	7:00	7:00	7:00	7:00	7:00	7:84	8:18
Operator:	TW	TW	TW	TW	TW	TW	TW
Rainfall	0	0	0	0	0	0	1.75 K
Temperature	68°	70°	72°	72°	78°	78°	70°
Effluent Totalizer	383849 383019	384673 383849	385512 384673	386304 385512	387044 386304	388105 387044	388806 388105
Discharge	.830	.824	.839	.792	.740	1.061	.701
S02 Totalizer							
Discharge							
ROTOR #1	off	off	off	ON	ON	ON	ON
SV30							
D.O.							
ROTOR #2	ON	ON	ON	off	off	off	off
SV30							
D.O.							
ROTOR #3	ON	ON	ON	ON	ON	ON	ON
SV30				180			
D.O.							
SAMPLER Temp.	4.6°C	3.4°C	3.7°C	3.0°C	3.6°C		
SV30							
D.O.							
Clarifier #1	OK	OK	OK	OK	OK	OK	OK
Appearance	CLEAR	CLEAR	CLEAR	Clear	CLEAR	CLEAR	CLEAR
Sludge Blanket				3"			
Clarifier #2	OK	OK	OK	OK	OK	OK	OK
Appearance	CLEAR	CLEAR	CLEAR	Clear	CLEAR	CLEAR	CLEAR
Sludge Blanket				6"			
Measuring Chamber	OK	OK	OK	OK	OK	OK	OK
Appearance	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
D.O. PH					6.0 7.2		
CL2 Residual	2.8	3.6	4.0	3.8	3.8	3.1	2.9
Comments:							

Daily Process Report
Permit Number _____

Page 1

(15)

CITY OF TOMBALL
Department of Public Works

BACKFLOW PREVENTION ASSEMBLY
TEST AND MAINTENANCE

ILLEGIBLE OR INCOMPLETE TEST REPORTS WILL NOT BE ACCEPTED

NAME OF PROPERTY: Southwest Water treatment
PROPERTY ADDRESS: 1211 Holderrieth
CITY: Tomball, STATE: TX, ZIP: 77375 KEY MAP: _____, PHONE: 281-290-1487
MAILING ADDRESS: 501 James St CONTACT BUSINESS: Same
Tomball TX 77375

Send This Original Report to: ***Tomball Public Works Department, 501 James Street, Tomball, TX 77375***

THE BACKFLOW PREVENTION ASSEMBLY DETAILED HEREON HAS BEEN TESTED AND MAINTAINED AS REQUIRED BY TCEQ-Chapter 290, RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS, CITY'S INTERNATIONAL PLUMBING CODE, AND IS CERTIFIED TO COMPLY WITH THE REQUIREMENTS

TYPE OF ASSEMBLY

☐ REDUCED PRESSURE PRINCIPLE (RP) ☑ REDUCED PRESSURE PRINCIPLE-DETECTOR (RPD) ☐ PRESSURE VACCUM BREAKER (PVB)
☐ DOUBLE CHECK VALVE (DCV) ☐ DOUBLE CHECK VALVE PROTECTOR (DCD) ☐ SPILL-RESISTANT PRESSURE VACCUM BREAKER (SVB)

MANUFACTURER Watts MODEL# 909M1QT SIZE 2" SERIAL NUMBER 4445619
LOCATED AT: Meter inside fence DATE INSTALLED: N/A

Is the assembly installed in accordance with manufacturer recommendations and/or City's International Plumbing Code? ✓

	REDUCED PRESSURE PRINCIPLE ASSEMBLY			PRESSURE VACCUM BREAKER & SVB	
	DOUBLE CHECK VALVE ASSEMLY		RELIEVE VALVE	AIR INLET	CHECK VALVE
	CHECK VALVE #1	CHECK VALVE #2			
INITIAL TEST	D.C. CLOSED TIGHT ☐ RP 7.1 PSI LEAKED ☐	CLOSED TIGHT ☑ 6.7 PSI LEAKED ☐	OPENED AT 23 PSI DID NOT OPEN ☐	OPENED AT _____ PSI DID NOT OPEN ☐	HELD AT _____ PSI LEAKED ☐
EPAIRS** AND \TERIAL USED					
\L TEST	D.C. CLOSED TIGHT ☐ RP: _____ PSI	CLOSED TIGHT ☐ _____ PSI	OPENED AT _____ PSI	OPENED AT _____ PSI	HELD AT _____ PSI

GUAGE USED: MODEL/MAKE Apollo TRS S/N 0209377 CALIBRATION DATE 8/3/11 (Tested annually)
RKS: ✓

BOVE TEST IS CERTIFIED TO BE TRUE AT THE TIME OF TESTING
ow Test Status ☐ Pass ☐ Fail

ACTOR's FIRM NAME: [illegible] BACKFLOW SERVICE
DDRESS: [illegible]
ONE#: [illegible]

CERTIFIED TESTER NAME: Cheryl Ezarza
CERTIFIED TESTER NO.: BP6010638
TEST DATE: 10/28/11
C.O.T WITNESS: _____ BADGE #: _____

EPORTS MUST BE KEPT FOR THREE YEARS.
I IS REQUIRED UPON INSTALLATION, REPAIR, OR RELOCATION AND ANNUALLY THERAFTER
SE ONLY MANUFACTURERS' REPLACEMENT PARTS.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 17, 2015

The Honorable Gretchen Fagan
Mayor of Tomball
501 James Street
Tomball, Texas 77375

Re: **Compliance Evaluation Investigation at:**
City of Tomball North Wastewater Treatment Plant
615 East Huffsmith, Harris County, Texas
TCEQ ID No.: WQ0010616001, EPA ID No.: TX0022381

Dear Mayor Fagan:

On February 17, 2015, Ms. Christi Torres of the Texas Commission on Environmental Quality (TCEQ) Houston Region Office conducted an investigation of the above-referenced facility to evaluate compliance with applicable requirements for water quality. No violations are being alleged as a result of the investigation; however, please see the enclosed Area of Concern and Additional Issues.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Ms. Christi Torres in the Houston Region Office at phone number 713-767-3774.

