

TUELECTRIC

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August 30, 1995

C. Lance Terry
Group Vice President, Nuclear

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

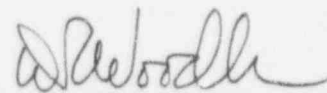
SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
TRANSMITTAL OF COPIES OF THE RENEWED EPA NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM (NPDES) AND TNRCC WASTERWATER
DISCHARGE PERMITS

Dear Sirs:

Pursuant to Section 3.2 of the Environmental Protection Plan
(Nonradiological), Appendix B of CPSES Facility Operating License Nos.
NPF-87 and NPF-89, a copy of the renewed EPA NPDES Permit No. TX0065854 and
TNRCC Wastewater Discharge Permit No. 01854 have been enclosed for your
records.

Sincerely,

C. L. Terry

By: 
D. R. Woodlan
Docket Licensing Manager

RSB/
Enclosure

cc: Mr. L. J. Callan, Region IV
Mr. D. F. Kirsch, Region IV
Mr. T. J. Polich, NRR
Resident Inspectors

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PDR ADDCK 05000445
P PDR

Energy Plaza 1601 Bryan Street Dallas, Texas 75201-3411

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

September 30, 1994

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 239 546 240)

REPLY TO: 6W-PS

Mr. William J. Cahill, Jr.
Group Vice President, Nuclear
Texas Utilities Electric Company
400 N. Olive Street, LB 81
Dallas, TX 75201

Re: NPDES Permit No. TX0065854
Public Notice of Final Permit Decision

Dear Mr. Cahill:

Enclosed is the public notice of the Agency's final permit decision, a copy of our response to comments, and the final permit. For administrative purposes, the permit is to become effective on November 1, 1994, following regulations at 40 CFR Part 124.15(b)(1). This public notice describes any substantial changes from the draft permit.

Should you have any questions regarding the final permit, please feel free to contact Fred Humke of the Permits Branch at (214) 655-7503, FAX (214) 655-6490. Should you have any questions regarding compliance with the conditions of this permit, please contact the Enforcement Branch at (214) 655-6450.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Myron O. Knudson".

Myron O. Knudson, E.E.
Director
Water Management Division (6W)

Enclosures

cc (w/enclosures): Texas Natural Resource Conservation Commission

RECEIVED

OCT 03 1994

C. L. TERRY

U.S. Environmental Protection Agency - Region 6
Public Notice of Final Permit Decision

SEPTEMBER 30, 1994

This is to give notice that the U.S. Environmental Protection Agency, Region 6, has made a final permit decision and will issue the following Proposed Permit(s) under the National Pollutant Discharge Elimination System. The permit(s) will become effective 30 days from the date of this Public Notice. Any substantial changes from the Draft Permit are cited.

This issuance is based on a final staff review of the administrative record and comments received. A Response to Comments is available by writing to:

Ms. Ellen Caldwell
Permits Branch (6W-PS)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733
(214) 655-7513

Any person may request an Evidentiary Hearing on this final permit decision. However, the request must be submitted within 30 days from the date of this Notice. The request should be in accordance with the requirements of 40 CFR 124.74 (Federal Register Vol. 45, No. 98, Monday, May 19, 1980). The original public notice contains the stay provisions of a granted evidentiary hearing request.

Within 30 days after service of an initial decision, or a denial in whole or in part of a request for an evidentiary hearing, any person may file an appeal in accordance with the requirements of 40 CFR 124.91. Submissions may be mailed to: U.S. Environmental Protection Agency, Environmental Appeals Board (MC-1103B), 401 M Street, SW, Washington, D.C. 20460. Hand-delivered submissions may be made at: U.S. Environmental Protection Agency, Environmental Appeals Board, Westory Building, 607 14th Street, NW, Suite 500, Washington, D.C. 20005.

Further information including the administrative record may be viewed at the above address between 8 a.m. and 4:30 p.m., Monday through Friday.

6. AUTHORIZATION TO DISCHARGE TO WATERS OF THE UNITED STATES,
NPDES PERMIT NO. TX0065854

The applicant's mailing address is:

Texas Utilities Electric Company
400 N. Olive Street, L.B. 81
Dallas, Texas 75201

The discharge from this existing source is made into Squaw Creek Reservoir, thence to Squaw Creek, thence to the Paluxy River in Segment No. 1229 of the Brazos River Basin, a water of the United States classified for contact recreation, high quality aquatic habitat, and public water supply. The discharger is located on Squaw Creek Reservoir along Hwy 56 approximately four and one half miles (4.5) northwest of the City of Glen Rose, Somerville County, Texas. Under the Standard Industrial Classification (SIC) Code(s) 4911, the applicant currently operates a steam electric generating facility consisting of two (2) nuclear-fueled steam electric generating units.

There are substantial changes from the draft reissued permit publicly noticed on July 16, 1994.

1. Section II.J.3.d. is changed to specify a minimum of three (3) flow weighted composite samples be collected as opposed to two (2) in the draft permit.
2. Paragraph II.J.3.d.i. is changed to specify that a 24-hour composite sample consist of a minimum of 12 effluent portions, not four (4) which appears in the draft permit.
3. Outfall 003 sample types are corrected for Flow to Estimate and for BOD as Record.
4. Outfall 104 description is changed to metal cleaning waste/low volume wastewater.

RESPONSE TO COMMENTS
FINAL PERMIT DECISION

This is our response to comments received on the subject draft permit in accordance with regulations promulgated at 40 CFR Part 124.17.

Permit No. TX0065854

Applicant: Texas Utilities Electric Company
400 N. Olive Street, L.B. 81
Dallas, Texas 75201

Issuing Office: U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Prepared By: Fred Humke
Industrial Permits Section (6W-PI)
Permits Branch
Water Management Division
(214) 655-7180

Permit Action: Final permit decision and response to comments
received on the draft reissued permit publicly noticed
on July 16, 1994.

Date Prepared: August 23, 1994.

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of 7/1/94.

STATE CERTIFICATION

Texas Natural Resource Conservation Commission, dated August 17, 1994.

The following effluent limitations and/or conditions are included in the final permit in conformance with regulations listed at 40 CFR Part 122.44(d)(3):

1. Item 3.d., Samples and Composites, Page 7 of Part II, changed to specify a minimum of three (3) flow-weighted 24-hour composite samples be collected as opposed to two (2) as specified in the draft permit. Two flow-weighted samples would cause the permittee to exceed the 72 hour holding time limit for samples.
2. Recommendation included that Item 3.d.i., Page 7 of Part II, be modified to specify that a 24-hour composite sample consist of a minimum of 12 effluent portions, not four (4) which appears in the draft permit, to correspond with the requirements of the TNRCC permit.

COMMENTS RECEIVED ON DRAFT PERMIT

From Texas Utilities Electric Company, dated August 15, 1994.

RESPONSE TO COMMENTS

ISSUE NUMBER 1

Cover Page The discharge route mentions only one of the facility's two possible options. While discharge will normally go to Squaw Creek, the option exists to discharge to Lake Granbury in Segment No. 1205 of the Brazos River Basin. In order to more accurately describe the facility's discharge route the Agency may wish to include Segment 1205.

RESPONSE

This matter was discussed with the TNRCC. The alternate discharge location can not be allowed for this permit as applied for and drafted under the application dated 9/27/93. The water quality calculations are based on Squaw Creek Reservoir and Waterbody Segment Code No. 1229 of the Brazos River. Therefore, TNRCC could not certify this change without a revised WQ analysis.

ISSUE NUMBER 2

For Outfall 001, once-through and auxiliary cooling, just below the effluent characterization table a reference is made to Part II, Paragraph O. Since there is no Paragraph O in Part II, the Agency may wish to either delete this line or reference an existing paragraph.

RESPONSE

The draft permit being issued shows Footnote *1 as Part II, Paragraph D., which is FLOW-WEIGHTED AVERAGE TEMPERATURE. This is the correct reference for temperature. Therefore, no change is needed.

ISSUE NO. 3

Outfall 003, sanitary sewage effluents The Permit lists the sample type for both Flow and BOD as Record. The Company believes these sample types were inadvertently changed from Estimate and Grab, respectively, as listed in the current Permit. Consequently, the Company requests that the Agency change the Sample Type for Flow to Estimate and the Sample Type for BOD to Grab.

RESPONSE

These changes have been made.

ISSUE NO. 4

Outfall 104, metal cleaning wastes The Agency dropped the term "low-volume wastewater" from the outfall's description. On rare occasion, the facility may wish to discharge some low-volume wastewater from this outfall; therefore, the Company requests that this outfall retain its current description of metal cleaning waste/low volume wastewater.

RESPONSE

This change has been made.

ISSUE NO. 5

The Company requests additions to Part II.J. Whole Effluent Toxicity Testing (7-Day Chronic NOEC Freshwater) and Part II.K. Whole Effluent Toxicity Testing (TX 24_Hour Acute LC50 Freshwater) relative to test initiation and dates.

RESPONSE

These are standard paragraphs which are not revised on a permit-by-permit basis.

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended,
(33 U.S.C. 1251 et. seq; the "Act"),

Texas Utilities Electric Company
400 N. Olive Street L.B. 81
Dallas, Texas 75201

is authorized to discharge from a facility located on Squaw Creek Reservoir
along Hwy 56 approximately four and one half miles (4.5) northwest of the City
of Glen Rose, Somervell County, Texas

to receiving waters named Squaw Creek Reservoir, thence to Squaw Creek, Thence
to Paluxy River, Waterbody Segment Code No. 1229 of the Brazos River, from

Final Outfall 001: Latitude - 32°17'46"N; Longitude - 97°46'56W"
Final Outfall 002: Latitude - 32°17'29"N; Longitude - 97°47'10W"
Final Outfall 003: Latitude - 32°17'46"N; Longitude - 97°46'56W"
Final Outfall 004: Latitude - 32°17'54"N; Longitude - 97°47'06W"
Latitude - 32°18'08"N; Longitude - 97°47'21W"
Internal Outfall 104: Latitude - 32°18'05"N; Longitude - 97°47'23W"


in accordance with effluent limitations, monitoring requirements and other
conditions set forth in Parts I [6 pages], II [17 pages], and III [7 pages]
hereof.

This permit supersedes and replaces NPDES Permit No. TX0065854
issued March 31, 1989.

This permit shall become effective on November 1, 1994.

This permit and the authorization to discharge shall expire at midnight,
October 30, 1999.

