

DRAFT

**AUTHORIZATION TO DISCHARGE UNDER THE
OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM**

PERMIT NUMBER: OK0031011

ID NUMBER: S-10804

PART I

In compliance with the Oklahoma Pollutant Discharge Elimination System Act (OPDES Act), Title 27A O.S. § 2-6-201 *et seq.*, and the rules of the State of Oklahoma Department of Environmental Quality (DEQ) adopted thereunder {See OAC 252:606}; the Federal Clean Water Act, Public Law 95-217 (33 U.S.C. 1251 *et seq.*), Section 402; and NPDES Regulations (40 CFR Parts 122, 124, and 403),

Clinton Public Works Authority
P.O. Box 1177
Clinton, OK 73601

is hereby authorized to discharge treated wastewater from a facility located at approximately

W½, NE¼, NE¼, Section 36, Township 12 North,
Range 17 West, Indian Meridian,
Custer County, Oklahoma
or at 2200 E. Commerce Rd., Clinton, OK 73601

to receiving waters: The Washita River at the point located at approximately

Latitude: 35° 28' 45.756" N [GPS: NAD 1983 CONUS]
Longitude: 98° 56' 32.824" W [GPS: NAD 1983 CONUS]

Water Body ID No. 310830030010_00

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, and IV hereof.

This permit replaces and supersedes the previous permit issued on March 30, 2011.

The issuance date of this permit is Month Date, Year.

This permit shall become effective Month Date, Year.

This permit and authorization to discharge shall expire at midnight Month Date, Year.

For the Oklahoma Department of Environmental Quality:

Micheal Jordan, P.E., Manager
Municipal Discharge and Stormwater Permit Section
Water Quality Division

Shellie Chard-McClary, Director
Water Quality Division

Clinton Wastewater and Pollution Control Facility

A. Effluent Limitations and Monitoring Requirements (Outfall 001)

Beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge treated wastewater in accordance with the following limitations:

Effluent Characteristic		Discharge Limitations			Monitoring Requirements	
		Mass Loading (lb/day)	Concentrations (mg/l unless otherwise specified)		Frequency	Sample Type
			Monthly Avg.	Monthly Avg.		
Flow (mgd) [50050]	Year round	Report Monthly Average and Daily Maximum			Daily	Totalized
Carbonaceous Biochemical Oxygen Demand-5 Day (CBOD₅) [80082]	Apr – Oct	212.7	15.0	22.5	1/Week	6-hr Comp
Biochemical Oxygen Demand-5 Day (BOD₅) [00310]	Nov – Mar	415.3	30.0	45.0	1/Week	6-hr Comp
Total Suspended Solids (TSS) [00530]	Year round	415.3	30.0	45.0	1/Week	6-hr Comp
Ammonia as N (NH₃-N) [00610]	Apr – Oct	99.2	7.0	10.5	1/Week	6-hr Comp
<i>E. Coli</i> (MPN/100 ml) [51040]	May – Sep	---	126 Geo. Mean	406 Daily Max.	2/Week	Grab
	Oct – Apr	---	630 Geo. Mean	2030 Daily Max.	1/Week	
Dissolved Oxygen (DO) [00300]	Apr – Oct	---	Minimum: 5.0		Daily	Grab
	Nov – Mar	---	Minimum: 4.0			
Total Residual Chlorine (TRC) [50060]	Year round	---	Instantaneous Max.: No Measurable ^a		Daily	Grab
pH (standard unit) [00400]	Year round	---	6.5 – 9.0		Daily	Grab

^a No measurable is defined as less than 0.1 mg/l.

Year-round Requirements

- There shall be no discharge of floating solids or visible foam in other than trace amounts.
- There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses or which cause deleterious effects to the biota.
- All monitoring and reporting requirements shall also be in compliance with Part III of this permit.

Sampling Point

Samples taken in compliance with the monitoring requirements specified in the permit shall be taken by at the end of the chlorine contact basin.

B. Whole Effluent Toxicity Reporting and Monitoring Requirements

During the period beginning the effective date of the permit and lasting through the expiration date, the permittee is authorized to discharge from Outfall TX1 (functionally identical to Outfall 001). Such discharges shall be limited and monitored by the permittee as specified below.

The permittee is encouraged to perform required biomonitoring activities as early in the reporting period as is practical to ensure sufficient time remains in the reporting period should retests/repeat tests be necessary.

All laboratory analyses for the biomonitoring parameters specified in this permit must be performed by a laboratory certified by the Oklahoma Department of Environmental Quality for those parameters.

1. Acute WET Testing

Whole Effluent Toxicity Reporting and Monitoring Requirements (Outfall TX1)

Effluent Characteristic			Reporting/Monitoring Requirements ^a		
Test	Critical Dilution ^c	Parameter	48-hour Min	Testing Frequency ^b	Sample Type
<i>Daphnia pulex</i> , 48-hour acute LC ₅₀ static renewal, freshwater	100%	Pass/Fail Survival [TIM3D]	Report	1/quarter	24-hr comp
		LC ₅₀ Effluent Conc [TAM3D]	Report		
		% Mortality at 100% Effluent [TJM3D]	Report		
<i>Pimephales promelas</i> (Fathead minnow), 48-hour acute LC ₅₀ static renewal, freshwater	100%	Pass/Fail Survival [TIM6C]	Report	1/quarter	24-hr comp
		LC ₅₀ Effluent Conc [TAM6C]	Report		
		% Mortality at 100% Effluent [TJM6C]	Report		

^a See Part II, Section E, Whole Effluent Toxicity Limit, for additional monitoring and reporting conditions.

^b Quarterly reporting periods commence with the effective date of the permit. A valid WET test shall be reported for each species for each reporting period.

^c All acute WET testing shall use the dilution series specified in Part II, Section E, Item 1.

Whole Effluent Toxicity Limit and Monitoring Requirements (Outfall TX1)

Effluent Characteristic	Reporting/Monitoring Requirements ^a		
	48-hour Min	Testing Frequency	Sample Type
Whole Effluent Toxicity Limit (lowest acute LC ₅₀ across both test species) [STORET 22414]	>100%	1/quarter ^b	24-hr comp

^a See Part II, Section E, Whole Effluent Toxicity Limit, for additional monitoring and reporting conditions.

^b Results of retests conducted pursuant to prior test failure shall not be substituted on DMRs in lieu of routine test results (see Part II, Section E, Item 2.a).