Sincerely,

Barbara Sullivan
Team Leader
Water Quality Management
Region 12 Houston

BSS/CHT/ci

Enclosure: Summary of Investigation Findings
Bypass for City of Tomball North Wastewater Treatment Plant

Direct Testimony of Glen Williams **Ex. GAW-17**

Summary of Investigation Findings

CITY OF TOMBALL NORTH WASTEWATER TREATMENT PLANT Investigation # 1227718
615 E HUFSMITH RD Investigation Date: 02/17/2015
TOMBALL, HARRIS COUNTY, TX 77375

Additional ID(s): TX0022381
WQ0010616001

AREA OF CONCERN

Track No: 566461
30 TAC Chapter 305.125(5)

Alleged Violation:
Investigation: 1227718 Comment Date: 04/07/2015

Failed to test the reduced-pressure principal backflow prevention assembly (RPBA) annually. Specifically, it was determined the RPBA had not been tested in the past year.

Recommended Corrective Action: Each RPBA must be tested annually. Submit a passing test certificate for the RPBA.

Resolution: On February 25, 2015, documentation was submitted indicating the alleged violation has been resolved.

ADDITIONAL ISSUES

Description	Additional Comments
Have unauthorized discharges occurred at the plant or in the collection system since the last CCI?	There has been one unauthorized discharge reported in the past 18 months which was due to a grease blockage. See attached bypass report.
Is the regulated entity compliant with the self-monitored effluent limitations?	One effluent violation was reported in the past 12 months which was an exceedance of the daily average and daily max of total copper in December 2014. See attached ISIS data.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 17, 2015

The Honorable Gretchen Fagan
Mayor of Tomball
501 James Street
Tomball, Texas 77375

Re: Compliance Evaluation Investigation at:
City of Tomball South Wastewater Treatment Plant
12411 Holderrieth, Harris County, Texas
TCEQ ID No.: WQ0010616002, EPA ID No.: TX0117595

Dear Mayor Fagan:

On February 17, 2015, Ms. Christi Torres of the Texas Commission on Environmental Quality (TCEQ) Houston Region Office conducted an investigation of the above-referenced facility to evaluate compliance with applicable requirements for water quality. No violations are being alleged as a result of the investigation; however, please see the enclosed Areas of Concern and Additional Issue.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Ms. Christi Torres in the Houston Region Office at phone number 713-767-3774.

Sincerely,

Barbara Sullivan
Team Leader
Water Quality Management
Region 12 Houston

BSS/CHT/ci

Enclosure: Summary of Investigation Findings

Direct Testimony of Glen Williams **Ex. GAW-18**

Direct Testimony of Glen Williams

COT1269

Ex. GAW-18

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location If Different)
NAME: CITY OF TOMBALL
ADDRESS: 401 MARKET ST
TOMBALL, TX 77375
FACILITY: TOMBALL SOUTH WWTP
LOCATION: 4300' E INTX HOLDERRIETH RD & HOLDERRIETH RD
ATTN: DAVID KAUFFMAN

TX0117585	001-A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
09/01/2014	09/30/2014

DMR Mailing ZIP CODE: 77375
MAJOR
(SUBR 12)
DOMESTIC FACILITY - 001
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Oxygen, dissolved [DO]	SAMPLE MEASUREMENT	******	******	******	7.89	******	******		0	02107	GRAB
00300 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	4 MO MIN	******	******	mg/L		Twice Every Week	GRAB
pH	SAMPLE MEASUREMENT	******	******	******	7.36	******	7.76		0	02107	GRAB
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	6 MINIMUM	******	9 MAXIMUM	SU		Weekly	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	29.0	******		******	21.08	1.3		0	02107	COMP24
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	188 DAILY AV	******	lb/d	******	15 DAILY AV	40 DAILY MX	mg/L		Twice Every Week	COMPOS
Nitrogen, ammonia total [as N]	SAMPLE MEASUREMENT	20.84			******	20.10	20.10		0	02107	COMP24
00610 1 0 Effluent Gross	PERMIT REQUIREMENT	38 DAILY AV	******	lb/d	******	3 DAILY AV	7 DAILY MX	mg/L		Twice Every Week	COMPOS
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.957	1.761		******	******	******	******	0	99/99	TOTALZ
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. DAILY AV	Req. Mon. DAILY MX	MGD	******	******	******	******		Continuous	TOTALZ
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	******	1799		******	******	******	******	0	99/99	TOTALZ
50050 P 0 See Comments	PERMIT REQUIREMENT	******	4166 2HR PEAK	gal/min	******	******	******	******		Continuous	TOTALZ
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.905	******		******	******	******	******	0	99/99	TOTALZ
50050 Y 0 Effluent Gross (Supplementary)	PERMIT REQUIREMENT	1.5 ANNL AVG	******	MGD	******	******	******	******		Continuous	TOTALZ

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE
Glen Williams/Supervisor	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Glen Williams	281	2901435	02/18/2015
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Revised monthly minimum chlorine residual is 2.33 mg/L.

Direct Testimony of Glen Williams

COT1270

Ex. GAW-18

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)
NAME: CITY OF TOMBALL
ADDRESS: 401 MARKET ST
TOMBALL, TX 77375
FACILITY: TOMBALL SOUTH WWTP
LOCATION: 4300' E INTX HOLDERRIETH RD & HOLDERRIETH RD
ATTN: DAVID KAUFFMAN

TX0117595	001-A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
09/01/2014	09/30/2014