Signed and issued on September 30, 1994


Myron O. Knudson, P.E.
Director
Water Management Division (6W)

PART I
REQUIREMENTS FOR NPDES PERMITS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOUTFALL 001 (FINAL) (Previously Outfall 201)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit,

the permittee is authorized to discharge from Final Outfall 001: the continuous discharge of once-through and auxiliary cooling water and previously monitored effluents (*5) to Squaw Creek Reservoir.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS			
	MASS (LBS/DAY UNLESS STATED)		OTHER UNITS (mg/L UNLESS STATED)	
	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX
Flow (MGD)	N/A	N/A	(Report)	(Report)
Temperature, °F (*1)	N/A	N/A	113°F	116°F
Free Available Chlorine	440	1101	0.2	0.5
Total Residual Chlorine	Report	880	Report	0.2

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow (MGD)	Continuous (*2)	Record
Temperature, °F (*1)	Continuous	Record
Free Available Chlorine (*3)	1/week (*4)	Grab
Total Residual Chlorine (*3)	1/week (*4)	Grab

See Part II, Paragraph O.

The pH shall not be less than N/A standard units nor greater than N/A standard units.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At Outfall 001, where condenser cooling water and previously monitored effluents (*5) are discharged from the discharge canal to Squaw Creek Reservoir.

FOOTNOTES

- *1 See Part II, Paragraph D.
- *2 Flow rates shall be obtained from pump curve data.
- *3 See Part II, Paragraph E.
- *4 Samples shall be representative of periods of chlorination.
- *5 Effluent previously monitored at Outfall 004 may be discharged through Outfall 001.

PART I
REQUIREMENTS FOR NPDES PERMITS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL 002 (FINAL) (Previously Outfall 501)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit,

the permittee is authorized to discharge from Final Outfall 002: the intermittent discharge of Safe Shutdown Impoundment (SSI) containing cooling water, low-volume wastes (*4) (service water) and stormwater runoff to Squaw Creek Reservoir.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS			
	MASS (LBS/DAY UNLESS STATED)		OTHER UNITS (mg/L UNLESS STATED)	
	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX
Flow (MGD)	N/A	N/A	Report	Report
Total Suspended Solids	N/A	N/A	30	100
Oil and Grease	N/A	N/A	15	20
pH Minimum/Maximum Values (standard Units)	----	----	(Min) 6.0 (*2)	(Max) 9.0 (*2)

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow (MGD)	1/day (*1)	Estimate (*3)
Total Suspended Solids	1/week (*1)	Grab
Oil and Grease	1/week (*1)	Grab
pH Minimum/Maximum Values (standard Units)	1/week (*1)	Grab

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At Outfall 002, where (SSI) effluents are discharged to Squaw Creek Reservoir.

FOOTNOTES

- *1 When discharge occurs.
- *2 The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units. The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous (rather than the daily average and daily maximum) pH values measured during the sampling month.
- *3 See Part II, Paragraph G.
- *4 See Part II, Paragraph C.

PART I
REQUIREMENTS FOR NPDES PERMITS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL 003 (FINAL) (Previously Outfall 301)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit,

the permittee is authorized to discharge from Final Outfall 003: the continuous discharge of sanitary sewage effluents to Squaw Creek Reservoir.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS			
	MASS (LBS/DAY UNLESS STATED)		OTHER UNITS (mg/L UNLESS STATED)	
	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX
Flow (MGD)	N/A	N/A	(Report)	(Report)
Biochemical Oxygen Demand (5-day)	N/A	N/A	20	45
Total Suspended Solids	N/A	N/A	20	45
pH Minimum/Maximum Values (standard Units)	----	----	(Min) 6.0 (*1)	(Max) 9.0 (*1)

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow (MGD)	1/day	Estimate
Biochemical Oxygen Demand (5-day)	2/month	Grab
Total Suspended Solids	2/month	Grab
pH Minimum/Maximum Values (standard Units)	2/month	Grab

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent shall contain chlorine residual of at least 1.0 mg/l and a maximum chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week, by grab sample.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At Outfall 003, where sanitary sewage effluents are discharged from the sewage treatment plant prior to discharge to Squaw Creek Reservoir.

FOOTNOTES

- *1 The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units. The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous (rather than the daily average and daily maximum) pH values measured during the sampling month.

PART I
REQUIREMENTS FOR NPDES PERMITS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOUTFALL 004 (FINAL) (Previously Outfall 101)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit,

the permittee is authorized to discharge from Final Outfall 004: the intermittent discharge of low-volume wastewater (*1) and previously monitored effluents to the condenser cooling water and/or Squaw Creek Reservoir.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS			
	MASS (LBS/DAY UNLESS STATED)		OTHER UNITS (mg/L UNLESS STATED)	
	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX
Flow (MGD)	N/A	N/A	Report	Report
Total Suspended Solids	N/A	N/A	30	100
Oil and Grease	N/A	N/A	15	20
pH Minimum/Maximum Values (standard Units)	----	----	(Min) 6.0 (*3)	(Max) 9.0 (*3)

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow (MGD)	1/day (*2)	Estimate (*4)
Total Suspended Solids	1/week (*2)	Grab (*5)
Oil and Grease	1/week (*2)	Grab (*5)
pH Minimum/Maximum Values (standard Units)	1/week (*2)	Grab (*5)

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At Outfall 004, where low-volume wastewater and previously monitored effluents are discharged prior to mixing with the condenser cooling water and/or Squaw Creek Reservoir.

FOOTNOTES

- *1 See Part II, Paragraph C.
- *2 When discharge occurs.
- *3 The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units. The permittee shall report on the Discharge Monitoring Reports both the minimum and maximum instantaneous (rather than the daily average and daily maximum) pH values measured during the sampling month.
- *4 See Part II, Paragraph G.
- *5 Since more than one source may be associated with this particular waste category, grab samples from each source may be either physically combined into a single flow weighted sample for analysis and reporting or individually analyzed and the results mathematically combined into a single flow weighted result for reporting.

PART I
REQUIREMENTS FOR NPDES PERMITS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOUTFALL 104 (INTERNAL) (Previously Outfall 601)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit,

the permittee is authorized to discharge from Internal Outfall 104: the intermittent discharge of metal cleaning (*1) wastes/low volume wastewater to Outfall 004.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS			
	MASS (LBS/DAY UNLESS STATED)		OTHER UNITS (mg/L UNLESS STATED)	
	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX
Flow (MGD)	N/A	N/A	(Report)	(Report)
Iron, Total	N/A	N/A	1.0	1.0
Copper, Total	N/A	N/A	0.5	1.0

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow (MGD)	1/day (*2)	Estimate (*3)
Iron, Total	1/week (*2)	Grab
Copper, Total	1/week (*2)	Grab

The pH shall not be less than N/A standard units nor greater than N/A standard units.

Oil and Grease, total suspended solids and pH are monitored and reported at Outfall 004.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At Outfall 104, where metal cleaning wastes are discharged from the retention ponds or temporary treatment facilities prior to mixing with low-volume waste stream prior to discharge through Outfall 004.

FOOTNOTES

- *1 See Part II, Paragraph B.
- *2 When discharge occurs.
- *3 See Part II, Paragraph G.

B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

NONE

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

C. REPORTING OF MONITORING RESULTS (MAJOR DISCHARGERS)

Monitoring results shall be reported in accordance with the provisions of Part III.D.4 of the permit. Monitoring results obtained during the previous month shall be summarized and reported on a Discharge Monitoring Report form postmarked no later than the 25th day of the month following the completed monthly reporting period.

The first report is due on December 25, 1994.

PART II
OTHER CONDITIONS

A. TRANSFORMER FLUID DISCHARGE

There shall be no discharge of transformer fluid containing polychlorinated biphenyl (PCB) compounds.

B. METAL CLEANING WASTE

The term "metal cleaning waste" means any wastewater resulting from cleaning (with or without chemical cleaning compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

C. LOW-VOLUME WASTESOURCES

The term "low-volume wastesources" means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established. Low volume waste sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

D. FLOW-WEIGHTED AVERAGE TEMPERATURE

For the purposes of this permit, daily temperature discharge is defined as the flow-weighted average temperature (FWAT) and, on a daily basis, shall be monitored and recorded in accordance with Part I, of this permit. FWAT shall be calculated at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\text{SUMMATION (INSTANTANEOUS FLOW X INSTANTANEOUS TEMPERATURE)}}{\text{SUMMATION (INSTANTANEOUS FLOW)}}$$

"Daily average temperature" (also known as average monthly or maximum 30 day value) shall be the arithmetic average of all FWAT's calculated during the calendar month.

"Daily maximum temperature" (also known as the maximum daily value) shall be the highest FWAT calculated during the calendar month.

E. FREE AVAILABLE CHLORINE ANALYSIS

The term "free available chlorine" shall mean the value obtained using the amperometric titration method for free available chlorine described in the latest edition of "Standard Methods for the Examination of Water and Wastewater."

TOTAL RESIDUAL CHLORINE

The term "total residual chlorine" (or total residual oxidants for intake water with bromides) means the value obtained using the amperometric method for total residual chlorine described in the latest edition of "Standard Methods for the Examination of Water and Wastewater."

DISCHARGE OF FREE AVAILABLE OR TOTAL RESIDUAL CHLORINE

Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time.

F. STORET/CAS CROSS-REFERENCE

For the proper identification of parameters being regulated in this permit, the following table lists the corresponding EPA Storet Number and the Chemical Abstract Service (CAS) Registry Number where applicable. The EPA Storet number is used to identify parameters on the Discharge Monitoring Report described at Part III.D.4.

PARAMETERS	STORET	CAS
<u>CONVENTIONAL</u>		
BOD5	00310	----
TSS	00530	----
Oil & Grease (Gravimetric)	00556	----
pH Range (Grab - Field Test)	00400	----
<u>NONCONVENTIONAL</u>		
Flow (MGD)	50050	----
Chlorine (Total Residual)	50060	----
Free Available Chlorine	50064	----
Temperature (°F)	00011	----
<u>METALS AND CYANIDE</u>		
Copper (Total)	01042	7550-50-8
Iron (Total)	01045	----
<u>WHOLE EFFLUENT TOXICITY (CHRONIC 7-DAY NOEC FRESHWATER)</u>		
NOEC, Pass/Fail, Static Renewal, 7-Day Chronic, Lethality, <u>Pimephales promelas</u>	TLP6C	----
NOEC, Value, Static Renewal, 7-Day Chronic, Lethality, <u>Pimephales promelas</u>	TOP6C	----
NOEC, Value, Static Renewal, 7-Day Chronic, Growth, <u>Pimephales promelas</u>	TPP6C	----
Coe. of Variation, Value, Static Renewal, 7-Day Chronic, Lethality, <u>Pimephales promelas</u>	TQP6C	----
NOEC, Pass/Fail, Static Renewal, 7-Day Chronic, Lethality, <u>Ceriodaphnia dubia</u>	TLP3B	----
NOEC, Value, Static Renewal, 7-Day Chronic, Lethality, <u>Ceriodaphnia dubia</u>	TOP3B	----
NOEC, Value, Static Renewal, 7-Day Chronic, Reproduction, <u>Ceriodaphnia dubia</u>	TPP3B	----
Coe. of Variation, Value, Static Renewal, 7-Day Chronic, Lethality, <u>Ceriodaphnia dubia</u>	TQP3B	----
<u>WHOLE EFFLUENT TOXICITY (TEXAS 24-HOUR ACUTE LC50 FRESHWATER)</u>		
LC50, Pass/Fail, Static Nonrenewal, 24-Hour Acute, Lethality, <u>Daphnia pulex</u>	TIE3D	----

LC50, Pass/Fail,
Static Nonrenewal,
24-Hour Acute, Lethality,
Pimephales promelas

TIE6C

G. FLOW MEASUREMENT "ESTIMATE" SAMPLE TYPE

If the flow measurement sample type in Part I is specified as "estimate," flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

H. 40 CFR PART 136 ANALYTICAL REQUIREMENTS

Unless otherwise specified in this permit, monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136 in effect on the effective date of this permit. Appendices A, B, and C to 40 CFR Part 136 are specifically referenced as part of this requirement. Amendments to 40 CFR Part 136 promulgated after the effective date of this permit shall supersede these requirements as applicable.