Compliance with the Whole Effluent Toxicity Limit is required beginning the effective date of the permit.

D. pulex whole effluent toxicity reporting and monitoring requirements apply beginning the effective date, and the first reporting period is _____ to _____.

P. promelas (Fathead minnow) whole effluent toxicity reporting and monitoring requirements apply beginning the effective date, and the first reporting period is _____ to _____.

2. Chronic WET Testing

Whole Effluent Toxicity Reporting and Monitoring Requirements (Outfall TX1)

Effluent Characteristic			Reporting/Monitoring Requirements ^a		
Test	Critical Dilution ^c	Parameter	7-day Min	Testing Frequency ^b	Sample Type
<i>Ceriodaphnia dubia</i> , 7-day chronic NOEC static renewal, freshwater	40%	Pass/Fail Survival [TLP3B]	Report	1/quarter	24-hr comp
		NOEC _L Survival [TOP3B]	Report		
		% Mortality at Critical Dilution [TJP3B]	Report		
		Pass/Fail Reproduction [TGP3B]	Report		
		NOEC _S Reproduction [TPP3B]	Report		
		% Coeff of Variation [TQP3B]	Report		
<i>Pimephales promelas</i> (Fathead minnow), 7-day chronic NOEC static renewal, freshwater	40%	Pass/Fail Survival [TLP6C]	Report	1/quarter	24-hr comp
		NOEC _L Survival [TOP6C]	Report		
		% Mortality at Critical Dilution [TJP6C]	Report		
		Pass/Fail Growth [TGP6C]	Report		
		NOEC _S Growth [TPP6C]	Report		
		% Coeff of Variation [TQP6C]	Report		

^a See Part II, Section F, Whole Effluent Toxicity Limit, for additional monitoring and reporting conditions.

^b Quarterly reporting periods commence with the effective date of the permit. A valid WET test shall be reported for each species for each reporting period. Results of retests conducted pursuant to prior test failure shall not be submitted on DMRs in lieu of routine test results.

^c All chronic WET testing shall use the dilution series specified in Part II, Section F, Item 1).

Whole Effluent Toxicity Limit and Monitoring Requirements (Outfall TX1)

Effluent Characteristic	Reporting/Monitoring Requirements ^a		
	7-day Min	Testing Frequency ^b	Sample Type
Whole Effluent Toxicity Limit (lowest lethal NOEC _L and/or sublethal NOECs across both test species) [STORET 22414]	40%	1/quarter	24-hr comp

^a See Part II, Section F, Whole Effluent Toxicity Limit, for additional monitoring and reporting conditions.

^b Results of retests conducted pursuant to prior test failure shall not be submitted on DMRs in lieu of routine test results.

Compliance with the Whole Effluent Toxicity Limit is required beginning the effective date of the permit.

C. dubia whole effluent toxicity reporting and monitoring requirements apply beginning the effective date, and the first reporting period is _____ to _____.

P. promelas (Fathead minnow) whole effluent toxicity reporting and monitoring requirements apply beginning the effective date, and the first reporting period is _____ to _____.

WET testing summary reports: Reports of all WET testing initiated, regardless of whether such tests are carried to completion, shall follow the requirements of Part II, Section E and F, Item 3.

3. Concurrent Testing Provision for Acute and Chronic WET Testing

Concurrent analyses of total ammonia and pH are required for each individual effluent sample collected for acute and chronic WET testing or retesting of the Fathead minnow species. Concurrent analyses of TDS and constituent ion species are required for each individual effluent sample collected for *Daphnia pulex* and *Ceriodaphnia dubia* WET testing or retesting. TDS constituent ion species are: K⁺ (potassium), Na⁺ (sodium), Ca⁺² (calcium), Mg⁺² (magnesium), Cl⁻ (chloride), HCO₃⁻ (bicarbonate) and SO₄⁻² (sulfate).

Reporting of concurrent testing results shall be in accordance with the following requirements. Results shall also be submitted in or concurrently with each WET test report.

Concurrent Effluent Testing for Acute and Chronic WET Tests (Outfall TX1)

Effluent Characteristic	Concentration			Monitoring Requirements	
	Daily Min	Monthly Avg	Daily Max	Monitoring Frequency	Sample Type
Ammonia, total (mg/l) ^{a,b} [STORET 00610]	Report	Report	Report	1/quarter	24-hr comp ^b
pH (std units) ^{a,b} [STORET 00400]	Report	N/A	Report	1/quarter	Measured in each composite effluent sample, including static renewals, just prior to first use ^b
Total Dissolved Solids (mg/l) ^c [STORET 70300]	Report	Report	Report	1/quarter	24-hr comp

^a Report only those effluent samples collected for WET testing of the Fathead minnow species. Samples collected for WET testing purposes, including static renewals, shall be of sufficient volume to allow for the required concurrent analyses in addition to the WET testing itself. Samples sent directly to WET testing laboratories shall not undergo any preservation other than refrigeration to maintain a temperature at or below 6° C but not frozen prior to arrival and processing at the WET testing laboratory.

^b Two sets of samples for concurrent analyses are required for ammonia and pH:

Concurrent ammonia analyses must be performed on composite samples that are properly preserved and delivered directly to a state certified analytical laboratory. These results shall be included in the results for Outfall 001.

A second concurrent analysis is required for the sample that is sent to the WET testing laboratory and for the table above. Just prior to first use of each composite sample for WET testing purposes, the biomonitoring laboratory shall take an adequately-sized portion of each composite sample, acidify it in accordance with preservation requirements in 40 CFR 136, and have it analyzed for ammonia (NH₃-N) at a state certified laboratory. The pH measurement required for the above table must be taken just prior to the acidification step. These pH and ammonia readings should NOT be included in the results for Outfall 001.

^c Report only those effluent samples collected for WET testing of the *Daphnia pulex* and *C. dubia* species

The concurrent TDS sample is taken at the beginning of the biomonitoring test. Only one sample is necessary and it must be sent directly to a laboratory certified by the state for the TDS analyses. The analyses must include the constituents listed for TDS above the concurrent table.

It must be a composite sample that is properly preserved and refrigerated to maintain a temperature at or below 6° C but not frozen. This result may be included in the results for Outfall 001, if required.

Sampling Location

Samples taken in compliance with the monitoring requirements specified above for Outfall TX1 shall be taken at the following location: at the same location as for Outfall 001 (see cover page for latitude/longitude and legal location).