DMR Mailing ZIP CODE: 77375
MAJOR
(SUBR 12)
DOMESTIC FACILITY - 001
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Chlorine, total residual	SAMPLE MEASUREMENT	******	******	******	******	******	0.03		O	01/01	GRAB
50060 A 0 Disinfection, Process Complete	PERMIT REQUIREMENT	******	******	******	******	******	.1 INST MAX	mg/L		Daily	GRAB
Chlorine, total residual	SAMPLE MEASUREMENT	******	******	******	2.33	******	******		O	01/01	GRAB
50060 B 0 Prior to Disinfection	PERMIT REQUIREMENT	******	******	******	1 MO MIN	******	******	mg/L		Daily	GRAB
E. coli	SAMPLE MEASUREMENT	******	******	******	******	3	8	MPN	O	01/07	GRAB
51040 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	63 DAILY AV	200 DAILY MX	CFU/100mL		Weekly	GRAB
Solids, total dissolved	SAMPLE MEASUREMENT	4520.35	******		******	534.67	721		0	02/07	COMP24
70295 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. DAILY AV	******	lb/d	******	Req. Mon. DAILY AV	Req. Mon. DAILY MX	mg/L		Twice Every Week	COMPOS
BOD, carbonaceous, 05 day, 20 C	SAMPLE MEASUREMENT	216.8	******		******	22	2		O	02/07	COMP24
80082 1 0 Effluent Gross	PERMIT REQUIREMENT	125 DAILY AV	******	lb/d	******	10 DAILY AV	25 DAILY MX	mg/L		Twice Every Week	COMPOS

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE
Glen Williams Supervisor	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	GWilliams	281	290 1405	02/18/2015
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Revised monthly minimum chlorine residual is 2.33 mg/L.

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

02/12/2014 Page 2

To: City Of Tomball
From: Vernon Hagan
Subject: South Plant Flow for WWTP
Date: February 23, 2015

Glen,

I Visited the South Plant on February 23, 2015, I checked the Flow Meter and found that the Level was reading correct but when compared to the actual Flow the reading read high, I checked it at 2 different levels and found the problem was repeatable. I verified the Settings and Calibration and found them to be correct with the exception of the Temperature Compensator.

I Replaced the Temperature Compensator and Re-Calibrated the Flow meter and verified the Actual Flow against the Issco Manual in several different levels and the reading where correct across the spectrum.

Please let me know if you would like me to do anything else in regards to this issue.

Thanks,

Vernon A Hagan

Vernon Hagan
(281) 797-2887
www.mudinstruments.com

Mud Instruments
10902 David Lane
Crosby, Texas 77532
(O) (281)421-1864
(C) (281)797-2887
(F) (281)421-5785

Mud Instruments
10902 David Lane - Crosby, TX 77532
(281) 421-1864 - Fax (281) 421-5785

Certificate Of Calibration

Owner: City Of Tomball
Location: South Plant
Application: WWTP Discharge

Certificate No: 11261405

We certify that the following instrument(s) is/are in good working order and conform to the Manufacturers specified accuracy. All workmanship and Materials are guaranteed to be of the highest standards and in accordance with the manufacturers guidelines.

Measuring Element: 24 Inch Parshall Flume
Flowmeter:
Manufacturer: Miltronics
Model Number: OCM III
Range: 14.64 Inches
Variance Found: < 1%
Serial No: PBD/X4130191
Specified Accuracy: 1%
Zero Distance: 37.94 Inches

Recorder:
Manufacturer: Honeywell
Model Number: DR4300 Series
Range: 0 - 7 MGD
Variance Found: < 1%
Chart Type:
Serial No: 0744Y776045600005
Specified Accuracy: 1%
Ink Cartridge:

Calibration Data: Instrument was Calibrated as per the Manufactures recommendations and verified by using the Isco Manual Range was set for 0 - 7 MGD, Blanking Distance 12 Inches Sensor

Comments: None

Date of Calibration: February, 23 2014
Technician: Vernon Hagan

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☐ Unauthorized Discharge ☒ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball South **Telephone No (##########):** (281) 290-1425

☒ Permittee ☐ Subscriber **TCEQ Region:** R12 - Houston **County:** Harris ***Permit Number:** 0010616002

Noncompliance Summary

Description and Cause of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

2 hour peak flow violation, permitted 4,166 gpm, reported 4,278 gpm. 7.75 + inches of rain in 24 hours. Inflow and/or infiltration probable cause of noncompliance.

Duration:

Start Date: 7/13/2012 **End Date:** 7/13/12 **Or** **Date Expected to be Corrected:**

Time: 2:45 p.m. **Time:** 5:30 p.m.

Potential Danger to Human Health and Safety or the Environment:

None

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

Field Measurements ☐ Yes ☒ No

Laboratory Samples ☐ Yes ☒ No

Fish Kill(if yes, estimated number killed): ☐ Yes ☒ No

Actions Taken to Mitigate Adverse Effects:

N/A

Actions Taken to Correct the Problem and Prevent Recurrence:

Checked and monitored suspect manholes during and after rain event.

Verification Information

Information Reported By (Name/Title): Glen Williams/wastewater supervisor **Date Reported:** 8/2/2012

Signature:

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

*** If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied. If you are uncertain of this permit number, you may call the TCEQ Regional Office for assistance.**

1015-1040-0001-2253-9528
1015-0640-0000-3732-1782

File

Water Quality Noncompliance Notification

***See back of Form for Guidance for Completion*.**

☐ Unauthorized Discharge ☒ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball **Telephone No (##########):** (281) 290-1425

☒ Permittee ☐ Subscriber **TCEQ Region:** R12 - Houston **County:** Harris ***Permit Number:** 0010616001

Noncompliance Summary

Description and Cause of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

The copper sample taken on 09/20/2016 had a value of .025 mg/l making the daily average for the month of September to be .0175 mg/l, which exceeds the permitted level of .016 mg/l. The cause of the non-compliance is unknown.

Duration:

Start Date: **End Date:** **Or** **Date Expected to be Corrected:**

Time: **Time:**

Potential Danger to Human Health and Safety or the Environment:

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

Field Measurements ☐ Yes ☒ No

Laboratory Samples ☒ Yes ☐ No

Fish Kill(If yes, estimated number killed): ☐ Yes ☒ No

Actions Taken to Mitigate Adverse Effects:

Actions Taken to Correct the Problem and Prevent Recurrence:

Verification Information

Information Reported By (Name/Title): Glen Williams/Supervisor **Date Reported:** Oct 19, 2016

Signature: Glen Williams

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

*** If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied. If you are uncertain of this permit number, you may call the TCEQ Regional Office for assistance.**

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☐ Unauthorized Discharge ☒ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball **Telephone No (##########):** (281) 290-1425

☒ Permittee ☐ Subscriber **TCEQ Region:** R12 - Houston **County:** Harris ***Permit Number:** 0010616001

Noncompliance Summary

Description and Cause of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

The daily average of .029 mg/L and the daily maximum of .041 mg/L for total copper exceeded the permitted limits of .016 mg/L daily average and .033 mg/L daily maximum for the month of November 2016. Laboratory results are attached. The cause of the noncompliance is unknown.

