



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0030031

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"),

Mora National Fish Hatchery and Technology Center
P.O. Box 689
Mora, NM 87732

is authorized to discharge to receiving waters named an unnamed ditch; thence to unclassified Trambley ditch, thence to the Mora River in Segment No. 20.6.4.307 of the Canadian River Basin in Mora County, NM

from a facility located off State Highway 434, approximately 1.75 miles north of the intersection with State Highway 518 in Mora County, NM

the discharges are located on that water at the following coordinates:

Outfall 001: Latitude 35° 58' 34.23" North, Longitude 105° 18' 52.13" West

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, and Part III hereof.

This permit supersedes and replaces NPDES Permit No. NM0030031 issued December 14, 2007, with an effective date of January 1, 2008, and an expiration date of December 31, 2012.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Prepared by

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Water Quality Protection Division (6WQ)

Laurence E. Giglio
Environmental Engineer
Permits & Technical Section (6WQ-PP)

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – Outfall 001 – 0.42 MGD Flow

During the period beginning the effective date of the permit and lasting to the permit expiration date (unless otherwise noted), the permittee is authorized to discharge hatchery waste water to an unnamed ditch; thence to the Trambley drainage ditch, thence to the Mora River from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below.

| EFFLUENT CHARACTERISTICS | DISCHARGE LIMITATIONS | | MONITORING REQUIREMENTS | |
|--------------------------|-----------------------|---------|-------------------------|-------------|
| | Standard Units | | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| POLLUTANT | MINIMUM | MAXIMUM | | |
| PH | 6.6 | 9.0 | 2/Month (*2) | Grab (*3) |

| EFFLUENT CHARACTERISTICS | DISCHARGE LIMITATIONS | | | | MONITORING REQUIREMENTS | |
|--------------------------|-----------------------|------------|-------------------------|-----------|-------------------------|------------------|
| | lbs/day, unless noted | | mg/l, unless noted (*1) | | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| POLLUTANT | DAILY AVG | DAILY MAX | DAILY AVG | DAILY MAX | | |
| Flow | Report MGD | Report MGD | *** | *** | Continuous | Totalizing Meter |
| Total Suspended Solids | 35 | 52.6 | 10 | 15 | 2/Month (*2) | Grab (*3) |
| Settleable Solids | N/A | N/A | 0.1 ml/l | 0.5 ml/l | 2/Month (*2) | Grab (*3) |
| Total Nitrogen (*4) | 1.54 | 2.31 | 0.38 | 0.57 | 2/Month (*2) | Grab (*3) |
| Total Phosphorus | 0.122 | 0.183 | 0.03 | 0.045 | 2/Month (*2) | Grab (*3) |

| EFFLUENT CHARACTERISTICS | DISCHARGE MONITORING | | MONITORING REQUIREMENTS | |
|--|----------------------|---------------|-------------------------|-----------------------|
| | 30-DAY AVG MINIMUM | 7-DAY MINIMUM | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| WHOLE EFFLUENT TOXICITY TESTING (7-NOEC) (See Part II, Section D) (*5) (PCS 22414) | 44% | 44% | | |
| Ceriodaphnia dubia | Report | Report | Yearly (*6) | 24 Hr. Composite (*3) |
| Pimephales promelas | Report | Report | Yearly (*6) | 24 Hr. Composite (*3) |

Footnotes:

- *1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- *2 The first sample event of any reporting period shall be at least 10-days from the first sample event of the previous reporting period.
- *3 Sampling shall be conducted during cleaning operations of the raceways.
- *4 Total Nitrogen is defined as the sum of Total Kjeldahl Nitrogen (as N) and Nitrate-Nitrite (as N) (see EPA methods 351.2 and 353.2).
- *5 Yearly. Sampling for the WET test shall be conducted during raceway cleaning between November 1 and April 30. See Part II, Section C.
- *6 Monitoring and reporting requirements begin on the permit effective date lasting until the permit expiration date. See PART II, D. Whole Effluent Toxicity Limit.