C. Sanitary Sewer Overflows

Any bypass in the collection system [sanitary sewer overflow (SSO)] shall be reported in accordance with Permit Part III.B.6.

PERMIT PART II - OTHER PERMIT REQUIREMENTS

A. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants shall not be introduced into a Publicly Owned Treatment Works (POTW) facility, defined in 40 CFR 403.3(o) “as any devices and systems used in storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and from such treatment works.”
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 60°C (140°F) using the test methods specified in 40 CFR 261.21;
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in interference;
 - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;
 - e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
 - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.
3. The permittee shall provide adequate notice of the following:
 - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act and/or Sections 40 CFR 405-499 if it were directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.
 - c. Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

B. REOPENER CLAUSE

This permit may be reopened for modification or revocation and reissuance to require additional monitoring and/or effluent limitations where actual or potential exceedances of State water quality criteria are determined to be the result of the permittee's discharge to the receiving water(s), or a revised Total Maximum Daily Load is established for the receiving water(s), or when required as technology. Modification or revocation and reissuance of the permit shall follow regulations listed at 40 CFR 124.5.

C. BIOSOLIDS/SEWAGE SLUDGE REQUIREMENTS

Biosolids/sewage sludge disposal practices shall comply with the Federal regulations for land application of biosolids/sewage sludge, established at 40 CFR Part 503, and the DEQ rules governing Sludge Management (OAC 252:606) as applicable.

The biosolids/sewage sludge disposal practices shall also comply with the requirements of Sludge Management Plan 352010, approved by Department of Environmental Quality on November 6, 2006, that allows the permittee to land apply biosolids/sewage sludge at application sites located in Section 36, Township 12 North, Range 17 West, Indian Meridian, Custer County, Oklahoma.

In addition, the permittee shall comply with other biosolids/sewage sludge requirements specified in Part IV of this permit.

The permittee is required to maintain all records relevant to sewage biosolids/sewage sludge disposal for the life of the permit. These records shall be made available to the ODEQ upon request.

The permittee shall give 120 days prior notice to DEQ of any change planned in the biosolids/sewage sludge disposal practice.

D. POLLUTION PREVENTION REQUIREMENTS

1. The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing program) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:
 - a. The influent loadings, flow and design capacity;
 - b. The effluent quality and plant performance;
 - c. The age and expected life of the wastewater treatment facility's equipment;
 - d. Bypasses and overflows of the tributary sewerage system and treatment works;
 - e. New developments at the facility;
 - f. Operator certification and training plans and status;
 - g. The financial status of the facility;
 - h. Preventative maintenance programs and equipment conditions; and
 - i. An overall evaluation of conditions at the facility.
2. The permittee shall prepare the following information on the biosolids/sewage sludge generated by the facility:
 - a. An annual quantitative tabulation of the ultimate disposition of all biosolids/sewage sludge (including, but not limited to, the amount beneficially reused, landfilled, and incinerated).
 - b. An assessment of technological processes and an economic analysis evaluating the potential for beneficial reuse of all biosolids/sewage sludge not currently beneficially reused including a listing of

any steps which would be required to achieve the biosolids/sewage sludge quality necessary to beneficially reuse the biosolids/sewage sludge.

- c. A description of, including the expected results and the anticipated timing for, all projects in process, in planning and/or being considered which are directed towards additional beneficial reuse of biosolids/sewage sludge.
- d. An analysis of one composite sample of the biosolids/sewage sludge collected prior to ultimate re-use or disposal shall be performed for the pollutants listed in Part IV, Element 1, Section III, Table 3.
- e. A listing of the specific steps (controls/changes) which would be necessary to achieve and sustain the quality of the biosolids/sewage sludge so that the pollutant concentrations in the biosolids/sewage sludge fall below the pollutant concentration criteria listed in Part IV, Element 1, Section III, Table 3.
- f. A listing of, and the anticipated timing for, all projects in process, in planning, and/or being considered which are directed towards meeting the biosolids/sewage sludge quality referenced in (e) above.

The permittee shall certify in writing, within three years of the effective date of the permit, that all pertinent information is available. This certification shall be submitted to:

Oklahoma Department of Environmental Quality
 Water Quality Division
 Municipal Permits Section
 P. O. Box 1677
 707 North Robinson Street
 Oklahoma City, Oklahoma 73101-1677

E. ACUTE WHOLE EFFLUENT TOXICITY TESTING

1. Scope and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section, which apply individually and separately to the outfalls listed below. No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall. The permittee shall biomonitor for *Daphnia pulex* or *Pimephales promelas* in accordance with the WET testing frequencies prescribed in Part I. Intervals between test initiation dates shall be a function of the required testing frequency, as follows:

The permittee is encouraged to perform required biomonitoring activities as early in the reporting period as is practical to ensure sufficient time remains in the reporting period should retests/repeat tests be necessary.

All laboratory analyses for the biomonitoring parameters specified in this permit must be performed by a laboratory certified by the Oklahoma Department of Environmental Quality for those parameters.

Intervals between test initiation dates shall be a function of the required testing frequency, as follows:

- Monthly: No less than 20 days and no more than 40 days.
- Quarterly: No less than 2 months and no more than 4 months.
- Semi-annually: No less than 4 months and no more than 8 months.

APPLICABLE TO OUTFALL(S):	001
REPORTED ON DMR AS OUTFALL(S):	TX1
CRITICAL DILUTION:	100%
EFFLUENT DILUTION SERIES (ALL TESTS):	32%, 42%, 56%, 75%, <u>100%</u>
SAMPLE TYPE:	Defined at Part I
TEST SPECIES/METHODS:	40 CFR 136, except for changes required by EPA, Region 6.

Daphnia pulex acute static renewal 48-hour definitive toxicity test, Method 2021.0, EPA-821-R-02-012 (October 2002), or latest update thereof. 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.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test, Method 2000.0, EPA-821-R-02-012 (October 2002), or latest update thereof. 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.