I. MINIMUM QUANTIFICATION LEVEL (MQL)

If any individual analytical test result is less than the minimum quantification level listed below, a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

METALS AND CYANIDE
Copper (Total)

MQL (µg/L)
10

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR Part 136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to EPA Region 6 a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$MQL = 3.3 \times MDL$$

Upon written approval by EPA Region 6, the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

J. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC FRESHWATER)

1. SCOPE, FREQUENCY, AND METHODOLOGY

- a. The provisions of this section are applicable to Outfall(s) 001 for whole effluent toxicity.
- b. The permittee shall test the effluent for toxicity in accordance with the provisions in this section. This testing will determine if an appropriately dilute effluent sample adversely affects the survival of the test organism. The permittee shall submit the results of these tests on the appropriate Discharge Monitoring Report (DMR) for the reporting period.

- c. The permittee shall implement all toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with the EPA manual, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the latest update thereof. The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.
- d. The permittee shall utilize the Ceriodaphnia dubia chronic static renewal survival and reproduction test (Method 1002.0 or the most recent publication). This test should be terminated when 60% of the surviving females in the control produce three broods. The permittee shall conduct the Ceriodaphnia dubia toxicity test at a frequency of once per year.
- e. The permittee shall utilize the Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test (Method 1000.0 or the most recent publication). A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test. The permittee shall conduct the Fathead minnow toxicity test at a frequency of once per year.
- f. The permittee shall use five effluent dilution concentrations in addition to a control (0% effluent) in each toxicity test. These additional effluent concentrations shall be 100%, 75%, 56%, 42%, and 32%. The low-flow effluent concentration (critical dilution) is defined as the 100% effluent.
- g. The NOEC (No Observed Effect Concentration) is defined as the greatest effluent dilution which does not result in lethality that is statistically different from the control (0% effluent) at the 95% confidence level.
- h. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHALITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at the 100% effluent concentration. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

- a. The permittee shall conduct a total of two (2) additional tests for any species that demonstrates significant lethal effects at the 100% effluent concentration. The two additional tests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two additional tests in lieu of routine

toxicity testing, unless the specified testing frequency for the species demonstrating significant lethal effects is monthly. The full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section.

- b. If one or both of the two additional tests demonstrates significant lethal effects at the 100% effluent concentration, the permittee shall initiate Toxicity Reduction Evaluation requirements as specified under Item 5 of this section.
- c. If one or both of the two additional tests demonstrates significant lethal effects at the 100% effluent concentration, the permittee shall henceforth increase the frequency of testing for this species at a frequency of once per quarter for the life of the permit.
- d. The provisions of Item 2.a are suspended upon submittal of the TRE Action Plan.
- e. If the testing frequency in Item 1 is monthly for a species, the permittee shall initiate the Toxicity Reduction Evaluation requirements as specified under Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant lethal effects at the 100% effluent concentration.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. TEST ACCEPTANCE

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

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.
- v. The percent coefficient of variation between replicates shall be 40% or less in the (DLL)% effluent concentration, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

b. STATISTICAL INTERPRETATION

- i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the low flow (critical dilution) shall be Fisher's Exact Test as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the most recent update thereof.
- ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the low flow effluent concentration (critical dilution) shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the most recent update thereof.

c. DILUTION WATER

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
 - (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
 - (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
 - (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

- (D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. SAMPLES AND COMPOSITES

- i. The permittee shall collect a minimum of three flow-weighted 24-hour composite samples from Outfall(s) 001. A 24-hour composite sample consists of a minimum of twelve (12) effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.
- ii. The permittee shall collect a second and third 24-hour composite sample for use during the 24-hour renewal of each dilution concentration the for both tests. The permittee must collect the 24-hour composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first 24-hour composite sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.
- iii. The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of Part III.C.3 of this permit. The permittee shall submit full reports only upon the specific request of the Agency.

- b. The permittee shall report the following results of each toxicity test on the subsequent monthly DMR for that reporting period in accordance with Part III.D.4 of this permit:

i. PIMEPHALES PROMELAS (FATHEAD MINNOW)

- (A) If the Fathead minnow No Observed Effect Concentration (NOEC) for survival is less than the 100% effluent dilution, enter one ("1"); otherwise, enter zero ("0"). Parameter No. TLP6C.
- (B) Report the Fathead minnow NOEC value for survival, Parameter No. TOP6C.
- (C) Report the Fathead minnow NOEC value for growth, Parameter No. TPP6C.
- (D) Report the % coefficient of variation (larger of low flow and control dilutions), Parameter No. TQP6C.

ii. CERIODAPHNIA DUBIA

- (A) If the Ceriodaphnia dubia NOEC for survival is less than the 100% effluent dilution, enter one ("1"); otherwise, enter zero ("0"). Parameter No. TLP3B.
- (B) Report the Ceriodaphnia dubia NOEC value for survival, Parameter No. TOP3B.
- (C) Report the Ceriodaphnia dubia NOEC value for reproduction, Parameter No. TPP3B.
- (D) Report the % coefficient of variation (larger of low flow and control dilutions), Parameter No. TQP3B.

5. TOXICITY REDUCTION EVALUATION (TRE)

- a. Within ninety (90) days of confirming lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the low flow dilution and include the following:

i. SPECIFIC ACTIVITIES

The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE.

The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures" (EPA/600/3-88/035) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures" (EPA/600/3-88/036), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

- ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.);

The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified.

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 24 hours of test initiation, each 24 hour composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual 24 hour composite samples, for the chemical specific analysis.

- iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
- iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).

- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

- c. The permittee shall submit a quarterly TRE Activities Report with the Discharge Monitoring Report in the months of January, April, July, and October containing information on toxicity reduction evaluation activities including:

- i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
- ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
- iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no lethality at the low flow effluent concentration (critical dilution).

A copy of the TRE Activities Report shall be also be submitted to the Texas Natural Resource Conservation Commission.

- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no lethality at the low flow effluent concentration (critical dilution). The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the Texas Natural Resource Conservation Commission.

K. WHOLE EFFLUENT TOXICITY TESTING (TX 24-HOUR ACUTE LC50 FRESHWATER)

1. SCOPE, FREQUENCY, AND METHODOLOGY

- a. The provisions of this section shall apply individually and separately to Outfall 001. No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall. The provisions of this section are in addition to other biomonitoring requirements in this permit.

24-HOUR ACUTE TEST SUBSTITUTIONS - If any other tests conducted under biomonitoring requirements elsewhere in Part II of this permit include the 100% effluent concentration in the dilution series, the mean survival results at 24 hours from those tests for each species may be submitted to fulfill the requirements of this section. See Item 4.b of this section for acceptable test substitutions. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted for compliance with the minimum testing frequency described in Item 1.c, below.

- b. The permittee shall test the effluent for lethality in accordance with the provisions of this section. Such testing will determine if an effluent sample meets the Texas Surface Water Quality Standard listed at 30 TAC §307.6(e)(2)(B) of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

- c. The permittee shall submit the results of these tests on the Discharge Monitoring Report (DMR) due in the month following the test. The toxicity tests shall be conducted two (2) times per year at six month intervals for the life of the permit.
- d. The permittee shall implement all toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with the EPA manual, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", EPA/600/4-90/027, or the latest update thereof. The permittee shall repeat a test including the control and all effluent dilutions if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied. A repeat test shall be conducted within the required reporting period of any test determined to be invalid in accordance with Item 3.b, below, of this section.
- e. The permittee shall use the Daphnia pulex acute static 24-hour definitive toxicity test. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.
- f. The permittee shall use the Pimephales promelas (Fathead minnow) acute static 24-hour definitive toxicity test. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.
- g. In addition to an appropriate control (0% effluent), a 100% effluent concentration shall be used in the toxicity tests.
- h. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHALITY

- a. If any toxicity test at the 100% effluent concentration demonstrates 50% or greater mortality, the permittee shall conduct two (2) additional tests (retests) for each species that demonstrates mortality and report these results as required in Item 4 of this section. The two additional retests shall be conducted monthly during the next two consecutive months. Five (5) dilutions in addition to an appropriate control (0% effluent) shall be used in the two (2) retests. These effluent concentrations shall be 100%, 50%, 25%, 13%, and 6%. If one of the retests indicates 50% or greater mortality at the 100% effluent concentration, the permittee may suspend additional retesting for this period and shall notify the EPA in writing within five (5) days. If none of the retests indicates 50% or greater mortality at the 100% effluent concentration, the permittee shall continue testing at the original frequency (two times per year, per species, following the original schedule).
- b. Within thirty (30) days after submitting the original and retest results which demonstrate 50% or greater mortality at the 100% effluent concentration, the permittee shall

initiate a Toxicity Reduction Evaluation (TRE) in accordance with the procedures stated in Item 5 of this section. The permittee shall continue biomonitoring quarterly (as a minimum) during the TRE using the affected species unless otherwise authorized by the permitting authority.

- c. Within three (3) years from the date of completion of the test confirming 50% or greater mortality at the 100% effluent concentration, the permittee shall demonstrate greater than 50% mean survival of the appropriate test organism in 100% effluent for a 24-hour test period for all subsequent testing.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. CONTROL/DILUTION WATER

Control and/or dilution water used in the test shall normally consist of a standard, synthetic, moderately hard, reconstituted water of similar pH and alkalinity to the closest downstream perennial water. If the permittee is utilizing the results of a 48-hour acute test or 7-day chronic test to satisfy these 24-hour acute biomonitoring requirements in accordance with Item 1.a, the permittee may use receiving water as the control and dilution water if the control meets the requirements of Item 3.b.

b. CONTROL SURVIVAL

If more than 10% of the test organisms in any control die within 24 hours, that test including the control and all effluent dilution(s) shall be repeated with all results from both tests reported as per Item 4 of this section.

c. SAMPLES AND COMPOSITES

The samples shall be collected at a point following the last treatment unit.