Duration:

Start Date: **End Date:** **Or** **Date Expected to be Corrected:**

Time: **Time:**

Potential Danger to Human Health and Safety or the Environment:

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

Field Measurements ☐ Yes ☒ No

Laboratory Samples ☒ Yes ☐ No

Fish Kill(If yes, estimated number killed): ☐ Yes ☒ No

Actions Taken to Mitigate Adverse Effects:

Actions Taken to Correct the Problem and Prevent Recurrence:

Magnesium Oxide is being added to the head of the plant in an effort to reduce the total copper levels in the plant process and also testing for copper in the collection system by taking raw wastewater samples from the lift stations. (See attached lab results)

Verification Information

Information Reported By (Name/Title): Glen Williams/Supervisor **Date Reported:** Dec 14, 2016

Signature: Glen Williams

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

*** If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied. If you are uncertain of this permit number, you may call the TCEQ Regional Office for assistance.**

Central Registry

The Customer Name displayed may be different than the Customer Name associated to the Additional IDs related to the customer. This name may be different due to ownership changes, legal name changes, or other administrative changes.

Detail of: **Wastewater Permit WQ0010616001**
For: **CITY OF TOMBALL NORTH WWTP (RN102177763)**
1,400 FT N OF THE INTERSECTION OF NEAL ST AND E HU
Permit Status: **ACTIVE**
Held by: **CITY OF TOMBALL (CN600667190)** View 'Issued To' History
N/A View Compliance History
Mailing Address: 401 MARKET ST TOMBALL, TX 77375 -4645

Notice of Violations Current TCEQ Rules

NOV Date	Status	Citation/Requirement Provision	Allegation	Classification	Self Reporting Indicator
11/30/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
09/30/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
06/30/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
05/31/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
04/30/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
03/31/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more	MODERATE	YES

			permit parameter		
12/31/2014	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
06/30/2013	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
11/30/2011	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES

Central Registry

The Customer Name displayed may be different than the Customer Name associated to the Additional IDs related to the customer. This name may be different due to ownership changes, legal name changes, or other administrative changes.

Detail of: **Wastewater Permit WQ0010616002**
For: **CITY OF TOMBALL SOUTH WWTP (RN101609899)**
LOCATED S OF HOLDERRIETH RD, APPROX 2100 FT N OF W
Permit Status: **ACTIVE**
Held by: **CITY OF TOMBALL (CN600667190)** View 'Issued To' History
N/A View Compliance History
Mailing Address: 401 MARKET ST TOMBALL, TX 77375 -4645

Notice of Violations Current TCEQ Rules

NOV Date	Status	Citation/Requirement Provision	Allegation	Classification	Self Reporting Indicator
06/30/2016	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
12/31/2014	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
04/30/2014	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
05/31/2013	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES
07/31/2012	ACTIVE	2D TWC Chapter 26, SubChapter A 26.121(a) ; 30 TAC Chapter 305, SubChapter F 305.125(1)	Failure to meet the limit for one or more permit parameter	MODERATE	YES

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☒ Unauthorized Discharge ☐ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball **Telephone No (##########):** (832) 349-8027

☒ Permittee ☐ Subscriber **TCEQ Region:** R12 - Houston **County:** Harris ***Permit Number:** 0010616002

Noncompliance Summary

Description and Cause of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

Contractor damaged 6" force main during excavation. Contractor dug hole around damaged pipe and when pump came on wastewater would fill the hole and then drain back into the pipe when pump shut off. Location is 14301 Medical Complex Dr., Tomball, Texas 77375. Estimated volume is 500 gallons.

Duration:

Start Date: 8/31/15 **End Date:** 8/31/15 **Or** **Date Expected to be Corrected:**

Time: 11:30 A.M. **Time:** 7:00 P.M.

Potential Danger to Human Health and Safety or the Environment:

None

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

Field Measurements ☐ Yes ☒ No

Laboratory Samples ☐ Yes ☒ No

Fish Kill(If yes, estimated number killed): ☐ Yes ☒ No

Actions Taken to Mitigate Adverse Effects:

Calcium hypochlorite was sprinkled on the affected area when repair was complete.

Actions Taken to Correct the Problem and Prevent Recurrence:

Repair clamp was installed on the force main break on 8/31/2015 and the broken section was replaced with new pipe on 9/1/2015.

Verification Information

Information Reported By (Name/Title): Glen Williams/Supervisor **Date Reported:** Sep 2, 2015

Signature: Glen Williams

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

*** If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied. If you are uncertain of this permit number, you may call the TCEQ Regional Office for assistance.**

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☒ Unauthorized Discharge ☐ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball **Telephone No (##########):** (832) 349-8027

☒ Permittee ☐ Subscriber **TCEQ Region:** R12 - Houston **County:** Harris ***Permit Number:** 0010616001

Noncompliance Summary

Description and Cause of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

The Tomball North wastewater treatment plant at 615 E. Hufsmith Rd. An aeration basin drain and manhole connected to the drain overflowed due to heavy rain (4.25 inches) and lift station level at 26 feet. The discharge from the high level in the lift station overflowed onto the concrete area and driveway at the plant.

Duration:

Start Date: 5/26/15 **End Date:** 5/26/15 **Or** **Date Expected to be Corrected:**

Time: **Time:**

Potential Danger to Human Health and Safety or the Environment:

None.

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

Field Measurements ☐ Yes ☒ No

Laboratory Samples ☐ Yes ☒ No

Fish Kill(If yes, estimated number killed): ☐ Yes ☒ No

Actions Taken to Mitigate Adverse Effects:

A vactor removed an estimated 400 gallons of material and washed down the affected area. HTH was used for disinfection.

Actions Taken to Correct the Problem and Prevent Recurrence:

Widespread flooding in area.

