



Doc Type: Effluent Limit Standards Review

Address the completed, signed report to: Attn: Water Quality Submittals
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Permit No.: MN Station ID: _____

Name of permittee: _____

Facility representative name: _____ E-mail: _____

Sample condition upon test initiation

Sample	Collection date	Receipt date	First use date	pH (SU)	Conductivity (umhos/cm)	TRC (mg/L)	Temp °C Arrival at lab	Temp °C upon test initiation	Total Ammonia (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)
Receiving Water 1											
Receiving Water 2*											
Receiving Water 3*											
Receiving Water 4*											
Effluent 1											
Effluent 2*											
Effluent 3*											
Effluent 4*											

*If applicable

umhos/cm = micromhos per centimeter

mg/L = milligrams per Liter (mg/L)

Does facility have chlorine limit? (check one) ☐ Yes ☐ No

Was sample dechlorinated at lab? (check each one that applies)

☐ Effluent 1 ☐ Effluent 2 ☐ Effluent 3 ☐ Effluent 4

Effluent filtered? (check one) ☐ Yes ☐ No If yes, state mesh size: _____

Effluent sample type (check one type for each sample):

Effluent 1:	<input type="checkbox"/> 24 hr composite	<input type="checkbox"/> Grab	<input type="checkbox"/> Grab-composite – Enter number of grabs: _____
Effluent 2:	<input type="checkbox"/> 24 hr composite	<input type="checkbox"/> Grab	<input type="checkbox"/> Grab-composite – Enter number of grabs: _____
Effluent 3:	<input type="checkbox"/> 24 hr composite	<input type="checkbox"/> Grab	<input type="checkbox"/> Grab-composite – Enter number of grabs: _____
Effluent 4:	<input type="checkbox"/> 24 hr composite	<input type="checkbox"/> Grab	<input type="checkbox"/> Grab-composite – Enter number of grabs: _____

Summary of data for Fathead Minnows – Percent survival per concentration

Day	0 ₁ (diluent)	0 ₂ (if used)	%	%	%	%	100%
1							
2							
3							
4							

Summary of data for *Ceriodaphnia dubia* – Percent survival per concentration

Day	0 ₁ (diluent)	0 ₂ (if used)	%	%	%	%	100%
1							
2							

Summary of data for *Daphnia magna* – Percent survival per concentration

Day	0 ₁ (diluent)	0 ₂ (if used)	%	%	%	%	100%
1							
2							

Summary of results – Acute values

Species	LC ₅₀	TU _a (acute toxic units)
Fathead Minnow (96 hour)		
<i>Ceriodaphnia dubia</i> (48 hour)		
<i>Daphnia magna</i> (48 hour)		

Test Acceptability Criteria (TAC)

QA/QC Criteria	Criteria met for Acute Toxicity
Fathead Minnow – Age range <24 hours at test start	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Ceriodaphnia dubia</i> – Age range <24 hours at test start	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Daphnia magna</i> – Age range <24 hours at test start	<input type="checkbox"/> Yes <input type="checkbox"/> No
Test started within 36 hours of collection of sample	<input type="checkbox"/> Yes <input type="checkbox"/> No
90% or greater survival of all control organisms (if any species results fail, check No)	<input type="checkbox"/> Yes <input type="checkbox"/> No

If reference toxicant other than NaCl used, please indicate: _____

Test deviation comments

Describe any deviation from test methods: _____

(For example: pH-controlled test amount of CO₂, reduced DO levels in test leading to aeration, sample exceeded holding time.)

Certifications

Form shall be signed by the laboratory here certifying the results:

Lab representative (print): _____ Phone: _____

Signature: _____ Date: _____

Form shall be signed by the permittee here in accordance with Minn. R. 7001.0540 Certification of Permit Applications and Reports

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.

Permittee representative (print): _____ Phone: _____

Signature: _____ Date: _____

Attachments provided:

Whole Effluent Toxicity Test Instruction Sheet

This instruction sheet is provided to aid in filling out the Acute or Chronic Whole Effluent Toxicity (WET) Test report forms as required by your National Pollutant Discharge Elimination System (NPDES) Permit. If your permit requires acute WET testing, there will be one form to fill out. If your permit requires chronic WET testing, there will be two forms to fill out.

Section 1. Facility Information

Fill out your NPDES permit number, discharge outfall station identification (ID) number, and your Permittee name as it appears on your NPDES permit.

Section 2. Test Information

Test Start Date/Test End Date. Fill out the date the test began (month/day/year), the date the test finished (month/day/year)

No discharge. This box should be checked if no discharge occurred during the WET monitoring period. If no discharge occurred, the rest of the form is left blank, and should be signed, dated, and submitted by the required date.

Report Completion Date. Fill out the completion date, which is the date the report is sent from the testing laboratory as indicated on the test report (month/day/year).