One flow-weighted 24-hour composite sample representative of normal operating flows will be collected from each outfall, and a discrete test will be run on each composite sample. A 24-hour composite sample consists of a minimum of twelve (12) effluent portions collected at equal time intervals and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.

Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage. The toxicity tests must be initiated within 36 hours after collection of the 24-hour composite sample. The 24-hour composite sample must be collected such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Fresh-water and Marine Organisms", for every valid or invalid

toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of Part III.C.3 of this permit. The permittee shall submit full reports only upon the specific request of the Agency.

- b. The permittee shall report the following results of each toxicity test on the subsequent monthly DMR for that reporting period in accordance with Part III.D.4 of this permit:

i. PIMEPHALES PROMELAS (FATHEAD MINNOW)

Enter the following codes on the DMR for Parameter No. TIE6C:

"0" if mean survival at 24 hours is greater than 50% in 100% effluent;

"1" if the mean survival at 24 hours is less than or equal to 50% in 100% effluent.

In cases of test substitution (See 24-HOUR ACUTE TEST SUBSTITUTIONS, Item 1.a, above), mean survival results in 100% effluent from the 48-hour acute or 7-day chronic Pimephales promelas tests determined at 24 hours shall be reported on the DMR under Parameter No. TIE6C.

ii. DAPHNIA PULEX

Enter the following codes on the DMR for Parameter No. TIE3D:

"0" if mean survival at 24 hours is greater than 50% in 100% effluent;

"1" if the mean survival at 24 hours is less than or equal to 50% in 100% effluent.

In cases of test substitution (See 24-HOUR ACUTE TEST SUBSTITUTIONS, Item 1.a, above), mean survival results in 100% effluent from the 48-hour Daphnia pulex acute test or the 7-day chronic Ceriodaphnia dubia test determined at 24 hours shall be reported on the DMR under Parameter No. TIE3D.

5. TOXICITY REDUCTION EVALUATION (TRE)

- a. Within ninety (90) days of confirming lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the low flow dilution and include the following:

i. SPECIFIC ACTIVITIES

The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures" (EPA/600/3-88/035) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures" (EPA/600/3-88/036), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

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Springfield, VA 22161

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.);

The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified.

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 24 hours of test initiation, each 24 hour composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual 24 hour composite samples, for the chemical specific analysis.

iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); andiv. Project Organization (e.g., project staff, project manager, consulting services, etc.).

b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

- c. The permittee shall submit a quarterly TRE Activities Report with the Discharge Monitoring Report in the months of January, April, July, and October containing information on toxicity reduction evaluation activities including:
- i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 - ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 - iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no lethality at the low flow effluent concentration (critical dilution).

A copy of the TRE Activities Report shall be also be submitted to the Texas Natural Resource Conservation Commission.

- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no lethality at the low flow effluent concentration (critical dilution). The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the Texas Natural Resource Conservation Commission.

L. MIXING ZONE DEFINITION (TEXAS)

Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as a volume within a radius of 100 feet from the point of discharge.

M. RAW WATER INTAKE

The makeup water intake, located on Lake Granbury, is approved pursuant to Section 316(b) of the Clean Water Act. The applicant shall conduct a program to monitor the impingement and entrainment of organisms at the circulating water intake structure in Squaw Creek Reservoir.

PART III
STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Introduction
In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable regulations.
2. Duty to Comply
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
3. Toxic Pollutants
 - a. Notwithstanding Part III.A.5, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.
 - b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
4. Duty to Reapply
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR Part 122.6 and any subsequent amendments.
5. Permit Flexibility
This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
6. Property Rights
This permit does not convey any property rights of any sort, or any exclusive privilege.
7. Duty to Provide Information
The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee

shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. Criminal and Civil Liability
Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.
9. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.
10. State Laws
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.
11. Severability
The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

SECTION B. PROPER OPERATION AND MAINTENANCE

1. Need to Halt or Reduce not a Defense
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators or retention of inadequately treated effluent.
2. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
3. Proper Operation and Maintenance
 - a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only

when the operation is necessary to achieve compliance with the conditions of this permit.

- b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

4. Bypass of Treatment Facilities

- a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.8.4.b. and 4.c.

b. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall, within 24 hours, submit notice of an unanticipated bypass as required in Part III.D.7.

c. Prohibition of bypass

- (1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
- (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,
- (c) The permittee submitted notices as required by Part III.8.4.b.
- (2) The Director may allow an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed at Part III.8.4.c(1).

5. Upset Conditions

- a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.8.5.b. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated;
- (3) The permittee submitted notice of the upset as required by Part III.D.7; and,
- (4) The permittee complied with any remedial measures required by Part III.8.2.

- c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

Solids, sewage sludges, filter backwash, or other pollutants removed in the course of treatment or wastewater control shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. Percent Removal

For publicly owned treatment works, the 30-day average percent removal for Biochemical Oxygen Demand and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR 133.103.

SECTION C. MONITORING AND RECORDS

1. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

2. Representative Sampling

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation. Copies of all reports required by this permit, and records of all data

used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. Record Contents

Records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) and time(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

5. Monitoring Procedures

- Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
- The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.
- An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

6. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

a. Industrial Permits

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b); or,
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements listed at Part III.D.10.a.

b. Municipal Permits

Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. Discharge Monitoring Reports and Other Reports

Monitoring results must be reported on Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. The permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA at the address below. Duplicate copies of DMR's and all other reports shall be submitted to the appropriate State agency(ies) at the following address(es):

EPA:

Water Management Division
Enforcement Branch (6W-E)
U.S. Environmental Protection
Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

New Mexico:

Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
1190 Saint Francis Drive
Santa Fe, NM 87501-4182

Oklahoma (Industrial Permits Only):

Director
Oklahoma Department of
Environmental Quality
1000 NE 10th Street
Oklahoma City, OK 73117-1212

Louisiana:

Assistant Secretary for Water
Water Pollution Control Division
Louisiana Department of
Environmental Quality
P.O. Box 82215
Baton Rouge, LA 70884-2215

5. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such

increased monitoring frequency shall also be indicated on the DMR.

6. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

7. Twenty-Four Hour Reporting

a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

- (1) A description of the noncompliance and its cause;
- (2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,
- (3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. The following shall be included as information which must be reported within 24 hours:

- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
- (2) Any upset which exceeds any effluent limitation in the permit; and,
- (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.

c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

8. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 and Part I.B (for industrial permits only) at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.7.

9. Other Information

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

10. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Director as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III

(excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

- (1) One hundred micrograms per liter (100 µg/L);
- (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
- (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
- (4) The level established by the Director.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

- (1) Five hundred micrograms per liter (500 µg/L);
- (2) One milligram per liter (1 mg/L) for antimony;
- (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
- (4) The level established by the Director.

11. Signatory Requirements

All applications, reports, or information submitted to the Director shall be signed and certified.

a. All permit applications shall be signed as follows:

(1) For a corporation - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,

(b) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

(3) For a municipality, State, Federal, or other public agency - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency, or

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

- b. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above;
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,
- (3) The written authorization is submitted to the Director.

- c. Certification. Any person signing a document under this section shall make the following certification:

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

12. Availability of Reports

Except for applications, effluent data, permits, and other data specified in 40 CFR 122.7, any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

13. Archeological/Historical Sites (Texas Permits Only)

If during the life of this permit, new construction or land acquisition or any construction related activity where previously undisturbed ground is proposed for disturbance by the permittee which is related to an activity authorized by this permit, the permittee shall send the following items to the Texas State Historic Preservation Officer (SHPO): (1) a description of the new construction and the potential impact that this activity may have upon the ground (including sludge application methods, if applicable), and (2) a copy of a USGS topographic map outlining the location of the project and associated sludge disposal areas or other ancillary impact areas. The address of the Texas SHPO is:

Texas State Historic Preservation Officer
Department of Antiquities Protection
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

This information will be used by the Texas SHPO and EPA to consult according to the requirements of 36 CFR Part 800.4-800.6 on methods to minimize harm to historical properties. The applicant will be contacted within 30 days about further actions that may be needed to meet the requirements of 36 CFR Part 800.

SECTION E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

1. Criminal

a. Negligent Violations

The Act provides that any person who negligently violates permit conditions implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

b. Knowing Violations

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

c. Knowing Endangerment

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

d. False Statements

The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act)

2. Civil Penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$25,000 per day for each violation.

3. Administrative Penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. Class I Penalty

Not to exceed \$10,000 per violation nor shall the maximum amount exceed \$25,000.

b. Class II Penalty

Not to exceed \$10,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$125,000.

SECTION F. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. "Act" means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.
2. "Administrator" means the Administrator of the U.S. Environmental Protection Agency.
3. "Applicable effluent standards and limitations" means all state and federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards or performance, toxic effluent standards and prohibitions, and pretreatment standards.
4. "Applicable water quality standards" means all water quality standards to which a discharge is subject under the Act.
5. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
6. "Daily Discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be arithmetic average (weighted by flow value) of all samples collected during that sampling day.
7. "Daily Average" (also known as monthly average) discharge limitations means the highest allowable average of "daily discharge(s)" over a calendar month, calculated as the sum of all "daily discharge(s)" measured during a calendar month divided by the number of "daily discharge(s)" measured during that month. When the permit establishes daily average concentration effluent limitations or conditions, the daily average concentration means the arithmetic average (weighted by flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = daily concentration, F = daily flow and n = number of daily samples; daily average discharge =

$$C_1F_1 + C_2F_2 + \dots + C_nF_n$$

$$F_1 + F_2 + \dots + F_n$$

8. "Daily Maximum" discharge limitation means the highest allowable "daily discharge" during the calendar month.
9. "Director" means the U.S. Environmental Protection Agency Regional Administrator or an authorized representative.