2. FINAL Effluent Limits – Outfall 01B – Special Testing - Non FDA Approved Drugs, Medications and/or Chemicals

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge wastewater containing either non-approved Food and Drug Administration drugs, medications or chemicals (DMC), or DMC used in a manner not consistent with FDA approval, or chlorine to the Trambley drainage ditch, thence to the Mora River from Outfall 001. (See Part II). Such discharges shall be limited and monitored by the permittee and reported as Outfall 01B, as specified below:

| EFFLUENT CHARACTERISTICS | DISCHARGE LIMITATIONS | | | | MONITORING REQUIREMENTS | |
|-------------------------------|-----------------------|------------|-------------------------|--------------|-------------------------|-------------------------|
| | lbs/day, unless noted | | mg/l, unless noted (*1) | | | |
| POLLUTANT | DAILY AVG | DAILY MAX | DAILY AVG | DAILY MAX | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| Flow | Report MGD | Report MGD | *** | *** | Continuous | Totalizing Meter |
| Total Residual Chlorine (TRC) | N/A | N/A | N/A | 11 ug/l (*2) | Daily | Instantaneous Grab (*3) |

| EFFLUENT CHARACTERISTICS | DISCHARGE MONITORING | | MONITORING REQUIREMENTS | |
|--|----------------------|---------------|-------------------------|-------------|
| WHOLE EFFLUENT TOXICITY TESTING 48-Hr Static Renewal) (See Part II, Section E) | 30-DAY AVG | 7-DAY MINIMUM | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| Pimephales promelas | Report | Report | Once/Use (*4, 5) | Grab (*6) |
| Daphnia pulex | Report | Report | Once/Use (*4, 5) | Grab (*6) |

Footnotes:

- *1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- *2 This testing shall be only used when chlorine is being used in the fish production systems such as the raceways etc. The maximum TRC shall be monitored by instantaneous grab sample each day that chlorine is being used as a treatment chemical, PLUS for one day after the last day of its use. Regulations at 40 CFR Part 136 define "instantaneous grab" as analyzed within 15 minutes of collection. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. If chlorine is used, WET testing is not applicable.
- *3 Instantaneous grab sample shall be taken approximately 30-minutes after the expected slug of water has passed through the outfall. The expected time of arrival can be determined by direct observation by the use of a floatable marker such as wooden blocks.
- *4 Once per use is defined as one WET test for each continuous use of the DMC. For long-term use of these DMC, only one WET test shall be required on the maximum dose of the treatment, unless that maximum dose is later increased by 20 percent. At that point, and any later increases above 20 percent, then additional WET tests will be required.
- *5 See Part II, Section E.
- *6 Grab sample shall be taken approximately 30-minutes after the expected time of arrival of the treated water has passed through the outfall. The expected time of arrival can be determined by direct observation by the use of a floatable marker such as wooden blocks.

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the weir locations prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

NONE

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring results must be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. Until you are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, 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 and other agencies as required. (See Part III.D.IV of the permit.)

1. Reporting periods shall end on the last day of the months March, June, September, and December.
2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

3. NO DISCHARGE REPORTING

If there is no discharge from any outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

4. If any 7-day average or daily maximum value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.

5. Any 30-day average, 7-day average, or daily maximum value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.

6. The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). Overflows that endanger health or the environment shall be orally reported to EPA at (214) 665- 6595 and NMED Surface Water Quality Bureau at (505) 827-0187, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment shall be provided to EPA and NMED within 5 days of the time the permittee becomes aware of the circumstance.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II below with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II.

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

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future DMR reporting requirements until/or unless changes are required for adoption of a lower MQL.