- b. Acute test failure – Acute test failure (LC₅₀ test) is defined as 50% or more lethality (toxicity) at 48 hours to test organisms at any effluent concentration. The 48-hour LC₅₀ effluent value must be >100% to indicate a passing test. Any 48-hour LC₅₀ effluent value of 100% or less (or equivalently, a survival value of less than 50.1% in any test dilution) will constitute a test failure.
- c. The conditions of this item are effective beginning with the effective date of the WET limit, as established in Part I of this permit. When a whole effluent toxicity test for either test species results in an LC₅₀ value of 100% or less (i.e., greater than or equal to 50% lethality (toxicity) in any effluent dilution), the permittee shall be considered in violation of this permit, and the frequency of testing for that species will increase to monthly until such time as compliance with the LC₅₀ whole effluent toxicity limit is demonstrated for that test species for a period of three (3) consecutive months, at which time the permittee may return to the testing frequency for each species stated in Part I of this permit. Testing conducted pursuant to this provision shall be reported in accordance with Item 3 of this section.

A full laboratory report for the failed routine test and all additional tests shall be prepared and submitted to DEQ in accordance with procedures outlined in Item 3 of the section.

If the permittee cannot pass three tests in a row within the next six months, DEQ will review the test results and may require a Toxicity Identification Evaluation (TIE) be done to determine the cause of the toxicity. If the TIE cannot detect the problem, another Toxicity Reduction Evaluation (TRE) may be required.

- d. Reopener clause – This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity. Accelerated or intensified testing may be required in accordance with Section 308 of the Clean Water Act.
- e. Upon becoming aware of the failure of any test, the permittee shall notify a DEQ Water Quality Division biomonitoring coordinator immediately, and in writing within 5 working days of the test failure with a summary of the results of and any other pertinent circumstances associated with the failed test.

2. Testing Requirements due to Acute Test Failure

Upon becoming aware of the failure of any test, the permittee shall notify DEQ Water Quality Division biomonitoring coordinator immediately, and in writing within 5 working days of the test failure with a summary of the results of and any other pertinent circumstances associated with the failed test.

Beginning with the effective date of the WET limit, as established in Part I of this permit, the following testing requirements due to chronic test failure apply:

- a. When there is an acute test failure for either species during routine testing, at least three additional monthly tests (retests) for the affected species are required. (See Part II, Section E, Item 1.d above). The additional tests shall be conducted monthly during subsequent consecutive months until there are three consecutive months of passing tests at which time the frequency of testing shall return to that stated in Part I of the permit. The permittee shall not substitute any of the retests for routine toxicity testing.
- b. A full laboratory report for the failed routine test and all additional tests shall be provided and submitted to DEQ in accordance with procedure outlined in Item 4.
- c. If the permittee cannot pass three tests in a row within the next six months, DEQ will review the test results and may require a Toxicity Identification Evaluation (TIE) be done to determine the cause of the toxicity. If the TIE cannot detect the problem, another Toxicity Reduction Evaluation (TRE) may be required.

3. Required Toxicity Testing Conditions

- a. Test acceptance – 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, including the following additional criteria:
 - (1) The toxicity test control (0% effluent) must have survival equal to or greater than 90%.
 - (2) The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for the *Daphnia pulex* survival test and Fathead minnow survival test.
 - (3) The percent coefficient of variation between replicates shall be 40% or less in the critical dilution unless significant toxic effects are demonstrated in that dilution for the *Daphnia pulex* survival test and Fathead minnow survival test.
 - (4) As documented at test termination, no more than forty (40) percent of the daphnid test organisms in any replicate of any effluent dilution or in any replicate of the control (0% effluent) shall be male.

If the above criteria or criteria listed in Item 1.a is not met the test will be considered invalid. Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40% for replicates tested at the critical dilution. A repeat test shall be conducted and the biomonitoring enforcement coordinator notified, within the reporting period of any test determined to be invalid.

- b. The permittee shall follow the requirements listed below in determining success or failure of a WET test:

The statistical analyses in the *Daphnia pulex* survival test and the Fathead minnow survival test, used to determine the LC_{50} shall be in accordance with the methods described in EPA-821-R-02-012, or most recent update thereof.

- c. The permittee shall use dilution water that meets the following standards:
- (1) 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 where the toxicity test is conducted on an effluent discharge to a receiving stream classified as intermittent or to a receiving stream with no flow due to zero flow conditions.
 - (2) If the receiving water is unsatisfactory as a result of instream toxicity (fails to meet the test acceptance criteria in Item 3.a), the permittee must submit the test results exhibiting receiving water toxicity with the full test report required in Item 4 below and may thereafter 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 was carried out to completion (i.e., 48 hours); and
 - (c) the synthetic dilution water had 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. The permittee shall collect samples that are representative of their effluent by following the criteria listed below:
- (1) Unless grab sampling is specifically authorized in Part I of the permit, the permittee shall collect two flow-weighted 24-hour composite samples representative of the flows during normal operation from the outfall(s) listed at Item 1.a above. If grab sampling is authorized, all the requirements listed below for composite sampling also pertain to grab sampling. In such cases, collection of the grab sample is considered equivalent to collection of the last portion of a composite sample. Unless otherwise specified in Part I of the permit, a 24-hour composite sample consists of a minimum of 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 first composite effluent sample shall be used to initiate each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to maintain a temperature at or below 6° C but not frozen during collection, shipping, and/or storage.
 - (3) The permittee must collect the 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.
 - (4) If it is anticipated that flow from the outfall being tested may cease prior to collection of the second effluent sample, the permittee must ensure that the first composite effluent sample is of sufficient volume to complete the required testing with daily renewal of effluent. The abbreviated effluent composite sample collection duration, the static renewal protocol associated with an abbreviated sample collection, and a summary of the circumstances justifying collection of an abbreviated sample must be adequately documented in the full test report required in Item 4 of this section.

DEQ reserves the right to require a retest and/or consider the permittee in violation of this permit if the basis offered for justification of an abbreviated sample is insufficient, flawed, or in any way reflects an effort on the part of the permittee to avoid test failure by use of an abbreviated sample.