10. "Environmental Protection Agency" means the U.S. Environmental Protection Agency.
11. "Grab sample" means an individual sample collected in less than 15 minutes.
12. "Industrial user" means a nondomestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly owned treatment works.
13. "National Pollutant Discharge Elimination System" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Act.
14. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. "Sewage sludge" means the solids, residues, and precipitates separated from or created in sewage by the unit processes of a publicly owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff, that are discharged to or otherwise enter a publicly owned treatment works.
16. "Treatment works" means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature to implement Section 201 of the Act, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extension, improvement, remodeling, additions, and alterations thereof.
17. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
18. For fecal coliform bacteria, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.
19. The term "MGD" shall mean million gallons per day.
20. The term "mg/L" shall mean milligrams per liter or parts per million (ppm).
21. The term "ug/L" shall mean micrograms per liter or parts per billion (ppb).
22. Municipal Terms:
 - a. "7-day average", other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges

measured during a calendar week divided by the number of daily discharges measured during that week. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

- b. "30-day average", other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
- c. "24-hour composite sample" consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
- d. "12-hour composite sample" consists of 12 effluent portions collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
- e. "6-hour composite sample" consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
- f. "3-hour composite sample" consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

John Hall, Chairman
Pam Reed, Commissioner
R. B. "Ralph" Marquez, Commissioner
Dan Pearson, Executive Director



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

July 11, 1995

Protecting Texas by Reducing and Preventing Pollution

Texas Utilities Electric Company
Attn: Timothy O'Shea, Coordinator
Energy Plaza, 1601 Bryant Street
Dallas, Texas 75201-3411

RE: TEXAS UTILITIES ELECTRIC COMPANY
RENEWAL; Permit 01854

Enclosed is a copy of:

(✓) a Permit for a wastewater treatment facility issued pursuant to Chapter 26 of the Texas Water Code.

In order that you may comply with monitoring requirements for your waste discharge permit, self-reporting forms and instructions will be forwarded to you from the Watershed Management Division. Please discontinue the use of any old self-reporting forms that you may have and wait to fill out forms until you receive new ones from the TNRCC which reflect your new monitoring requirements. For further information, please contact Mary Taylor at (512) 239-4570.

When your facility is placed in operation or goes into a new phase, please use the attached "Report of Progress of Construction of Wastewater Treatment Facilities" form. This form will advise this agency and our region office of the completion or placement in operation of proposed facilities in accordance with the special provision incorporated into the permit.

() a Permit for a hazardous or solid waste facility issued pursuant to Art. 4477-7, Texas Revised Civil Statutes. Your attention is directed to Commission Rule 335.5 which may be applicable to your facility.

() a Permit for a waste disposal well or an injection well issued pursuant to Chapter 27 of the Texas Water Code. In accordance with the Texas Water Code, you must file a copy of the permit with the city and county health authorities.

() a Permit for a municipal solid waste facility issued pursuant to Chapter 361, Texas Health and Safety Code. The Site Development Plan, the Site Operating Plan, and all other documents and plans prepared and submitted to support the permit application shall be considered as a part of this permit and shall be considered as operational requirements of this permit.

() a Radioactive Material License issued pursuant to 30 Texas Administrative Code, Chapter 336.

Sincerely,

Gloria A. Vasquez

Gloria A. Vasquez, Chief Clerk

GAV:de

cc: TNRCC Region 4

The Natural Resource Conservation Commission
Attn: Enforcement Support Unit, Watershed Management

REPORT OF PROGRESS OF CONSTRUCTION
OF WASTEWATER TREATMENT FACILITIES

Today's Date

Name of Permittee

WQ

Permit No.

Responsible Official: _____

Name

Title

Phone Number

Facilities are operational/are estimated to be operational

Date (month/day/year)

The volume and phase in operation (Interim/Final) _____

(million gallons per day)

Operator of this facility will be _____

Name

Class of Certificate _____

Social Security Number _____

-

-

Employed by (if applicable) _____

(Name of Operations Company)

Signature

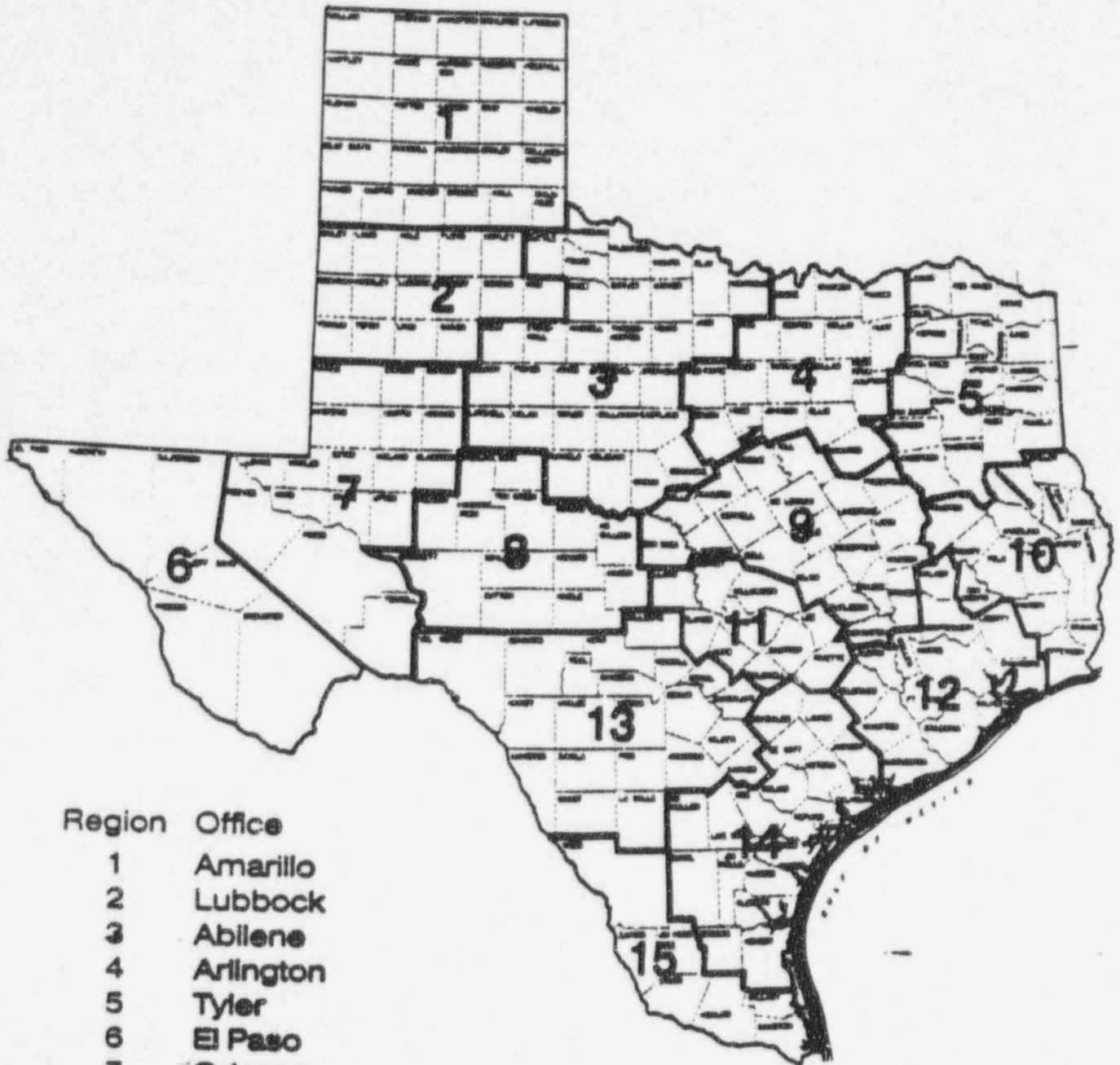
TNRCC Enforcement Support Unit/Watershed Management/P.O. Box 13087/Austin, Texas
78711-3087/Area Code 512 239-4570



REGIONAL OFFICES

TNRCC REGIONS	AIR PROGRAM	WATER WASTE PROGRAMS
1-Amarillo 3918 Canyon Drive, Amarillo, TX 79109-4996 806/353-9251 FAX: 806/358-9546 Regional Manager - Brad Jones		
2-Lubbock 4630 50th St., Suite 600, Lubbock, TX 79414-3508 806/796-7092 FAX: 806/796-7107 Regional Manager - Jim Estes		
3-Abilene 209 South Denville, Suite 200B, Abilene, TX 79606 915/696-9674 FAX: 915/692-5868 Regional Manager - Winona Henry		
4-Arlington 817/732-5531 FAX: 817/732-0175 Regional Manager - Melvin Lewis	6421 Camp Bowie Blvd., Suite 312 Fort Worth, TX 76116 817/732-5531 FAX: 817/732-0175	1019 N. Duncanville Rd. Duncanville, TX 75116-2201 214/298-6171 FAX: 214/709-1181 407 North Cedar Ridge, Suite 230, Duncanville, TX 75116 214/283-3703 FAX: 214/709-1181
5-Tyler 903/566-0476 FAX: 903/566-9216 Regional Manager - Leroy Biggers	1304 South Vine Ave. Tyler, TX 75701 903/596-2626 FAX: 903/596-1562	11408 Hwy. 64 East Rt. 14, Box 254, Tyler, TX 75707 903/566-0476 FAX: 903/566-9216 2916 Tongue, Tyler, TX 75701 903/596-6466 FAX: 903/593-2542
6-El Paso 7500 Viscount Blvd., Suite 147, El Paso, TX 79925 915/778-9634 FAX: 915/778-4578 Regional Manager - Hector Villa		
7-Odessa 2626 J.B. Sheppard Pkwy. Blvd., Bldg. B-101, Odessa, TX 79761 915/362-6997 FAX: 915/362-4517 Regional Manager - Charley Sims		
8-San Angelo 301 W. Beauregard Ave., Suite 202, San Angelo, TX 76903 915/656-9479 FAX: 915/656-5431 Regional Manager - John Haagenen		
9-Waco 6801 Sanger Ave., Suite 2500, Waco, TX 76710-7807 817/751-0335 FAX: 817/772-9241 Regional Manager - Gene Fulton		
10-Beaumont 3870 Eastex Fwy., Suite 110, Beaumont, TX 77703-1830 409/896-3836 FAX: 409/892-2119 Regional Manager - Vic Fair		
11-Austin 1700 S. Lamar Blvd., Bldg. 1, No. 101, Austin, TX 78704-3360 512/463-7803 FAX: 512/447-8528 Regional Manager - Larry Smith		
12-Houston 4150 Westheimer, Houston, TX 77027-4417 713/625-7900 FAX: 713/625-7987 Regional Manager - Allen Parker		
13-San Antonio 140 Heimer Rd., Suite 360, San Antonio, TX 78232-5042 210/490-3096 FAX: 210/545-4325 Regional Manager - Richard Garcia		
14-Corpus Christi 512/851-8484 FAX: 512/851-2666 Regional Manager - Buddy Stanley	1231 Agnes St., Suite 103 Corpus Christi, TX 78401 512/882-5828 FAX: 512/882-7364	4410 Dillon Ln., Suite 47 Corpus Christi, TX 78415-5326 512/851-8484 FAX: 512/851-2666
15-Harlingen 210/968-3165 FAX: 210/969-1315 Regional Manager - Tony France	Mats Bldg., Room 204 513 East Jackson Harlingen, TX 78560 210/425-6010 FAX: 210/412-5069	813 East Pike Blvd. Weslaco, TX 78596-4935 210/968-3165 FAX: 210/969-1315
TNRCC Laboratory 5144 E. Sam Houston Pkwy. N., Houston, TX 77015 713/457-5229 FAX: 713/457-9107 Lab Manager - Jim Busceme		