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

None

C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or State of New Mexico water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(a)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. WHOLE EFFLUENT TOXICITY LIMITS (7 DAY CHRONIC NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S): 001

REPORTED ON DMR AS FINAL OUTFALL: 001

CRITICAL DILUTION: 44%

EFFLUENT CONCENTRATIONS: 19%, 25%, 33%, 44%, and 59%

EFFLUENT DILUTION SERIES: 75%

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: [40 CFR Part 136]

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA 821 R 02 013, or the most recent update thereof. 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.

Pimephales promelas (Fathead minnow) chronic static renewal 7 day larval survival and growth test, Method 1000.0, EPA 821 R 02 013, or the 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. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is

defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

c. The conditions of this item are effective beginning with the effective date of the WET limit. When the testing frequency stated above is less than monthly and the effluent fails the survival 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 compliance with the Lethal No Observed Effect Concentration (NOEC) 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. During the period the permittee is out of compliance, test results shall be reported on the DMR for that reporting period. The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

d. This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. 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:

- 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. 60% of the surviving control females must produce three broods.
- iv. 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.
- v. 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.
- vi. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, 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.

vii. a Percent Minimum Significant Difference (PMSD) range of 13 - 47 for Ceriodaphnia dubia reproduction;

viii. a PMSD range of 12 - 30 for Fathead minnow growth.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

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 critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 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 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.

iii. If the conditions of Test Acceptability are met in Item 2.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 a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 3 below.

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 where the receiving stream is classified as intermittent or where the receiving stream has no flow 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 composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect second and third flow-weighted composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the flow-weighted 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.

iii. The permittee must collect the flow-weighted 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 flow-weighted composite sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.

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 flow-weighted 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 if the discharge occurs over multiple days. The effluent flow-weighted 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 3 of this section.

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, 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 upon the

specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. The permittee shall report the Whole Effluent Toxicity values for the 30 Day Average Minimum and the 7 Day Minimum under Parameter No. 22414 on the DMR for that reporting period in accordance with PART III.D.4 of this permit.

If more than one valid test for a species was performed during the reporting period, the test NOECs will be averaged arithmetically and reported as the DAILY AVERAGE MINIMUM NOEC for that reporting period.

If more than one species is tested during the reporting period, the permittee shall report the lowest 30 Day Average Minimum NOEC and the lowest 7 Day Minimum NOEC for Whole Effluent Lethality.

A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.

c. The permittee shall submit the results of the valid toxicity test on the DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. Pimephales promelas (Fathead Minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP6C

(B) Report the NOEC value for survival, Parameter No. TOP6C

(C) Report the LOEC value for survival, Parameter No. TXP6C

(D) Report the NOEC value for growth, Parameter No. TPP6C

(E) Report the LOEC value for growth, Parameter No. TYP6C

(F) If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP6C

(G) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C

ii. Ceriodaphnia dubia

(A) If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B

(B) Report the NOEC value for survival, Parameter No. TOP3B

(C) Report the LOEC value for survival, Parameter No. TXP3B

(D) Report the NOEC value for reproduction, Parameter No. TPP3B

(E) Report the LOEC value for reproduction, Parameter No. TYP3B

(F) If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B

(G) Report the higher (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B

E. DRUGS, MEDICATIONS and CHEMICALS, (EXCLUDING CHLORINE)

With the exception of chlorine, anytime drugs, medications and chemicals (DMC), at either concentrations and/or uses not approved by the Food and Drug Administration (FDA), are used either in amounts or a manner that it would allow it to enter the receiving stream, the Hatchery shall notify both EPA and NMED of its impending use. Notification to NMED shall be by phone within one business day of its decision to use the DMC, and to EPA within three days. Written notification shall also be to both EPA and NMED, in writing no less than five-business days later. Both notifications shall provide the name of the DMC, its amount, concentration of use and reason for its use, along with the expected date and time of its use, and expected duration of use.