Verification Information

Information Reported By (Name/Title): Glen Williams/Supervisor **Date Reported:** May 27, 2015

Signature: Glen Williams

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

*** If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied. If you are uncertain of this permit number, you may call the TCEQ Regional Office for assistance.**

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☐ Unauthorized Discharge ☒ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball South Wastewater Facility **Telephone No (##########):** (832) 349-8027

☒ Permittee ☐ Subscriber **TCEQ Region:** R12 - Houston **County:** Harris ***Permit Number:** 0010616002

Noncompliance Summary

Description and Cause of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

3/30/14 bearings failed on Mammoth Rotor #3 causing severe damage to the rotor shaft. Bearings and shaft were replaced on 4/3/14. 4/8/14 the lab reported a 9.209 ammonia nitrogen value of the sample taken on 4/5/14 exceeding the 7 mg/l daily maximum limit of the permit. This value along with the 8.312 ammonia nitrogen value of the sample taken on 4/4/14 exceeded the 7-day average of 5 mg/l of the permit limit.

Duration:

Start Date: **End Date:** Or **Date Expected to be Corrected:** 4/7/14

Time: **Time:**

Potential Danger to Human Health and Safety or the Environment:

None.

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

Field Measurements ☐ Yes ☐ No **Laboratory Samples** ☒ Yes ☐ No **Fish Kill(If yes, estimated number killed):** ☐ Yes ☒ No

Actions Taken to Mitigate Adverse Effects:

Actions Taken to Correct the Problem and Prevent Recurrence:

Bearings and shaft were replaced on 4/3/14 and rotor was put back in service. Mammoth Rotor #2 has been repaired, installed and put back in service on 4/9/14.

Verification Information

Information Reported By (Name/Title): Glen Williams/Wastewater Sup. **Date Reported:** Apr 9, 2014

Signature: Glen Williams

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

*** If the noncompliance is an unauthorized discharge from a wastewater collection system, use the permit number of the treatment plant to which the collection system is tied. If you are uncertain of this permit number, you may call the TCEQ Regional Office for assistance.**

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☒ Unauthorized Discharge ☐ Reportable Effluent Violation ☐ Other

General Information

Entity Name: CITY OF TOMBALL **Telephone No:** (281) 290-1400

☒ Permittee ☐ Subscriber

TCEQ Region: 12 **County:** HARRIS ***Permit Number:** 0022381

Noncompliance Summary

Description of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge):

MANHOLE OVERFLOWED ONTO THE PROPERTY IN APPROXIMATELY A 30 FT CIRCUMFERENCE. APPROXIMATELY 300 GALLONS.

Cause of Noncompliance:

DISCHARGE CAUSED BY EXCESSIVE AMOUNTS OF RAIN AND AREA FLOODING.

Duration: **Start Date and Time:6/2/2016 5:00PM**
End Date and Time: 6/2/2016 6:00PM **Or** **Date Expected to be Corrected:**

Potential Danger to Human Health and Safety or the Environment: NO DANGER

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

☐ Yes ☒ No **Field Measurements**
☐ Yes ☒ No **Laboratory Samples**
☐ Yes ☒ No **Fish Kill If yes, estimated number killed:**

Actions Taken to Mitigate Adverse Effects: SPREAD GRANULAR HTH ON EFFECTED AREA

Actions Taken to Correct the Problem and Prevent Recurrence:

Verification Information

Information Reported By (Name/Title): _____

Date Reported: _____ **Signature:** _____

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

Direct Testimony of Glen Williams Ex. GAW-23

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☒ Unauthorized Discharge ☐ Reportable Effluent Violation ☐ Other

General Information

Entity Name: city of tomball **Telephone No:** (281-290-1400

☒ Permittee ☐ Subscriber

TCEQ Region: 12 **County:** Harris ***Permit Number:** 0022381

Noncompliance Summary

Description of Noncompliance (Include location, discharge route, and estimated volume of unauthorized discharge): Discharge occurred @ manhole @ the southeast corner of 820 E. Carrell St. minmal spillage around manhole; route west of manhole, approximately 200 gallons.

Cause of Noncompliance: Large piece of concrete blocking outlet side of manhole.

Duration: **Start Date and Time:** 2-25-16 / 8:58am
End Date and Time: 2-25-16 / 10:15am **Or** **Date Expected to be Corrected:** 2-25-16

Potential Danger to Human Health and Safety or the Environment: Minimal danger. Was able to unstop the main line and after sewer drained down entered manhole down stream from discharge, and found, and removed large piece of concrete obstructing the out flow of the manhole. This should correct the problem we have had at this location.

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

☐ Yes ☒ No Field Measurements
☐ Yes ☒ No Laboratory Samples
☐ Yes ☒ No Fish Kill If yes, estimated number killed:

Actions Taken to Mitigate Adverse Effects: Granular chlorine was spread on affected area. Pumped discharged sewer back into manhole.

Actions Taken to Correct the Problem and Prevent Recurrence: Entered manhole and removed a large piece of concrete blocking outlet side of manhole.

Verification Information

Information Reported By (Name/Title): JOHN ESCAMILLA / SUPERINTENDENT

Date Reported: 2-25-16 **Signature:**

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division, P.O. Box 13087, Austin, TX 78711-3087.

Water Quality Noncompliance Notification

See back of Form for Guidance for Completion

☒ Unauthorized Discharge ☐ Reportable Effluent Violation ☐ Other

General Information

Entity Name: City of Tomball **Telephone No:** (281) 290-1400

☒ Permittee ☐ Subscriber

TCEQ Region: 12 **County:** Harris ***Permit Number:** 0022381

Noncompliance Summary

Description of Noncompliance (include location, discharge route, and estimated volume of unauthorized discharge): Discharge occurred @ manhole @ the southeast corner of 820 E. Carrell st. Minimal spillage around manhole, route west of manhole, approximately 100 gallons.

Cause of Noncompliance:
Grease build up in main distribution line.

Duration: **Start Date and Time:** 2-22-16 8:15 am
End Date and Time: 2-22-16 9:00 am **Or** **Date Expected to be Corrected:** 2-22-16

Potential Danger to Human Health and Safety or the Environment: Very minimal danger. Was able to unstop the main line and break stoppage free quickly with little discharge.