TNRCC REGIONS



Region	Office
1	Amarillo
2	Lubbock
3	Abilene
4	Arlington
5	Tyler
6	El Paso
7	Odessa
8	San Angelo
9	Waco
10	Beaumont
11	Austin
12	Houston
13	San Antonio
14	Corpus Christi
15	Harlingen



PERMIT NO. 01854
(corresponds to
NPDES PERMIT NO. TX0065854)

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
P. O. Box 13087
Austin, Texas 78711-3087

This permit is a renewal
of Permit No. 01854
approved November 14, 1989

PERMIT TO DISPOSE OF WASTES
under provisions of Chapter 26
of the Texas Water Code

Texas Utilities Electric Company

whose mailing address is

Energy Plaza
1601 Bryant Street
Dallas, Texas 75201-3411

is authorized to treat and dispose of wastes from the Comanche Peak Steam Electric Station. (SIC 4911)

located on the west side of the Squaw Creek Reservoir along Hwy 56 approximately four and one half miles (4.5) northwest of the City of Glen Rose, Somervell County, Texas.

effluent is discharged from the plant into Squaw Creek Reservoir; thence to Squaw Creek; thence to the Paluxy River in Segment No. 1229 of the Brazos River Basin; or to Squaw Creek Reservoir, thence to Lake Granbury in Segment No. 1205 of the Brazos River Basin.

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

This permit and the authorization contained herein shall expire at midnight, five years after the date of Commission approval.

ISSUED DATE: JUL 03 1995

ATTEST:

Nannie M. Black

[Signature]
For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number(s) 001
(Previously Outfall 201)

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge once-through and auxiliary cooling water and previously monitored effluents (*5) subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 3168 million gallons per day (MGD). The total volume discharged during any 24-hour period shall not exceed 3168 million gallons.

Effluent Characteristic	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Avg lbs/day (mg/l)	Daily Max lbs/day (mg/l)	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	Continuous (*2)	Record
Temperature, °F (*1)	N/A (113°F)	N/A (116°F)	116°F	Continuous	Record
Free Available Chlorine (*3)	440 (0.2)	1101 (0.5)	0.5	1/week (*4)	Grab
Total Residual Chlorine (*3)	(Report)	880 (0.2)	0.2	1/week (*4)	Grab

(*1) See Other Requirements, No. 4.

(*2) Flow rates shall be obtained from pump curve data.

(*3) See Other Requirements, No. 5.

(*4) Samples shall be representative of periods of chlorination.

(*5) Effluent previously monitored at Outfall 004 may be discharged through Outfall 001.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location(s): At Outfall 001, where once-through cooling water and previously monitored effluents (*5) are discharged from the discharge canal to Squaw Creek Reservoir.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number(s) 002
(Previously Outfall 501)

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge Safe Shutdown Impoundment (SSI) containing cooling water, low-volume wastes (*2) (service water) and stormwater runoff subject to the following effluent limitations:

Effluent Characteristic	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*1)	Estimate
Total Suspended Solids	30	100	100	1/week (*1)	Grab
Oil and Grease	15	20	20	1/week (*1)	Grab

(*1) When discharge occurs.

(*2) See Other Requirements, No. 3.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week (*1) by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location(s): At Outfall 002, where (SSI) effluents are discharged to Squaw Creek Reservoir.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number(s) 003
(Previously Outfall 301)

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge sanitary sewage effluents subject to the following effluent limitations:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Minimum Self-Monitoring Requirements</u>	
	Daily Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day	Estimate
Biochemical Oxygen Demand (5-day)	20	45	45	2/month	Grab
Total Suspended Solids	20	45	45	2/month	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 2/month by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location(s): At Outfall 003, where sanitary sewage effluents are discharged from the sewage treatment plant prior to Squaw Creek Reservoir.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number(s) 004
(Previously Outfall 101)

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge low-volume wastewater (*1) and previously monitored effluents subject to the following effluent limitations:

Effluent Characteristic	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate
Total Suspended Solids	30	100	100	1/week (*2)	Grab (*3)
Oil and Grease	15	20	20	1/week (*2)	Grab (*3)

(*1) See Other Requirements, No. 3.

(*2) When discharge occurs.

(*3) Since more than one source may be associated with this particular waste category, grab samples from each source may be either physically combined into a single flow weighted sample for analysis and reporting or individually analyzed and the results mathematically combined into a single flow weighted result for reporting.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week (*2) by grab (*3) sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location(s): At Outfall 004, where low-volume wastewater and previously monitored effluents are discharged prior to mixing with the once-through cooling water and/or Squaw Creek Reservoir.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**Outfall Number(s) 005
(Previously Outfall 001)**

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge waters contained in Squaw Creek Reservoir subject to the following effluent limitations:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Minimum Self-Monitoring Requirements</u>	
	Daily Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day(*2)(*3)	Estimate
Temperature, °F (*1)	N/A	93°F	93°F	1/day(*3)	Grab
Total Dissolved Solids	(Report)	4000	4000	1/month(*3)	Grab

(*1) See Other Requirements, No. 4.

(*2) Flow rates shall be obtained from pump curve data.

(*3) When Discharging.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location(s): At Outfall 005, located at Squaw Creek Reservoir Dam, prior to discharge to Lake Granbury.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number(s) 104
(Previously Outfall 601)

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge intermittent discharge of metal cleaning (*1) wastes subject to the following effluent limitations:

Effluent Characteristic	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate
Iron, Total	1.0	1.0	1.0	1/week (*2)	Grab
Copper, Total	0.5	1.0	1.0	1/week (*2)	Grab

(*1) See Other Requirements, No. 2.

(*2) When discharge occurs.

2. The pH, total suspended solids, and oil and grease limits shall apply at Outfall 004 and shall be monitored at Outfall 004, by grab sample (*2).
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location(s): At Outfall 104, where metal cleaning wastes are discharged from the retention ponds or temporary treatment facilities prior to mixing with low-volume waste stream prior to discharge through Outfall 004.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§305.121-305.129, Subchapter F, "Permit Characteristics and Conditions" as promulgated under the Texas Water Code, §§5.103 and 5.105, and §§361.017 and 361.024(e) of the Texas Solid Waste Disposal Act establish the characteristics and standards for waste discharge permits, including sewage sludge. The following text includes these conditions and incorporates them into this permit. All definitions contained in Section 26.001 of the Texas Water Code shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

- a. Daily average flow - the arithmetic average of all determinations of the daily discharge within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- b. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- c. 2-hour peak (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 2-hour peak flow.
- d. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab, within a period of one calendar week, Sunday through Saturday, consisting of at least three separate measurements.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by composite sample, unless otherwise specified elsewhere in this permit.
- d. Fecal Coliform bacteria - the number of colonies per 100 milliliters effluent.

3. Sample Type

- a. Composite sample - a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow collected no closer than two hours for domestic sewage. For industrial wastewater a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow collected no closer than one hour.
 - b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
 5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids separated from wastewater by unit processes which have not been classified as hazardous waste.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§312.4 - 312.12. Unless otherwise specified, a monthly effluent report shall be submitted each month by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month.

As provided by State Law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement on any report or document, falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, and the certification required by 40 Code of Federal Regulations §264.73(b)(9) shall be retained at the facility site and/or shall be readily available for review by a TNACC representative for a period of three years from the date of the record or sample, measurement, report or certification. This period may be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
 - i. date, time and place of sample or measurement;
 - ii. identity of individual who collected the sample or made the measurement;
 - iii. date and time of analysis;
 - iv. identity of the individual and laboratory who performed the analysis;
 - v. the technique or method of analysis; and
 - vi. the results of the analysis or measurement and quality assurance/quality control records.

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

4. Additional Monitoring by Permittee

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

5. Calibration of Instruments

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

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the appropriate Regional Office and the Watershed Management Division enforcement staff.

7. Noncompliance Notification

- a. Unless specified otherwise, any noncompliance which may endanger human health or safety, or the environment shall be reported to the TNACC. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided to the Regional Office and to the Enforcement Section of the Watershed Management Division within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- b. Unauthorized discharges as defined in Permit Condition 2(g) of this permit shall be reported under Part a of this noncompliance notification provision.

- c. Notwithstanding any of the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported in writing to the Regional Office and the Enforcement Section of the Watershed Management Division within 5 working days of becoming aware of the noncompliance.
- d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Section of the Watershed Management Division as promptly as possible. This requirement means to report these types of noncompliance on the monthly self-report form.

8. Signatories to Reports

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

PERMIT CONDITIONS

1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during the application process, relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part in accordance with 30 TAC 305.61 - 305.62, during its term for cause including but not limited to, the following:
 - i. Violation of any terms or conditions of this permit;
 - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required by the permit.

2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgement and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Solid Waste Disposal Act, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or of an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to waters in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements of this permit.
- h. A temporary diversion of wastewater around a unit or units to a permitted outfall for the purposes of maintenance or repair is not a violation of this permit as long as the wastewater complies with all other standards, terms and conditions of this permit. Notice shall be provided to the Regional Office at least 24 hours in advance of any temporary diversion, where practical. Where prior notice for a temporary diversion is not practical, notice shall be provided to the Regional Office as soon as possible but at least within 24 hours after beginning the temporary diversion. Notwithstanding any of the above, the Commission may require that an application be submitted for formal authorization.

3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state. Members, employees, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his or her presence and shall exhibit proper credentials. If any member, employee, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 26.123.

4. Permit Amendment

- a. The permittee shall give notice to the Executive Director prior to physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements.
- b. Prior to any facility modifications, additions and/or expansions of a permitted facility that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity will terminate upon the effective denial of said application.
- d. Prior to accepting wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. Texas Water Code §26.029(b) After a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, to conform to new or additional conditions. The Commission shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Commission may grant additional time.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified, in writing, of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Permit Application Team in the Watershed Management Division.
- b. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC 305.87 (relating to Action on Application for Transfer).