WET test type. Select the appropriate form to fill out. This will be either the acute test form, or both the Fathead chronic minnow form and the *Ceriodaphnia* chronic form. Check the appropriate test represented by this report; either Initial, Repeat#1, Repeat#2, or TAC Repeat

Dilution water. Check either lab or receiving water, whichever was used to dilute the effluent sample to create the test series concentrations. If receiving water is used as the diluents, supply the name of that receiving water.

Test Lab Name, etc. Provide the name, phone number, address, lab representative name, and e-mail address.

Facility representative name. Provide the name of the discharging facility's representative and e-mail address.

Sample condition table. The laboratory conducting the tests must fill in the sample information and dates associated with the samples received. The information is typically collected for Chain of Custody forms and for initial sampling upon initiating a test. Provide the date the sample was collected, receipt date at the lab, date of first use for testing, pH, specific conductivity, total residual chlorine (TRC) analysis, temperature upon arrival at the lab and temperature at test initiation, total ammonia analysis, total alkalinity, and total hardness. Sample data will be provided for each sample received and as specified by the applicable acute or chronic manuals, or by the permit. Up to four samples each may be received for the receiving water and effluent for acute tests. Up to three samples may be received for chronic tests for the receiving water. Fill in any data that is below quantification levels with a less than sign and that actual quantification level (e.g. <40 ug/l) – **do not report ND**.

Does facility have a chlorine (TRC) permit limit? Check either Yes or No.

Was sample dechlorinated at the lab? Check each sample that was dechlorinated at the lab.

Effluent filtered? Check either Yes or No, and state the mesh size used for filtration.

Effluent sample type. For each sample collected check or check whether the sample was a twenty-four hour composite, a grab, or a grab composite with the number of grabs taken to comprise the composite sample.

Summary of data for each species for acute or chronic tests, as applicable in your permit. For each species in an acute test summarize the cumulative survival data over all replicates for each treatment level for each day of the test. Fill in the dilution series expressed as percent effluent as specified by the permit. Reaffirm which sample of either receiving water or lab water was used as the diluent (0₁) based on your answer in section 2 *Test Information – Dilution water*.

For a Fathead minnow chronic test summarize the cumulative 96 hour survival data over all replicates, the cumulative mean 7-day biomass data, and the 7-day cumulative mean percent survival data for each treatment level for the test. Fill in the dilution series expressed as percent effluent as specified by the permit. Reaffirm which sample of either receiving water or lab water was used as the diluent (0₁) based on your answer in section 2 *Test Information – Dilution water*.

For a *Ceriodaphnia* chronic test summarize the cumulative 48 hour survival data over all replicates, the cumulative mean 7-day reproduction/female data, and the 7-day cumulative mean percent survival data for each treatment level for the test. Fill in the dilution series expressed as percent effluent as specified by the permit. Reaffirm which sample of either receiving water or lab water was used as the diluent (0₁) based on your answer in section 2 *Test Information – Dilution water*.

Summary of results table for each species for acute or chronic tests, as applicable. For acute tests provide the appropriate 48 or 96 hour LC50 values for each species and the calculated toxic unit values (TUa for acute or TUc for chronic tests).

For Fathead minnow chronic tests provide the calculated IC₂₅ for larval survival and growth at the end of the test as well as the critical No Observed Effect Concentration (NOEC) and Lowest Observed Effect Concentration (LOEC). Also provide the chronic toxic units (TUC) calculated as the inverse of the IC₂₅ value.

For *Ceriodaphnia* chronic tests provide the calculated IC₂₅ for survival and reproduction at the end of the test as well as the No Observed Effect Concentration (NOEC) and Lowest Observed Effect Concentration (LOEC). Also provide the chronic toxic units (TUC) calculated as the inverse of the IC₂₅ value.

Test acceptability criteria. For acute tests check the corresponding boxes either yes or no for each of the Quality Assurance/Quality Control (QA/QC) criteria.

For chronic tests check the corresponding boxes either yes or no for each of the QA/QC criteria. If there is deviation from the specified methods, please describe the change and reason for the deviation. PMSD is the percent minimum significant difference from hypothesis testing that characterizes overall test variability. The temperature variation of $\pm 1^{\circ}$ C is for individual measured test chambers over a test.

Deviations from test methods. If there is any deviation from the specified methods, please describe the change and the reason for the deviation. This is a narrative comment area to describe any unusual circumstances in conducting any of these tests.

Certifications. Provide the laboratory representative name, signature, phone number and date for the tests completed. Also provide the permittee representative name, signature, phone number and date for the tests completed. The Permittee is responsible for forwarding these results to the Minnesota Pollution Control Agency.

Attachments. Attach any narrative regarding results or SOP, bench sheets for analytical and biological data, chain of custody forms, reference test results for tested species (tables and/or charts over the past year), and toxicity calculation outputs.