4. Reporting

- a. The permittee shall provide a full laboratory report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA-821-R-02-012 for every valid or invalid toxicity test initiated, whether carried to completion or not, including any test which is considered invalid, is terminated early for any reason, or which indicates receiving water toxicity. The permittee shall retain each full report pursuant to the records retention provisions of Part III of this permit. The permittee shall submit to DEQ full laboratory test reports for all tests initiated, regardless of whether the tests are carried to completion. The reports shall be postmarked or received no later than the 15th day of the month following completion of the test.
- b. A valid test for each species (excluding retests) must be reported on the DMR for each reporting period specified in Part I of this permit. DMRs must be postmarked or received by the 15th day of the month following completion of any test to DEQ. The full report for the test (see Item 3.a above) shall be submitted along with the DMR. If monthly retesting is required as a result of a WET limit permit violation, several copies of the blank DMR for the applicable reporting period shall be made in advance of completing and submitting the DMR so that the DMR copies may be used to report results of the required retests for that reporting period. If more than one valid test (excluding retests) is performed on a species during a reporting period, the permittee shall report the lowest survival test results as the 48-hour minimum for each species tested.
- c. If any test results in anomalous findings (i.e., it indicates an interrupted dose response across the dilution series), DEQ recommends that the permittee contact a DEQ biomonitoring coordinator for a technical review of the test results prior to submitting the full test report and DMR. A summary of all tests initiated during the reporting period, including invalid tests, repeat tests and retests, shall be attached to the reporting period DMR for DEQ review.

A test is a REPEAT test if it is performed as the result of a previously invalid test. A test is a RETEST if it is performed as the result of a previously failed test, the exception being where the test is the first (valid) test of a reporting period, in which case it is reported as such on the DMR for that period.

- (1) The reporting period test summary attached to the DMR shall be organized as follows:
 - (a) Invalid tests (basis for test invalidity must be described)
 - (b) Valid tests (other than retests) initiated during current reporting period
 - (c) Valid retests for tests failed during previous reporting period (if not submitted in the previous reporting period test summary)
 - (d) Valid retests for tests failed during current reporting period.
- (2) The following information shall be listed in the reporting period test summary for each valid test in categories (b) through (d) in Item 4.b(1) above:
 - (a) Test species
 - (b) Date of test initiation at laboratory

- (c) Results of all concurrent effluent analyses specified in Part I of this permit
- (d) All test result parameters for the test species specified in Item 4.c below.
- d. The permittee shall report the following results for all VALID routine toxicity tests (excluding retests) on the DMR(s) for that reporting period in accordance with Item 4.b above and Part III of this permit.

Daphnia pulex

- (1) Parameter TIM3D: If the *Daphnia pulex* 48-hour LC₅₀ for survival is equal to or less than 100%, report a "1"; otherwise, report a "0".
- (2) Parameter TAM3D: Report the *Daphnia pulex* 48-hour LC₅₀ value for survival.
- (3) Parameter TJM3D: Report the *Daphnia pulex* 48-hour percent mortality in the 100% effluent concentration.

Pimephales promelas (Fathead Minnow)

- (1) Parameter TIM6C: If the Fathead minnow 48-hour LC₅₀ for survival is equal to or less than 100%, report a "1"; otherwise, report a "0".
 - (2) Parameter TAM6C: Report the Fathead minnow 48-hour LC₅₀ value for survival.
 - (3) Parameter TJM6C: Report the Fathead minnow 48-hour percent mortality in the 100% effluent concentration.
- e. The permittee shall report the results for all toxicity retests on the DMR(s) for the reporting period in which retesting is required postmarked or received no later than the 15th day of the month following completion of the retest. Results of all required retests shall be reported on a copy of the DMR for the reporting period (see Item 4.b above). The full laboratory report for the retest (see Item 4.a above) shall be submitted along with the retest DMR. Even if a retest cannot be conducted before the end of the reporting period for which it is required (due to test initiation interval requirements), the retest results shall still be reported for the reporting period in which retesting is required. Should retest failures necessitate the continuation of retesting into subsequent reporting periods, the results of the first test in any reporting period will be reported using the parameter STORET codes listed in Items 4.c above. If retesting is not required during a given reporting period, the permittee shall leave these DMR fields blank.

Whole effluent toxicity limit – The permittee shall report the lowest of either the NOEC_L or NOECs value across this species for the 7-day minimum under STORET No. 22414 on the DMR for the reporting period in accordance with Part III of this permit.

F. CHRONIC WHOLE EFFLUENT TOXICITY TESTING

1. Scope and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section, which apply individually and separately to the outfalls listed below. No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall. The permittee shall biomonitor for *Ceriodaphnia dubia* or *Pimephales promelas* in accordance with the WET testing frequencies prescribed in Part I. Intervals between test initiation dates shall be a function of the required testing frequency, as follows:

The permittee is encouraged to perform required biomonitoring activities as early in the reporting period as is practical to ensure sufficient time remains in the reporting period should retests/repeat tests be necessary.

All laboratory analyses for the biomonitoring parameters specified in this permit must be performed by a laboratory certified by the Oklahoma Department of Environmental Quality for those parameters.

Intervals between test initiation dates shall be a function of the required testing frequency, as follows:

- Monthly: No less than 20 days and no more than 40 days.
- Quarterly: No less than 2 months and no more than 4 months.
- Semi-annually: No less than 4 months and no more than 8 months.

APPLICABLE TO OUTFALL(S):	001
REPORTED ON DMR AS OUTFALL(S):	TX1
CRITICAL DILUTION:	100%
EFFLUENT DILUTION SERIES (ALL TESTS):	17%, 23%, 30%, <u>40%</u> , 53%
SAMPLE TYPE:	Defined at Part I
TEST SPECIES/METHODS:	40 CFR 136, except for changes required by EPA, Region 6.

Ceriodaphnia dubia chronic static renewal 7-day survival and reproduction test, Method 1002.0, EPA-821-R-02-013 (October 2002), or most recent update thereof. A minimum of ten (10) replicates consisting of a single (1) organism each must be used in the control and in each effluent dilution of this test. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first. If this criterion is not met at the end of 8 days, the test must be repeated.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA-821-R-02-013 (October 2002), or most recent update thereof. 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.

- b. Chronic lethal effect test failure – The NOEC_L (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality (toxicity) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure (chronic NOEC_L test) is defined as a demonstration of a statistically significant lethal (toxic) effect at test completion to a test species at or below the critical dilution.
- c. Chronic sublethal effect test failure – The NOEC_S (No Observed Sublethal Effect Concentration) is defined as the greatest effluent dilution at and below which sublethality (toxicity: inhibited reproduction in the *Ceriodaphnia dubia* test or inhibited growth in the Fathead minnow test) that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic sublethal test failure (chronic NOEC_S test) is defined as a demonstration of a statistically significant sublethal effect at test completion to a test species at or below the critical dilution.