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

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

8. Property Rights

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

9. Permit Enforceability

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

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all its systems of collection, treatment, and disposal are properly operated. This includes the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control such as the Commission's "Recommendations for Minimum Process Control Tests for Domestic Wastewater Treatment Facilities." Process control records shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years.
2. Upon request of the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all provisions of 30 TAC §312.1-§312.13 concerning sewage sludge use and disposal and §319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
 - a. The permittee shall notify the Executive Director in care of the Permitting Section, Watershed Management Division, in writing of any closure activity or facility expansion at least 90 days prior to conducting such activity.
 - b. Closure activities include those associated with any pit, tank, pond, lagoon, or surface impoundment regulated by this permit.
 - c. As part of the notification, the permittee shall submit to the Municipal Permits Team in Austin, a closure plan which has been developed in accordance with the "Closure Guidance Documents" available through Record System Services for the Office of Waste Management & Pollution Cleanup.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual waste treatment fee to the Commission as required by 30 TAC 305 (Subchapter M) and an annual water quality assessment fee to the Commission as required by 30 TAC 320. Failure to pay either fee may result in revocation of this permit.

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification, upon the same basis as self-monitoring data are required to be kept and made available.

8. Facilities which generate domestic wastewater shall comply with these provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
 - a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted average daily flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the average daily flow reaches 90 percent of the permitted average daily flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission. If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the director of the Watershed Management Division of the Commission or an authorized agent, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.
 - b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
 - c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to

such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 325.
10. Facilities which generate industrial solid waste as defined in 30 Texas Administrative Code (TAC) §335.1 shall comply with these provisions:
 - a. Any solid waste generated by the permittee during the management and treatment of wastewater, as defined in 30 Texas Administrative Code (TAC) §335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid) must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
 - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
 - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC §335.6(g), to the Corrective Action Section of the Commission's Industrial and Hazardous Waste Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
 - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Waste Evaluation Section of the Commission's Industrial and Hazardous Waste Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC §335.5.
 - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
 - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:
 - i. Volume of waste and date(s) generated from treatment process;
 - ii. Volume of waste disposed of on-site or shipped off-site;
 - iii. Date(s) of disposal;
 - iv. Identity of hauler or transporter;
 - v. Location of disposal site; and
 - vi. Method of final disposal.

The above records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Texas Natural Resource Conservation Commission for at least five years.

11. For facilities to which the requirements of 30 Texas Administrative Code (TAC) Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Health and Safety Code of Texas.

Other Requirements1. TRANSFORMER FLUID DISCHARGE

There shall be no discharge of transformer fluid containing polychlorinated biphenyl (PCB) compounds.

2. METAL CLEANING WASTE

The term "metal cleaning waste" means any wastewater resulting from cleaning (with or without chemical compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

The term "chemical metal cleaning waste" means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

3. LOW-VOLUME WASTE SOURCES

The term "low volume waste sources" means, wastewaters from, but not limited to: wet scrubber air pollution control systems, ion exchange water treatment system, water treatment, evaporator and boiler blowdown, laboratory and sampling streams, floor drainage, cooling tower basin cleaning wastes and blowdown from recirculating house service water systems. Sanitary and air conditioning wastes are not included.

4. FLOW-WEIGHTED AVERAGE TEMPERATURE

Daily average temperature is defined as the flow weighted average temperature (FWAT) and shall be computed and recorded on a daily basis. FWAT shall be computed at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\text{SUMMATION (INSTANTANEOUS FLOW X INSTANTANEOUS TEMPERATURE)}}{\text{SUMMATION (INSTANTANEOUS FLOW)}}$$

"Daily average temperature shall be the arithmetic average of all FWAT's calculated during the calendar month.

"Daily maximum temperature" shall be the highest FWAT calculated during the calendar month.

5. FREE AVAILABLE CHLORINE ANALYSIS

The term "free available chlorine" shall mean the value obtained using the amperometric titration method for free available chlorine described in "Standard Methods for the Examination of Water and Wastewater".

Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the permittee can demonstrate to the permitting Agency that the units in a particular location cannot operate at or below the limitations specified in this permit.

Other RequirementsTOTAL RESIDUAL CHLORINE

The term "total residual chlorine" (or total residual oxidants for intake water with bromides) means the value obtained using the amperometric method for total residual chlorine described in 40 CFR Part 136.

Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control.

Simultaneous multi-unit chlorination is permitted.

6. MINIMUM ANALYTICAL LEVEL (MAL)

Permit compliance/noncompliance determinations will be based on the minimum analytical level (MAL) for toxic organic and inorganic parameters. Effluent concentrations measured as less than the MAL are deemed to be compliant with the permit limitations. When an analysis of an effluent sample for the following parameters results in a measurement of less than the MAL, that parameter shall be reported as "< (MAL value)" and this shall be interpreted as a value of zero (0) for compliance purposes.

METALS AND CYANIDE
Copper (Total)

MAL (ug/L)
10

7. The permittee shall conduct effluent sampling and reporting in accordance with 30 TAC 319.4 - 319.12. A monthly effluent report must be submitted each month by the 25th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month.

This provision supersedes and replaces the first paragraph of Provision 1 Self-Reporting as defined on Page 3 of this permit.

8. MIXING ZONE DEFINITION

Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone for Outfall 001 is defined as a volume within a radius of 100 feet from the point of discharge to Squaw Creek Reservoir.

Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone for Outfall 005 is defined as a volume within a radius of 100 feet from the point of discharge to Lake Granbury.

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER1. Scope, Frequency and Methodology

- a. The provisions of this section apply individually and separately to Outfall 001 for whole effluent toxicity testing (biomonitoring). No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall. The provisions of this Section are in addition to other biomonitoring requirements in this permit.
- b. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine if an effluent sample meets the Surface Water Quality Standard given at 30 TAC § 307.6 (e)(2)(B) of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- c. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct all 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" (EPA 600/4-90/027), or the most recent update thereof. The TNRCC may require the permittee to repeat a test, including the control and all appropriate effluent dilutions, if the test acceptability criteria, procedures, and quality assurance requirements defined in the test methods or in this permit are not satisfied. A repeat test shall be conducted within the required reporting period if any test is determined to be invalid. The following tests shall be used:
 - 1) Acute 24-hour static toxicity test using Daphnia pulex. A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.
 - 2) Acute 24-hour static toxicity test using the fathead minnow (Pimephales promelas). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.
- d. In addition to an appropriate control (0% effluent), a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 3.b, the control and/or dilution water shall consist of a standard, synthetic, moderately hard, reconstituted water.
- e. This permit may be amended to require a whole effluent toxicity limit, chemical specific effluent limits, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

2. Persistent Mortality

The requirements of this section apply only when a toxicity test demonstrates a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration.

- a. The permittee shall conduct two (2) additional tests (retests) for each species that demonstrates mortality of 50% or greater. The two retests shall be conducted once per week for two (2) weeks. Five effluent dilution concentrations in addition to an appropriate control (0% effluent, as specified in item 1.d.), shall be used in the two (2) retests. These additional effluent concentrations shall be 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of 50% or greater mortality. All test results shall be submitted to the Toxicity Evaluation Team of the Watershed Management Division within twenty (20) days of test completion of the second retest. Test completion is defined as the last day of the test.
- b. If one or both of the two retests specified in item 2.a demonstrates 50% or greater mortality at the 100% effluent concentration, the permittee shall initiate the Toxicity Reduction Evaluation requirements as specified in Part 5 of this Section.
- c. Within three (3) years from the date of completion of the test confirming 50% or greater mortality at the 100% effluent concentration, the permittee shall demonstrate greater than 50% mean survival of the appropriate test organism in 100% effluent for a 24-hour test period for all subsequent testing. This is a permit limit.

3. Required Toxicity Testing Conditions

a. Test Acceptance

The permittee shall repeat any toxicity test, including the control and all appropriate effluent dilutions, if the toxicity test control (0% effluent) does not have a mean survival equal to or greater than 90%.

b. Dilution Water

In accordance with item 1.d, the control and/or dilution water shall normally consist of a standard, synthetic, moderately hard, reconstituted water. If the permittee is utilizing the results of a 48-Hour Acute test or chronic test to satisfy the 24-Hour Acute Biomonitoring requirements in accordance with item 1.f, the permittee may use the receiving water as the control and dilution water if the control meets the requirements of item 3.a.

c. Samples and Composites

- 1) The permittee shall collect one flow-weighted 24-hour composite sample from Outfall(s) 001. A 24-hour composite sample consists of a minimum of twelve (12) effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.
- 2) The permittee shall collect the 24-hour 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 24-hour composite sample. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.
- 4) If flow from the outfall being tested ceases during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume that is sufficient to complete the required toxicity test. The effluent composite sample collection duration and methodology associated with the abbreviated sample collection must be documented in the full report required in item 4.a of this section.

4. Reporting

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA 600/4-90/027), or the most recent update thereof, for every valid and invalid toxicity test initiated. All full reports shall be retained for three (3) years at the plant site and shall be available for inspection by TNRCC personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species, but need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each toxicity test on the Table 2 forms provided with this permit. All Table 2 reports must include the information specified in the Table 2 form attached to this permit. Table 2 reports and full reports shall be submitted to the Toxicity Evaluation Team of the Watershed Management Division.
- c. If semi-annual biomonitoring is required, the test results (Table 2 reports) are due on the sixth (6th) month and annual anniversary dates of permit issuance. The results of the initial toxicity tests are due six (6) months from the permit issue date.
- d. If quarterly biomonitoring is required, the test results (Table 2 reports) are due on the third (3rd), sixth (6th), and ninth (9th) month and annual anniversary dates of permit issuance. The results of the initial toxicity tests are due three (3) months from the permit issue date.

5. Toxicity Reduction Evaluation (TRE)

- a. Within forty-five (45) days of the last test day of the retest that demonstrates 50% or greater mortality at the 100% effluent concentration, the permittee shall submit a general outline to the TNRCC 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/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

- b. Within ninety (90) days of the last test day of the retest that demonstrates 50% or greater mortality at the 100% effluent concentration, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The Plan and Schedule shall be submitted to the Toxicity Evaluation Team of the Watershed Management Division. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to eliminate or reduce effluent toxicity to an acceptable level. A TRE is a step-wise process which combines toxicity testing with physical and chemical analysis of a toxic effluent, to identify the constituents causing effluent toxicity and/or to identify treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of 50% or greater mortality at the 100% effluent concentration for both test species defined in item 1.c. As a minimum, the TRE Action Plan shall include the following:

- 1) Specific Activities - The TRE Action Plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, toxicity identifications, toxicity confirmations, source evaluation, treatability studies, and/or alternative approaches. When the permittee conducts toxicity 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. When the permittee conducts toxicity identification evaluations and confirmations, 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" (EPA/600/3-88/035) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures" (EPA/600/3-88/036). 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 mortality at the 100% effluent concentration.