Actions Taken

Monitoring Data: Data should be attached or submitted to TCEQ when available.

☐ Yes ☒ No **Field Measurements**
☐ Yes ☒ No **Laboratory Samples**
☐ Yes ☒ No **Fish Kill If yes, estimated number killed:**

Actions Taken to Mitigate Adverse Effects: Granular chlorine was spread on the affected area.

Actions Taken to Correct the Problem and Prevent Recurrence: Used jet rig machine to thoroughly clean out main line and other man holes upstream and down steam of 820 E. Carrell. Added this area to preventative maintenance list.

Verification Information

Information Reported By (Name/Title): John Escamilla/Utilities Superintendent

Date Reported: 2-22-16 J. Escamilla **Signature:**

Note: If this form is being used for a 5-day written report, a copy of the form should be sent to the TCEQ Region Office, and the original to: TCEQ, Compliance Monitoring Team (MC224), Enforcement Division,

Direct Testimony of Glen Williams **Ex. GAW-23**

COT Exhibit 5

SOAH DOCKET NO. 473-17-2560.WS
PUC DOCKET NO. 46336

APPLICATION OF THE CITY OF TOMBALL TO OBTAIN WATER AND SEWER CERTIFICATES OF CONVENIENCE AND NECESSITY IN HARRIS AND MONTGOMERY COUNTIES, TEXAS	**§**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

DIRECT TESTIMONY OF DAVID ESQUIVEL

ON BEHALF OF APPLICANT, CITY OF TOMBALL

MAY 12, 2017

EXHIBITS

Exhibit DME-1	Resume
Exhibit DME-2	Water CCN Boundary (zoom view)
Exhibit DME-3	Sewer CCN Boundary (zoom view)
Exhibit DME-4	City of Tomball Code of Ordinances, Section 9
Exhibit DME-5	City of Tomball Comprehensive Master Plan
Exhibit DME-6	North Harris County Regional Water Authority Conversion Plan
Exhibit DME-7	City of Tomball Infrastructure Master Plan
Exhibit DME-8	City of Tomball Capital Improvement Plan
Exhibit DME-9	HMW SUD's Request for Service
Exhibit DME-10	Notice of Intent to HOE WSC
Exhibit DME-11	Harris County Request for Service
Exhibit DME-12	City of Houston Signed Agenda Item
Exhibit DME-13	Approved City of Houston City Council Minutes
Exhibit DME-14	City of Tomball Insurance Services Office Rating – In-City
Exhibit DME-15	City of Tomball Insurance Services Office Rating – ETJ
Exhibit DME-16	ABC13 News "Water Woes" Article
Exhibit DME-17	City of Tomball Utility Rates
Exhibit DME-18	Quadvest Water & Sewer Tariffs
Exhibit DME-19	NHCRWA Fee Notice
Exhibit DME-20	City of Tomball Code of Ordinances, Section 46

DIRECT TESTIMONY OF DAVID ESQUIVEL, WITNESS FOR APPLICANT, CITY OF TOMBALL

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name.

A. David Matty Esquivel.

Q. Please state your occupation and place of employment.

A. I am the Director of Public Works for the City of Tomball ("City" or "Tomball"). I have been in this position since January 2015.

Q. Please outline your educational and professional background.

A. I received a Bachelor's of Science degree in Civil Engineering from Texas Tech University in 2001. I am also a Licensed Professional Engineer licensed in the state of Texas, license number 96624, and I have completed the Public Funds Investment Act (PFIA) certification.

My professional experience began as a project engineer for a consulting firm. At that firm, we specialized in serving smaller cities, so that firm engineers would act as a particular city engineer. I became a project manager in the firm and assisted several cities with their engineering needs. I was then recruited by the City of Cleburne, where I started as an engineer in their Engineering and Planning department in 2008. Once I obtained my professional license, I was promoted to City Engineer. Within a couple of years, I was then promoted to Director of Public Works after the prior director left for a position in another city. In May 2011, I was promoted to Assistant City Manager. I also retained my responsibilities as Director of Public Works. Currently I am working as the Director of Public Works for the City of Tomball. Exhibit DME-1 is a copy of my professional resume.

Q. Please describe your job responsibilities for the City of Tomball.

A. As the Director of Public Works, I am responsible for the Streets and Drainage, municipal facilities, parks, fleet, sanitation, water distribution and supply, sewer collection and treatment, and gas distribution departments. After a year as the Director of Public Works for Tomball, I also took over the Capital Improvements Projects ("CIP") program.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to support the application for CCN, provide information regarding the current status of the City's water and sewer systems, and to describe its technical and managerial ability to provide continuous and adequate water and sewer utility service to an expanded service area. I am also testifying on the City's long-range planning that has and will be implemented for future expansion and plans for the water and sewer systems. It is critical for any utility to provide the long range planning necessary to have a complete and comprehensive CIP program that will be fiscally responsible to the rate payers. I am testifying on behalf of the City.

Q. Have you previously testified before the Public Utility Commission of Texas or the Texas Commission on Environmental Quality?

A. No, I have not previously testified before the Commission or TCEQ.

Q. What exhibits have you prepared in support of your testimony?

A. My direct testimony and testimony exhibits DME-1 through DME-20 were prepared by me or under my direction, supervision, or control and are true and correct to the best of my knowledge.

III. CCN AREA GENERALLY

Q. Is the City requesting the same geographic boundaries for the water and sewer CCN areas?

A. While the expanded water and sewer service areas would include all of the area within the City limits and the extra territorial jurisdiction ("ETJ") boundaries, the proposed water and sewer boundaries are not identical. As I explain below, the City carefully worked around existing water and sewer CCN areas when defining the Tomball CCN areas.

Q. How did the City provide public notice of its requested water and sewer areas?

A. The City's consulting engineer, Richard Weatherly, P.E. with Freese and Nichols, Inc. ("FNI") prepared the application under my direct supervision. This included the public notice that the PUC approved and the City sent by first class mail.