- d. The conditions of this item are effective beginning with the effective date of the WET limit as established in Part 1 of this permit. When the testing frequency stated above is less than monthly and the effluent fails the lethal and/or sublethal endpoint at or below the critical dilution, the permittee shall be considered in violation of this permit limit and the frequency for the affected species will increase to monthly until such time as compliance with the No. Observed Effect Concentration (NOEC: lethal and sublethal) effluent limitation is demonstrated for a period of three consecutive months, at which time the permittee may return to the testing frequency stated in Part I of this permit.

If the permittee cannot pass three tests in a row within the next six months, DEQ will review the test results and may require a Toxicity Identification Evaluation (TIE) be done to determine the cause of the toxicity. If the TIE cannot detect the problem, another Toxicity Reduction Evaluation (TRE) may be required.

A full laboratory report for the failed routine test and all additional tests shall be provided and submitted to DEQ in accordance with procedure outlined in Item 4.

- e. Reopener clause – This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity. Accelerated or intensified testing may be required in accordance with Section 308 of the Clean Water Act.
- f. Upon becoming aware of the failure of any test, the permittee shall notify a DEQ Water Quality Division biomonitoring coordinator immediately, and in writing within 5 working days of the test failure with a summary of the results of and any other pertinent circumstances associated with the failed test.

2. Testing Requirements due to Chronic Lethal and/or Sublethal Test Failure

Upon becoming aware of the failure of any test, the permittee shall notify DEQ Water Quality Division biomonitoring coordinator immediately, and in writing within 5 working days of the test failure with a summary of the results of and any other pertinent circumstances associated with the failed test.

Beginning with the effective date of the WET limit, as established in Part I of this permit, the following testing requirements due to chronic test failure apply:

- a. When there is a lethal and/or sublethal effect test failure for either species during routine testing, at least three additional monthly tests (retests) for the affected species are required. (See Part II, Section F, Item 1.d above). The additional tests shall be conducted monthly during subsequent consecutive months until there are three consecutive months of passing tests at which time the frequency of testing shall return to that stated in Part 1 of the permit. The permittee shall not substitute any of the retests for routine toxicity testing.
- b. A full laboratory report for the failed routine test and all additional tests shall be provided and submitted to DEQ in accordance with procedure outlined in Item 4.
- c. If the permittee cannot pass three tests in a row within the next six months, DEQ will review the test results and may require a Toxicity Identification Evaluation (TIE) be done to determine the cause of the toxicity. If the TIE cannot detect the problem, another Toxicity Reduction Evaluation (TRE) may be required.

3. Required Toxicity Testing Conditions

- a. Test acceptance – 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, including the following additional criteria:
- (1) The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
 - (2) The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.
 - (3) Sixty (60) percent of the surviving *Ceriodaphnia dubia* females in the control must produce three broods.
 - (4) 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.
 - (5) 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 and for the growth and survival endpoints of the Fathead minnow test.
 - (6) The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sublethal effects are exhibited for the young of surviving females in the *Ceriodaphnia dubia* reproduction test and for the growth and survival endpoints of the Fathead minnow test.
 - (7) As documented at test termination, no more than forty (40) percent of the daphnid test organisms in any replicate of any effluent dilution or in any replicate of the control (0% effluent) shall be male.
 - (8) The Percent Minimum Significant Difference (PMSD) shall be in the range of 13-47 for *Ceriodaphnia dubia* reproduction. If the test PMSD is less than 13, 13 may be substituted for the PMSD.
 - (9) The PMSD shall be in the range of 12-30 for Fathead minnow growth. If the test PMSD is less than 12, 12 may be substituted for the the PMSD.

If the above criteria or criteria listed in Item 1.a is not met the test will be considered invalid. Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40% for replicates tested at the critical dilution. A repeat test shall be conducted and the biomonitoring enforcement coordinator notified, within the reporting period of any test determined to be invalid.

- b. The permittee shall follow the requirements listed below in determining success or failure of a WET test:
- (1) The statistical analyses in the *Ceriodaphnia dubia* survival test, used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA-821-R-02-013, or the most recent update thereof.
 - (2) The statistical analyses in the *Ceriodaphnia dubia* reproduction test and the Fathead minnow larval survival and growth test, used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-013, or the most recent update thereof.

- (3) If the conditions of test acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an $NOEC_L$ of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.
- c. The permittee shall use dilution water that meets the following standards:
- (1) 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 where the toxicity test is conducted on an effluent discharge to a receiving stream classified as intermittent or to a receiving stream with no flow due to zero flow conditions.
 - (2) If the receiving water is unsatisfactory as a result of instream toxicity (fails to meet the test acceptance criteria in Item 3.a), the permittee must submit the test results exhibiting receiving water toxicity with the full test report required in Item 4 below and may thereafter 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 was carried out to completion (i.e., 48 hours); and
 - (c) the synthetic dilution water had 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. The permittee shall collect samples that are representative of their effluent by following the criteria listed below:
- (1) Unless grab sampling is specifically authorized in Part I of the permit, the permittee shall collect two flow-weighted 24-hour composite samples representative of the flows during normal operation from the outfall(s) listed at Item 1.a above. If grab sampling is authorized, all the requirements listed below for composite sampling also pertain to grab sampling. In such cases, collection of the grab sample is considered equivalent to collection of the last portion of a composite sample. Unless otherwise specified in Part I of the permit, a 24-hour composite sample consists of a minimum of 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 first composite effluent sample shall be used to initiate each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to maintain a temperature at or below 6° C but not frozen during collection, shipping, and/or storage.
 - (3) The permittee must collect the 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.

- (4) If it is anticipated that flow from the outfall being tested may cease prior to collection of the second effluent sample, the permittee must ensure that the first composite effluent sample is of sufficient volume to complete the required testing with daily renewal of effluent. The abbreviated effluent composite sample collection duration, the static renewal protocol associated with an abbreviated sample collection, and a summary of the circumstances justifying collection of an abbreviated sample must be adequately documented in the full test report required in Item 4 of this section. DEQ reserves the right to require a retest and/or consider the permittee in violation of this permit if the basis offered for justification of an abbreviated sample is insufficient, flawed, or in any way reflects an effort on the part of the permittee to avoid test failure by use of an abbreviated sample.