With the exception of chlorine, anytime the Hatchery uses drugs, medications and chemicals (DMC), at either amounts and/or uses not approved by the Food and Drug Administration (FDA), such that it would allow it to enter the receiving stream, the Hatchery shall conduct Whole Effluent Toxicity (WET) tests. The testing shall be reported on the discharge monitoring report (DMR) and reported as Outfall 01B. On the DMR, report in the comment section the date, time duration and the name of the DMC used. Also note the date of the letter sent to EPA and NMED.

WET testing shall be conducted on the maximum dose of each instance of intermittent use of drugs, medications and/or chemicals not approved by the FDA, or drugs, medications and/or chemicals for purposes other than those for which FDA approval was granted (not including chlorine). For long-term use of these drugs, medications and/or chemicals, only one WET test shall be required on the maximum dose of the treatment, unless that maximum dose is later increased by 20 percent. At that point, and any later increases above 20 percent, then additional WET tests will be required. The sample shall NOT be flow weighted with other

outfall flow. The sample shall occur at the outfall location consistent with the unit being treated, during the time that the expected highest dose is being administered and shall be taken at a time taking into consideration the lag-time for the slug of maximum dosage of

DMC to flow from the point of application to the sample point. The grab sample for the WET test shall be taken 30-minutes after the expected arrival time of the treated water of DMC at the outfall. The expected arrival time can be determined by direct observation by use of a floatable marker such as wooden blocks.

WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE NOEC FRESHWATER) DMC USAGE

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

| | |
|-----------------------------------|-----------------------|
| APPLICABLE TO FINAL OUTFALL(S): | 01B |
| REPORTED ON DMR AS FINAL OUTFALL: | 01B |
| EFFLUENT CONCENTRATIONS (%): | 25, 33, 44, 59 and 79 |
| CRITICAL DILUTION (%): | 44 |
| EFFLUENT DILUTION SERIES (%): | 75 |
| COMPOSITE SAMPLE TYPE: | Defined at PART I |
| TEST SPECIES/METHODS: | 40 CFR Part 136 |

Daphnia pulex acute static renewal 48 hour definitive toxicity test using EPA 821 R 02 012, or the 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 using EPA 821 R 02 012, or the 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. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.
- c. 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.
- d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

2. 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:

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: *Daphnia pulex* survival test; and Fathead minnow survival test.
- iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: *Daphnia pulex* survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the *Daphnia pulex* survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically 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 02 012 or the most recent update thereof.

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 90% 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 of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

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., 48 hours);

(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 (**Grab Samples Authorized For This Permit**)

- i. The permittee shall collect two grab samples from the outfall(s) listed at Item 1.a above.

- ii. The permittee shall collect a second grab sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee must collect the grab 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 grab sample. Samples shall be chilled to 4

degrees Centigrade during collection, shipping, and/or storage.

- iii. The permittee must collect the grab samples such that the effluent samples are representative of any periodic episode of DMC, 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 grab 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 grab 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.

3. 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 EPA 821 R 02 012, 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 upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.
- c. The permittee shall report the following results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.
 - i. Pimephales promelas (Fathead minnow)
 - (A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

- (B) Report the NOEC value for survival, Parameter No. TOM6C.
- (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.
- ii. *Daphnia pulex*
 - (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
 - (B) Report the NOEC value for survival, Parameter No. TOM3D.
 - (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.
- d. Enter the following codes on the DMR for retests only:
 - i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

F. CHLORINE USAGE AS TREATMENT

During times when chlorine is used in the treatment process, for cleaning of the aquatic production system, and/or to eliminate parasites, the Hatchery shall notify the Agency and the NMED. Notification to NMED shall be by phone within one business day of its decision to use the DMC, and at least three-business days prior to the actual use, and both EPA and NMED, in writing, within five-business days of its decision of use. The notification should give the expected date and time of its use and the expected duration of usage. This test shall be reported on the DMR as Outfall 01B. TRC shall be limited in the permit to a maximum 11 ug/l end-of-pipe.