Q. Who mailed the notices?

A. FNI utilized the PUC template for notifying neighboring utilities, cities and landowners, and FNI added specific information about the City's Water and Sewer CCN application as necessary. FNI then provided the City with the notice forms and mapping to be included with the notice as well as the addresses where notice forms should be mailed. Addresses were obtained from Harris County Appraisal District ("HCAD"). City of Tomball Administrative staff then mailed the notices to the groundwater conservation district, the county judges, retail public utilities within two miles of the requested boundary, and required landowners via first class mail. The United States Postal Service forwarded any notices that were returned to the City (but included a new address).

Q. Is the HCAD information regarding the contact information the most accurate data available to the City to find the property owners who need to be notified?

A. The HCAD information has the most recent contact information for the property owners in Harris County. This information is certified every year and is current to the latest year.

Q. Who assured that the information was correct and mailed?

A. The City completed affidavits certifying that the City mailed the required notices and published the appropriate notices in a newspaper of general circulation. FNI submitted the City's affidavits to the PUC on January 10, 2017. PUC deemed the notification sufficient on January 25, 2017.

Q. After public notice, did the City receive any inquiries about its application? If so, from whom?

A. Yes. We received two inquires that resulted in one meeting with staff and one telephone conference. The in-person meeting with staff was with an individual, Mr. Milmo, located on the west end of FM 2920. The phone conversation was with another individual, Russell De Nina, located on the south side of town on Holderrieth Road.

During our conversation with Mr. Milmo, he expressed concerns that his property would be included within the proposed boundary. However he decided to remain within the proposed CCN boundaries, as issuance of the CCN to the City would provide him with an additional option for water and sewer services in the future. Russell DeNina contacted the PUC to request that his property be removed from the City's requested service area.

Q. Did Mr. DeNina provide an explanation why he chose to be removed the City's CCN application area?

A. John Escamilla, City of Tomball Utilities Superintendent, did call Mr. DeNina about his decision and he informed Mr. Escamilla that he did not want to be tied to the City's zoning requirements should he be required to be annexed into the City in the future. The City had no objection to his removal.

Q. Would the City annex a landowner into the City if they were included in the service area of the CCN?

A. Being in the water and sewer service areas does not require annexation into the city limits.

Q. Did the City receive any requests to modify the application boundary?

A. No, the City did not receive any requests to change the proposed boundaries in any way, including the two protestants: Quadvest, L.P. ("Quadvest") and Undine Texas, LLC. Mr. DeNina did not request a change of the boundary per se, but contacted the PUC directly with his request to be removed from the application area entirely. Richard Weatherly included an exhibit with his testimony that depict the requested CCN area without Mr. DeNina's property. This map is revised from the map provided in the original CCN application.

Q. How did you address the existing CCN's within the proposed area before filing your application?

A. Existing CCN's were identified and removed before determining the boundary of the City of Tomball's proposed CCN service area to ensure that there were no overlapping boundaries. Additionally, we attempted to contact and discuss the application with any CCN holders that were located adjacent to the boundaries of the City of Tomball application area prior to the submittal. By doing so, we were attempting to ensure that the entities with current CCN's adjacent to the City of Tomball's application area were aware of the application before it was filed. We wanted to ensure that we respected each existing CCN holder's boundaries.

Quadvest has alleged that the City's requested area overlapped with its existing CCN boundary. There has been some confusion about an overlap with Quadvest's CCN boundaries, but none exists. GIS confirms the City's requested CCN area is adjacent but does not actually overlap with Quadvest's CCN. The lines on the original PUC maps are thick, which may confuse what GIS otherwise clarifies. Exhibit DME-2 is a detailed view of the proposed water CCN boundary, and Exhibit DME-3 is a zoomed-in view of the proposed sewer CCN boundary. Exhibit DME-3 was based on the Harris County Tax Maps.

Q. Why did the City choose the requested CCN area?

A. A City's ETJ is the area that the Texas Legislature allows municipalities to regulate development to ensure future development complies with the municipality's water, sewer, and other development regulations. The ETJ allows a municipality to grow or annex territory in more efficient manner. Annexation requires that the same level of service that the City provides

its citizens is also provided to all areas that are annexed into the city limits. Long-range master planning is required for a city to provide the level of services that all of the citizens receive. Major facilities, including water plants, wastewater treatment plants, water transmission lines, sewer trunk lines, lift stations, etc., are sized based on the projected growth and demands. Therefore, to be able to provide the same level of service as the residents within the city limits receive, the water and sewer service areas need to match the areas where the City may annex. However, we specifically chose CCN boundaries wholly within the City and ETJ to avoid overlap and conflict with other certificated providers.

Q. Does the City plan on annexing any additional property within the ETJ?

A. Annexation is a policy decision determined by the City Council in place at the time. However, the City's current and past policy is not to involuntarily annex. Rather, the only annexations are voluntary and due mainly to a desire for city services like emergency response (police and fire).

Q. What is the purpose of the ETJ?

A. According to the Texas Local Government Code, the purpose of the ETJ is to designate certain areas as the extraterritorial jurisdiction of municipalities to promote and protect the general health, safety, and welfare of persons residing in and adjacent to the municipalities. The City Council has adopted a policy relating to the sales of municipal utilities in City of Tomball Code of Ordinances. Sec 9.07 of the Code of Ordinances gives the power and authority to the City Council to provide city services and utilities to residents within the city limits and ETJ. See Exhibit DME-4, for the City of Tomball Code of Ordinances, Section 9.

Q. What else is significant regarding the requested area?

A. A number of businesses, political subdivisions, and individuals have requested service. The majority of our current customers are within the City's corporate boundaries, so the City already provides water and sewer service to the majority of the requested area. All the requested area is within the City's planning area.

One of the requests, for example, is a request from Pigs Unlimited to be annexed into the city limits to receive water service. Pigs Unlimited is an oil and gas field operations company that is developing property for manufacturing. Another entity is HCID #17. This district was within the City of Houston's ETJ, but then requested to be released from Houston's ETJ and added to the City of Tomball's ETJ. The City is currently in discussions with the district to provide either wholesale water service or retail service after annexation.

Q. What do you mean by the City's "planning area"?

A. The City has a Comprehensive Master Plan that was adopted by the City Council on December 7, 2009. This plan includes the existing city limits as well as future projections of development including the ETJ. I have provided the Comprehensive Master Plan as Exhibit DME-5.