4. Reporting

- a. The permittee shall provide a full laboratory report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA-821-R-02-012 for every valid or invalid toxicity test initiated, whether carried to completion or not, including any test which is considered invalid, is terminated early for any reason, or which indicates receiving water toxicity. The permittee shall retain each full report pursuant to the records retention provisions of Part III of this permit. The permittee shall submit to DEQ full laboratory test reports for all tests initiated, regardless of whether the tests are carried to completion. The reports shall be postmarked or received no later than the 15th day of the month following completion of the test.
- b. A valid test for each species (excluding retests) must be reported on the DMR for each reporting period specified in Part I of this permit. DMRs must be postmarked or received by the 15th day of the month following completion of any test to DEQ. The full report for the test (see Item 4.a above) shall be submitted along with the DMR. If monthly retesting is required as a result of a WET limit permit violation, several copies of the blank DMR for the applicable reporting period shall be made in advance of completing and submitting the DMR so that the DMR copies may be used to report results of the required retests for that reporting period. If more than one valid test (excluding retests) is performed on a species during a reporting period, the permittee shall report the lowest lethal and/or sublethal test result as the 7-day minimum and the 22414 result.
- c. If any test results in anomalous NOEC_L or NOEC_S findings (i.e., it indicates an interrupted dose response across the dilution series), DEQ recommends that the permittee contact a DEQ biomonitoring coordinator for a technical review of the test results prior to submitting the full laboratory test report and DMR. A summary of all tests initiated during the reporting period, including invalid tests, repeat tests and retests, shall be attached to the reporting period DMR for DEQ review.

A test is a REPEAT test if it is performed as the result of a previously invalid test. A test is a RETEST if it is performed as the result of a previously failed test, the exception being where the test is the first (valid) test of a reporting period, in which case it is reported as such on the DMR for that period.

- (1) The reporting period test summary attached to the DMR shall be organized as follows:
- (a) Invalid tests (basis for test invalidity must be described)
 - (b) Valid tests (other than retests) initiated during current reporting period
 - (c) Valid retests for tests failed during previous reporting period (if not submitted in the previous reporting period test summary)
 - (d) Valid retests for tests failed during current reporting period.

- (2) The following information shall be listed in the reporting period test summary for each valid test in categories (b) through (d) in Item 4.b(1) above:
 - (a) Test species
 - (b) Date of test initiation at laboratory
 - (c) Results of all concurrent effluent analyses specified in Part I of this permit
 - (d) All test result parameters for the test species specified in Item 4.c below.
- d. The permittee shall report the following results for all VALID toxicity tests (excluding retests) on the DMR(s) for that reporting period in accordance with Item 4.b above and Part III of this permit.

Ceriodaphnia dubia

- (1) Parameter TLP3B: If the *Ceriodaphnia dubia* NOEC_L for survival is less than the critical dilution, report a "1"; otherwise, report a "0".
- (2) Parameter TOP3B: Report the *Ceriodaphnia dubia* NOEC_L value for survival.
- (3) Parameter TJP3B: Report the *Ceriodaphnia dubia* percent mortality in the critical dilution at test completion.
- (4) Parameter TGP3B: If the *Ceriodaphnia dubia* NOEC_S for reproduction is less than the critical dilution, report a "1"; otherwise, report a "0".
- (5) Parameter TPP3B: Report the *Ceriodaphnia dubia* NOEC_S value for reproduction.
- (6) Parameter TQP3B: Report the highest coefficient of variation (critical dilution or control) for *Ceriodaphnia dubia* reproduction.

Pimephales promelas (Fathead minnow)

- (1) Parameter TLP6C: If the Fathead minnow NOEC_L for survival is less than the critical dilution, report a "1"; otherwise, report a "0".
 - (2) Parameter TOP6C: Report the Fathead minnow NOEC_L value for survival.
 - (3) Parameter TJP6C: Report the Fathead minnow percent mortality in the critical dilution at test completion.
 - (4) Parameter TGP6C: If the Fathead minnow NOEC_S for growth is less than the critical dilution, report a "1"; otherwise, report a "0".
 - (5) Parameter TPP6C: Report the Fathead minnow NOEC_S value for growth.
 - (6) Parameter TQP6C: Report the highest coefficient of variation (critical dilution or control) for Fathead minnow survival and growth.
- e. The permittee shall report the results for all toxicity retests on the DMR(s) for the reporting period in which retesting is required postmarked or received no later than the 15th day of the month following completion of the retest. Results of all required retests shall be reported on a copy of the DMR for the

reporting period (see Item 4.b above). The full laboratory report for the retest (see Item 4.a above) shall be submitted along with the retest DMR. Even if a retest cannot be conducted before the end of the reporting period for which it is required (due to test initiation interval requirements), the retest results shall still be reported for the reporting period in which retesting is required. Should retest failures necessitate the continuation of retesting into subsequent reporting periods, the results of the first test in any reporting period will be reported using the parameter STORET codes listed in Items 4.c above. If retesting is not required during a given reporting period, the permittee shall leave these DMR fields blank.

- f. Whole effluent toxicity limit – The permittee shall report the lowest of either the $NOEC_L$ or $NOECs$ value across this species for the 7-day minimum under STORET No. 22414 on the DMR for the reporting period in accordance with Part III of this permit.

MINIMUM QUANTIFICATION LEVELS (MQLs)

<u>METALS AND CYANIDE</u>	<u>(ug/L)</u>	<u>EPA METHOD</u>
Antimony (Total) ¹	60	200.7
Arsenic (Total) ¹	10	206.5
		200.7 revision 4.4 (1994)
		200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Beryllium (Total) ¹	5	200.7
Cadmium (Total)	1	200.7 revision 4.4 (1994)
		200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Chromium (Total) ¹	10	200.7
Chromium (3+) ¹	10	200.7
Chromium (6+) ¹	10	200.7
Copper (Total)	10	200.7 revision 4.4 (1994)
		200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Lead (Total)	5	200.7 revision 4.4 (1994)
		200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Mercury (Total) ¹	0.2	245.1 revision 3.0 (1994)
Molybdenum (Total)	30	200.7
Nickel (Total) ¹ [Freshwater]	40	200.7
Nickel (Total) [Marine]	5	200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Selenium (Total) ¹	5	200.7 revision 4.4 (1994)
		200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Silver (Total)	2	200.7 revision 4.4 (1994)
		200.8 revision 5.4 (1994)
		200.9 revision 2.2 (1994)
Thallium (Total) ¹	10	279.2 revision
Zinc (Total) ¹	20	200.7
Cyanide (Total) ¹	10	335.4
<u>DIOXIN</u>		
2,3,7,8-Tetrachlorodibenzo- P-Dioxin (TCDD) ^{2,4}	0.00001	1613
<u>VOLATILE COMPOUNDS</u>		
Acrolein ³	50	624
Acrylonitrile ³	50	624
Benzene ³	10	624
Bromoform ⁴	10	624
Carbon Tetrachloride ⁴	10	624
Chlorobenzene ⁴	10	624