This test will be in lieu of the WET test described above for other DMC. Testing for total residual chlorine (TRC) shall be an instantaneous grab sample, with analysis taken within 15-minutes of sample collection. During ALL times when chlorine is being used, the Hatchery shall monitor and report TRC daily, the discharge water for TRC. In addition, TRC shall be measured and reported for one day after the last use of the chlorine. On the DMR report in the comment section the date, time and duration of the chlorine use shall be noted. Also note the date of the letter that was sent to EPA and NMED. The first day of use, TRC shall be sampled approximately 30-minutes after the expected arrival time of treated water has passed through the outfall. The expected time of arrival can be determined by direct observation by the use of a floatable marker such as wooden blocks.

G. BEST MANAGEMENT PRACTICES

1. IMPLEMENTATION

The permittee shall continue to maintain and update its Best Management Practices (BMP) Plan that achieves the objectives and the specific requirements listed below. The current plan provided previously shall remain in effect with this permit. The following are elements of the plan that must be maintained in updates as needed.

2. PURPOSE

Through implementation of the BMP Plan the permittee shall prevent or minimize the generation of and the potential for the release of pollutants from the facility to the waters of the United States through normal operations and ancillary activities.

3. OBJECTIVES

The permittee shall develop and amend the BMP Plan consistent with the following objectives for the control of pollutants.

- a. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the facility shall be minimized by the permittee to the extent feasible by managing each influent waste stream in the most appropriate manner.
- b. Under the BMP Plan, and any Standard Operating procedures (SOPS) included in the Plan, the permittee shall ensure proper operation and maintenance of the treatment facility.

4. REQUIREMENTS

The BMP Plan shall be consistent with the objectives mentioned above and the general guidance contained in the publication entitled “Best Management [practices Guidance Document” (U.S. EPA 1981) or “Guidance manual for Developing Best Management Practices (BMP’s)” (U.S. EPA October 1993), or any subsequent revisions to the guidance document where applicable.

The Plan shall be documented in narrative form, and shall include any necessary plot plan, drawings or maps, and shall be developed in accordance with good engineering practices. The BMP Plan shall be organized and written with the following structures:

- a. Name and location of the facility.
- b. Statement of BMP policy.
- c. The location of all monitoring (sampling) stations.
- d. Summary of all data required to the monitoring and sampled for as a permit condition.

- e. Specific management practices and standard operating procedures to achieve objective, including, but not limited to the following;
 - i. Modification of equipment, facilities, technology, procedures.
 - ii. Improvement in management or general operational phases of the facility.
 - iii. Inspections and records.
 - iv. Reporting of BMP's incidents.

5. MINIMUM PRACTICES REQUIRED AND IMPLEMENTED IN THE BMP

- a. Solids Control
 - i. Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.
 - ii. In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting aquatic animals in the production system.
 - iii. Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the U.S., except in cases where the permitting authority authorizes such discharge in order to benefit the aquatic environment.
- b. Materials Storage
 - i. Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the U.S.
 - ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.
- c. Structural Maintenance
 - i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
 - ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.
- d. Recordkeeping
 - i. In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.
 - ii. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.
- e. Training
 - The permittee must:

- i. In order to ensure the proper clean-up and disposal of spilled material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
- ii. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

6. DOCUMENTATION

The permittee shall maintain a copy of the BMP Plan at the facility and shall make the plan available to EPA upon request.

7. MODIFICATION

The permittee shall amend a copy of the BMP Plan whenever there is a change in the facility or in the operation of the facility that increases the generation of pollutants or their release or potential release to the receiving waters. The permittee shall also amend the plan, as appropriate, when plant operations covered by the BMP Plan change. Any such changes to the BMP shall be consistent with the objective and specific requirements listed above. All changes in the BMP Plan shall be reported to EPA and NMED in writing.

8. MODIFICATION FOR INEFFECTIVENESS

At any time, if the BMP Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release and potential release to the receiving waters and/or meeting the specific requirements above, the permit and/or the BMP Plan shall be subject to modifications to incorporate revised BMP requirements.