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or 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 thirty (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 to the Toxicity Evaluation Team of the Watershed Management Division 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 toxicity reduction evaluation activities including:
- 1) results and interpretation of any chemical specific analyses for the identified and/or 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/or substantiating documentation which identifies the pollutant(s) and/or 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 achieve less than 50% mortality at the 100% effluent concentration; 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 Permitting Office and the TNRCC Region 4 Office.

- e. The permittee shall continue routine biomonitoring quarterly (as a minimum) during the TRE, using the most sensitive species unless, after initiating the TRE, the effluent ceases to induce 50% or greater mortality in the 100% effluent concentration for twelve (12) consecutive weeks with at least weekly sampling and testing. Such evidence shall be submitted to the TNRCC with a statement of intent to cease the TRE. The permittee may discontinue the TRE requirements and continue with the testing as required by this section.

This provision is not applicable where less than 50% mortality at the 100% effluent concentration is determined for a period of twelve (12) consecutive weeks as a result of corrective actions taken. Corrective actions necessary to eliminate or reduce effluent toxicity include source

reduction or elimination, housekeeping improvements, changes in chemical usage, and modifications of wastewater or effluent treatment.

- f. The permittee shall complete the TRE and submit a Final Report on the Toxicity Reduction Evaluation Activities no later than eighteen (18) months from the last test day of the retest that demonstrates 50% or greater mortality at the 100% effluent concentration. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity as specified in item 2.c. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s).

Copies of the Final Report on the Toxicity Reduction Evaluation Activities shall also be submitted to the U.S. EPA Region 6 Permitting Office and the TNRCC Region 4 Office.

- g. 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 whole effluent toxicity limits in Part 4 of the permit, and/or to specify chemical specific effluent limits.

TABLE 2 (SHEET 1 OF 2)

DAPHNIA PULEX SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	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*						

1. Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Daphnia or Ceriodaphnia) = _____ % effluent
(circle appropriate genus)

95% confidence limits: _____

Method of LC50 calculation: _____

*If 24-hour survivorship data from the chronic Ceriodaphnia dubia test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL
(*Pimephales promelas*)

GENERAL INFORMATION

	Time (am/pm)	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						

1. Enter percent effluent corresponding to the LC50 below:
- 24 hour LC50 (*Pimephales*) = _____ % effluent
- 95% confidence limits: _____
- Method of LC50 calculation: _____

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER1. SCOPE, FREQUENCY, AND METHODOLOGY

- a. The provisions of this section are applicable to Outfall(s) 001 for whole effluent toxicity.
- b. The permittee shall test the effluent for toxicity in accordance with the provisions in this section. This testing will determine if an appropriately dilute effluent sample adversely affects the survival of the test organism. The permittee shall submit the results of these tests on the appropriate Discharge Monitoring Report (DMR) for the reporting period.
- c. The permittee shall implement all toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with the EPA manual, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the latest update thereof. The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.
- d. The permittee shall utilize the Ceriodaphnia dubia chronic static renewal survival and reproduction test (Method 1002.0 or the most recent publication). This test should be terminated when 60% of the surviving females in the control produce three broods. The permittee shall conduct the Ceriodaphnia dubia toxicity test at a frequency of once per year.
- e. The permittee shall utilize the Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test (Method 1000.0 or the most recent publication). A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test. The permittee shall conduct the Fathead minnow toxicity test at a frequency of once per year.
- f. The permittee shall use five effluent dilution concentrations in addition to a control (0% effluent) in each toxicity test. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. Dilution water used in the toxicity tests shall be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The critical dilution is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions. The low-flow effluent concentration (critical dilution) is defined as the 100% effluent.

- g. This permit may be amended to require a whole effluent toxicity limit, chemical specific effluent limits, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.
- h. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHALITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at the 100% effluent concentration. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent).

- a. The permittee shall conduct a total of two (2) additional tests for any species that demonstrates significant lethal effects at the 100% effluent concentration. The two additional tests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two additional tests in lieu of routine toxicity testing, unless the specified testing frequency for the species demonstrating significant lethal effects is monthly. The full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section.
- b. If one or both of the two additional tests demonstrates significant lethal effects at the 100% effluent concentration, the permittee shall initiate Toxicity Reduction Evaluation requirements as specified under Item 5 of this section.
- c. If one or both of the two additional tests demonstrates significant lethal effects at the 100% effluent concentration, the permittee shall henceforth increase the frequency of testing for this species at a frequency of once per quarter for the life of the permit.
- d. The provisions of Item 2.a are suspended upon submittal of the TRE Action Plan.
- e. If the testing frequency in Item 1 is monthly for a species, the permittee shall initiate the Toxicity Reduction Evaluation requirements as specified under Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant lethal effects at the 100% effluent concentration.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. TEST ACCEPTANCE

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

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.
- v. The percent coefficient of variation between replicates shall be 40% or less in the 100% effluent concentration, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

b. STATISTICAL INTERPRETATION

- i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the low flow (critical dilution) shall be Fisher's Exact Test as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the most recent update thereof.
- ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the low flow effluent concentration (critical dilution) shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, or the most recent update thereof.

c. DILUTION WATER

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
 - (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

11. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
 - (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
 - (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

The permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water if approved by the TNRCC.

d. SAMPLES AND COMPOSITES

- i. The permittee shall collect three flow-weighted 24-hour composite samples from Outfall(s) 001. A 24-hour composite sample consists of a minimum of twelve (12) effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.
- ii. The permittee shall collect a second 24-hour composite sample for use during the 24-hour renewal of each dilution concentration the for both tests. The permittee must collect the 24-hour composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first 24-hour composite sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.
- iii. The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to

complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-89/001, for every valid or invalid toxicity test initiated, whether carried to completion or not. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TNRCC personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species, but need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each toxicity test on the Table 1 forms provided with this permit. All Table 1 reports must include the information specified in the Table 1 form attached to this permit. Table 1 reports and full reports shall be submitted to the Toxicity Evaluation Team of the Watershed Management Division.
- c. If monthly biomonitoring is required, the biomonitoring test results (Table 1 reports) are due on or before the 20th day of the month following sampling.
- d. If quarterly biomonitoring is required, the biomonitoring test results (Table 1 reports) are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.
- e. If semi-annual biomonitoring is required, test results (Table 1 reports) are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6 month period.
- f. If annual biomonitoring is required, test results (Table 1 reports) are due on or before January 20th for biomonitoring conducted during the previous 12 month period.

5. TOXICITY REDUCTION EVALUATION (TRE)

- a. Within forty-five (45) days of the last test day of the retest that confirms significant lethal effects at the critical dilution, the permittee shall submit a general outline to the TNRCC 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/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

- b. Within ninety (90) days of the last test day of the retest that confirms significant lethal effects at the critical dilution, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The Plan and Schedule shall be submitted to the Toxicity Evaluation Team of the Watershed Management Division. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to eliminate or reduce effluent toxicity to an acceptable level. A TRE is a step-wise process which combines toxicity testing with physical and chemical analysis of a toxic effluent, to identify the constituents causing effluent toxicity and/or to identify treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of significant lethal effects at the critical dilution (100% effluent) for both test species defined in item 1.d. As a minimum, the TRE Action Plan shall include the following:
- 1) Specific Activities - The TRE Action Plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, toxicity identifications, toxicity confirmations, source evaluation, treatability studies, and/or alternative approaches. When the permittee conducts toxicity characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005), or alternate procedures. When the permittee conducts toxicity identification evaluations and confirmations, 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" (EPA/600/3-88/035) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures" (EPA/600/3-88/036). 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 whole effluent toxicity test, the toxicity characterization/ identification/ confirmation procedures, and applicable chemical specific analyses when probable toxicant(s) have been identified.

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or 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 thirty (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 to the Toxicity Evaluation Team of the Watershed Management Division 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 toxicity reduction evaluation activities including:
- 1) results and interpretation of any chemical specific analyses for the identified and/or 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/or substantiating documentation which identifies the pollutant(s) and/or 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 Permitting Office and the TNRCC Region 4 office.

- e. The permittee shall continue routine biomonitoring quarterly (as a minimum) during the TRE, using the most sensitive species unless, after initiating the TRE, the effluent ceases to induce lethal responses. A cessation of lethality is defined as no significant lethality at the critical dilution for a period of twelve (12) consecutive months with at least monthly sampling and testing. Such evidence shall be submitted to the TNRCC with a statement of intent to cease the TRE. The permittee may

discontinue the TRE requirements and continue with the routine biomonitoring testing.

This provision is not applicable where significant lethality is absent at the critical dilution for a period of twelve (12) consecutive months as a result of corrective actions taken. Corrective actions necessary to eliminate or reduce effluent toxicity include source reduction or elimination, housekeeping improvements, changes in chemical usage, and modifications of wastewater or effluent treatment.

- f. The permittee shall complete the TRE and submit a Final Report on the Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from the last test day of the retest that confirmed significant lethal effects in the critical dilution. 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 (100% effluent). The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s).

Copies of the Final Report on the Toxicity Reduction Evaluation Activities shall also be submitted to the U.S. EPA Region 6 Permitting Office and the TNRCC Region 4 office.

- g. 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 whole effluent toxicity limits, and/or to specify chemical specific effluent limits.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times
Composites
Collected

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

No. 2 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

No. 3 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER FEMALE AT END OF TEST

REP	Percent effluent (%)					
	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survive: Mean						
Total Mean						
CV%*						

*coefficient of variation = standard deviation x 100/mean (calculation based on young of the surviving females)

Designate males (M), and dead females (D-x), 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 female significantly less ($p=0.05$) than the number of young per female in the control for the % effluent corresponding to (significant nonlethal effects):

CRITICAL DILUTION (%): _____ YES _____ NO

PERCENT SURVIVAL

Time of Reading	Percent effluent (%)					
	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ($p=0.05$) than the control survival for the % effluent corresponding to (lethality):

CRITICAL DILUTION (%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC (no observed effect concentration) below and circle the lowest number:

a.) NOEC survival = _____ % effluent

b.) NOEC reproduction = _____ % effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL
(*Pimephales promelas*)

Dates and Times
Composites
Collected

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

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
70%							
100%							

* 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 ($p=0.05$) than the control's dry weight (growth) for the % effluent corresponding to (significant nonlethal effects):

CRITICAL DILUTION (%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING
FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration (%)	Percent Survival in replicate chambers					Mean percent survival			CV% *
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

* 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 ($p=0.05$) than the control survival for the % effluent corresponding to:

CRITICAL DILUTION (%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC (no observed effect concentration) below and circle the lowest number:

a.) NOEC survival = _____ % effluent

b.) NOEC growth = _____ % effluent