Q. What is the purpose and scope of the Comprehensive Master Plan?

A. The Comprehensive Master Plan ensures that future growth and development occurs in a safe, orderly, and healthy fashion. The City's plan seeks, through regulations (adopted under the Master Plan), to promote the health, safety and general welfare of the municipality. Chapter 213 of the Texas Local Government Code authorizes cities to adopt a comprehensive plan for long-range development and for use to coordinate and guide the establishment of development regulations. The City's plan includes future land use, growth capacities that include the capacities of the utilities, thoroughfares, and zoning regulations.

IV. WATER CCN

Q. Would the City of Tomball require construction of a separate water system in order to adequately service the requested area?

A. No. The existing system is designed to provide an adequate supply and distribute water and pressure to the requested service area. The five (5) groundwater wells, located throughout the City, provide water supply and pressure at different locations that allows for additional extensions and loops to accommodate any future expansions. The City's system is really an integrated, regional system, because the water system has storage and pumping capacity to

maintain the system over a large area while the wastewater treatment plant locations and capacity within the collection system are designed to serve large areas that are expandable to areas that do not have existing service.

Q. Does the City currently have an adequate supply of water to provide water service to the requested CCN area, including meeting TCEQ and PUC standards and taking into account current and projected density and land use?

A. Yes, the City currently has a sufficient water pumping capacity to serve the approximately 4,000 existing connections and currently has capacity to serve an additional 1600 customers in the requested CCN area in accordance with TCEQ minimum standards for capacity. Currently, we use only 30% to 40% of our well capacity (based on average demand). By 2025, the City will also augment its groundwater supply by obtaining surface water from the North Harris County Regional Water Authority ("NHCRWA"), which is a requirement of the Harris–Galveston Subsidence District to convert a portion of the water supply to surface water.

Q. What is the Harris –Galveston Subsidence District?

A. The Harris–Galveston Subsidence District ("HGSD") is a special purpose district created by the Texas Legislature in 1975 (*see* chapter 8801 of the Texas Special District Local Laws Code). The district was created to provide for the regulation of groundwater withdrawal throughout Harris and Galveston counties to prevent land subsidence, which leads to increased flooding. Exhibit DME-6 details the requirement of the City of Tomball to convert to surface water obtained from NHCRWA.

Q. Is there a contract in place to obtain water from the NHCRWA?

A. There is not an agreement in place currently; however, the City of Tomball is not scheduled to take water from the district until the 2025 timeframe. The City is working with the NHCRWA staff to determine the future needs of the City to structure a contract that will meet the needs and anticipated demands and fulfill the mandate of HGSD.

Q. What authority does HGSD have over the City of Tomball in terms of its water service?

A. All wells serving more than one single family dwelling unit, or LUE, and those single-family dwelling unit wells that have a casing larger than five inches are required to obtain a permit and pay annual fees to HGSD. So that would include the City of Tomball that currently serves approximately 4,000 connections from a groundwater supply. Simply put, HGSD will not continue to allow the City to pump groundwater in the volume it has in the past or would in the future, so the City and those other well users (serving more than one LUE) are required to develop and implement a conversion plan to convert all or a portion of their supply to surface water. This conversion plan is detailed in Exhibit DME-6.

Q. How will the City provide services to the requested CCN area?

A. Developers are responsible for constructing and dedicating the improvements to roads and utilities to the City as a part of their development. The City will extend water transmission lines and upsize water lines paid through impact fees from development. Since the City provides the main trunk and transmission lines, the system is readily available to developers to connect to the system. The cost to develop is decreased by the availability of the City's system to supply water as well as the developer not having to install redundant portions of a system required for many smaller systems (water storage tanks, booster pumps, wells, etc.). Determining the ultimate service area long range planning is identified in the Infrastructure Master Plan, which I have attached as Exhibit DME-7. The Infrastructure Master Plan identifies improvements needed as development and growth occurs. A CIP is developed and forecast based on growth projections and land use as outlined in the Comprehensive Land Use Plan (previous Exhibit DME-5). The Fiscal year 2017 adopted CIP has been submitted as Exhibit DME-8.

Q. What is the CIP?

A. The CIP identifies the projects that are needed to extend service to the areas of the system where there is projected growth and development. The CIP breaks the needs into projects and schedules the completion of the projects following the growth projections in the Comprehensive Land Use Plan.

Q. How is a CIP developed?

A. A CIP is developed in accordance with Texas Local Government Code chapter 395. It is based on the existing system and describes existing capital improvements and their total capacities. It identifies necessary capital improvements or facility expansions and their costs, establishes a service unit for each category of capital improvements, and projects service units and demand necessitated by new development based on approved land use assumptions projected over a period of 10 years. In the City's case, from the CIP we developed a Maximum Capital Recovery Fee Determination for each service unit category. Examples of projects identified in the CIP process are things like upsizing existing lines or adding more elevated or ground storage. Additional supply may also be a part of the CIP in order to meet increasing demands. The City's current adopted CIP is attached as Exhibit DME-8.

Q. How are the improvements from the CIP funded?

A. Improvements are funded using many financial tools like General Obligation Bonds, which can be used to borrow the needed funds, or impact fees charged to development for their impact to the system. Cash funding projects from the City's Enterprise Fund is also a funding source.

Q. How are impact fees determined?

A. As required by chapter 395 of the Texas Local Government Code, the City of Tomball performs a study to determine the appropriateness of its impact fees. The City's initial impact fee study was the "Infrastructure Master Plan & Impact Fee Determination for 2007 to 2012" which was updated in the "Infrastructure Master Plan & Capital Recovery Fee Determination for 2012 to 2022," attached as Exhibit DME-7. The City of Tomball retained CLR, Inc. to update the Infrastructure Master Plan & Impact Fee Determination in conjunction with the CIP, using generally accepted engineering and planning practices. The Master Plan meets State requirements, reviews and evaluates its current land use assumptions, and updates its CIP. In the City's CIP, a Maximum Capital Recovery Fee Determination, or impact fee, was made for each service unit category.