MINIMUM QUANTIFICATION LEVELS (MQLs)

Chlorodibromomethane ⁴	10	624
Chloroethane	50	624
2-Chloroethylvinyl Ether ³	10	624
Chloroform ⁴	10	624
Dichlorobromomethane ⁴	10	624
1,1-Dichloroethane ⁴	10	624
1,2-Dichloroethane ⁴	10	624
1,1-Dichloroethylene ⁴	10	624
1,2-Dichloropropane ⁴	10	624
1,3-Dichloropropylene ⁴	10	624
Ethylbenzene ⁴	10	624
Methyl Bromide [Bromomethane]	50	624
Methyl Chloride [Chloromethane]	50	624
Methylene Chloride ⁴	20	624
1,1,2,2-Tetrachloroethane ⁴	10	624
Tetrachloroethylene ⁴	10	624
Toluene ⁴	10	624
1,2-Trans-Dichloroethylene ⁴	10	624
1,1,1-Trichloroethane ⁴	10	624
1,1,2-Trichloroethane ⁴	10	624
Trichloroethylene ⁴	10	624
Vinyl Chloride ⁴	10	624

ACID COMPOUNDS

2-Chlorophenol ⁴	10	625
2,4-Dichlorophenol ⁴	10	625
2,4-Dimethylphenol ¹	10	625
4,6-Dinitro-o-Cresol [12 methyl 4,6-dinitrophenol] ⁴	50	625
2,4-Dinitrophenol ⁴	50	625
2-Nitrophenol ⁴	20	625
4-Nitrophenol ⁴	50	625
p-Chloro-m-cresol [4 chloro-3-methylphenol] ¹	10	625
Pentachlorophenol ⁴	50	625
Phenol ⁴	10	625
2,4,6-Trichlorophenol ⁴	10	625

BASE/NEUTRAL COMPOUNDS

Acenaphthene ⁴	10	625
Acenaphthylene ⁴	10	625
Anthracene ⁴	10	625
Benzidine ³	50	625
Benzo(a)Anthracene ⁴	10	625
Benzo(a)Pyrene ⁴	10	625
3,4-Benzofluoranthene ⁴	10	625

MINIMUM QUANTIFICATION LEVELS (MQLs)

Benzo(ghi)Perylene	20	625
Benzo(k)Fluoranthene ⁴	10	625
Bis(2-Chloroethoxy) Methane ⁴	10	625
Bis(2-Chloroethyl) Ether ⁴	10	625
Bis(2-Chloroisopropyl) Ether ⁴	10	625
Bis(2-Ethylhexyl) Phthalate ⁴	10	625
4-Bromophenyl Phenyl Ether ⁴	10	625
Butylbenzyl Phthalate ⁴	10	625
2-Chloronaphthalene ⁴	10	625
4-Chlorophenyl Phenyl Ether ⁴	10	625
Chrysene ⁴	10	625
Dibenzo (a,h) Anthracene	20	625
1,2-Dichlorobenzene ⁴	10	625
1,3-Dichlorobenzene ⁴	10	625
1,4-Dichlorobenzene ⁴	10	625
3,3'-Dichlorobenzidine	50	625
Diethyl Phthalate ⁴	10	625
Dimethyl Phthalate ⁴	10	625
Di-n-butyl Phthalate ⁴	10	625
2,4-Dinitrotoluene ⁴	10	625
2,6-Dinitrotoluene ⁴	10	625
Di-n-octyl Phthalate ⁴	10	625
1,2-Diphenylhydrazine ³	20	625
Fluoranthene ⁴	10	625
Fluorene ⁴	10	625
Hexachlorobenzene ⁴	10	625
Hexachlorobutadiene ⁴	10	625
Hexachlorocyclopentadiene ⁴	10	625
Hexachloroethane	20	625
Indeno (1,2,3-cd) Pyrene (2,3-o-phenylene pyrene)	20	625
Isophorone ⁴	10	625
Naphthalene ⁴	10	625
Nitrobenzene ⁴	10	625
N-nitrosodimethylamine	50	625
N-nitrosodi-n-propylamine	20	625
N-nitrosodiphenylamine	20	625
Phenanthrene ⁴	10	625
Pyrene ⁴	10	625
1,2,4-Trichlorobenzene ⁴	10	625

PESTICIDES

Aldrin ¹	0.05	608
Alpha-BHC ¹	0.05	608

MINIMUM QUANTIFICATION LEVELS (MQLs)

Beta-BHC ¹	0.05	609
Gamma-BHC (Lindane) ¹	0.05	608
Delta-BHC ¹	0.05	608
Chlordane ¹	0.2	608
4,4'-DDT ¹	0.1	608
4,4'-DDE (p,p-DDX) ¹	0.1	608
4,4'-DDD (p,p-TDE) ¹	0.1	608
Dieldrin ¹	0.1	608
Alpha-endosulfan ¹	0.1	608
Beta-endosulfan ¹	0.1	608
Endosulfan sulfate ¹	0.1	608
Endrin ¹	0.1	608
Endrin aldehyde ¹	0.1	608
Heptachlor ¹	0.05	608
Heptachlor epoxide ¹ (BHC-hexachlorocyclohexane)	0.05	608
PCB-1242 ¹	1.0	608
PCB-1254	1.0	608
PCB-1221	1.0	608
PCB-1232	1.0	608
PCB-1248	1.0	608
PCB-1260	1.0	609
PCB-1016	1.0	608
Toxaphene ¹	5.0	608

¹ Based on Contract Required Quantitation Level (CRQL) developed pursuant to 40 CFR Part 122

² Dioxin National Strategy

³ No CRQL(Contract Required Quantification Level developed pursuant to 40 CFR Part 122) established

⁴ CRQL basis, equivalent to MQL

MQL based on 3.3 times LOD published in 40 CFR 136, Appendix B

Methods/MQL List modified 6/20/08