

Wyoming Department of Environmental Quality
Water Quality Division
WYPDES (Wyoming Pollutant Discharge Elimination System) Program

STATEMENT OF BASIS

RENEWAL

APPLICANT NAME: Worland, City of

MAILING ADDRESS: P.O. Box 226
Worland, WY 82401-0226

FACILITY LOCATION: Worland Wastewater Lagoon, which is located in the SE Section 13
Township 47 N, Range 92 ½ W, Washakie County.

Longitude (003) -107.95477; Latitude 44.03867
Longitude (004) -107.953889; Latitude 44.041389

The wastewater will be discharged to Big Horn River via a natural
wetland (both class 2AB), Big Horn River basin.

PERMIT NUMBER: WY0020176

This permit has been renewed in accordance with current WYPDES permitting requirements. All permit effluent limits and monitoring requirements have been updated in accordance with current WDEQ regulations and policy. Specific changes to the permit include the following:

- 1. The effluent limit for fecal coliform is replaced by E. coli in accordance with current WDEQ regulations.*
- 2. Percent removal of BOD is changed to 65% removal, the same as similar type facilities in the state.*
- 3. Percent removal of TSS is removed from this permit in accordance with Part 111.A.1 of this permit.*
- 4. Effluent water temperature (°C) monitoring has been added to this permit.*
- 5. The effluent limits and routine end-of-pipe monitoring requirements for ammonia are more stringent in this permit issuance due to a change in plant design flow.*
- 6. A compliance schedule with milestones is included in this permit to allow the facility a window of opportunity to meet mixing zone requirements.*
- 7. Downstream monitoring point 1 (DMP1) has been added to this permit to collect ambient pH and temperature of the Big Horn River (class 2AB). There are no limits associated with this monitoring; it is being collected to set future permit limits.*

A. FACILITY DESCRIPTION:

The wastewater treatment facilities serving the City of Worland, Wyoming consist of a six cell lagoon system which discharges from the sixth cell (via outfall 003) or the fifth cell (via outfall 004) to the Big Horn River (Class 2 water). Cells 1 and 2 run in parallel with a hydraulic splitter box feeding them. Cells 3-6 are operated in series. Cell 2 can bypass cell 3 to cell 4; cell 4 can be bypassed to cell 5; and cell 5 can be passed to cell 6. Cells 1 through 4 are aerated. The outfall 003 discharge has ultraviolet disinfection prior to release into a natural wetland of the Big Horn River (both Class 2AB). This wetland feeds directly into the Big Horn River a short distance away. The wetland has been enhanced with common wetland foliage for treatment purposes. Outfall 004 has no disinfection available and discharges just prior to the confluence of the wetland and the Big Horn River. Even though the facility does not routinely chlorinate, total residual chlorine limits are included in case of the emergency use of chlorine.

The permit establishes effluent limits for the end of pipe, which are protective of all the designated uses defined in *Chapter 1 of Wyoming Water Quality Rules and Regulations*. This may include drinking water, game and non-game fish, fish consumption, aquatic life other than fish, recreation, agriculture, wildlife, industry and scenic value.

B. EFFLUENT LIMITS AND MONITORING REQUIREMENTS:

Permit effluent limits are based on federal and state regulations and are effective as of the date of issuance. The permit limits are based on technology based limits and the water quality based limits.

1. **Technology based limits:** The permit requires immediate compliance with National Secondary Treatment Standards (NSTS), Wyoming Water Quality Standards, and the effluent limits that are established by this permit.
 - a. The five-day biochemical oxygen demand (BOD₅) concentration shall not exceed 30 mg/L (monthly average) or 45 mg/L (weekly average) or 90 mg/L (daily maximum). These limits are based upon National Secondary Treatment Standards. The facility has demonstrated the inability to meet the National Secondary Treatment Standard of 85% reduction of BOD, so this permit qualifies for the alternate limits for lagoon systems for percent BOD removal of 65%.
 - b. The Total Suspended Solids (TSS) concentration shall not exceed 100 mg/L (monthly average) or 150 mg/L (weekly average) or 300 mg/L (daily maximum). The facility has demonstrated the inability to meet the National Secondary Treatment Standard of 30 mg/L monthly average for TSS, so this permit qualifies for the alternate limits for lagoon systems for TSS of 100 mg/L, monthly average.
 - c. The permit requires that the pH must remain within 6.5 and 9.0 standard units. The pH limit is based on water quality standards established in the *Wyoming Water Quality Rules and Regulations, Chapter 1*.
2. **Water quality based limits:** Water-quality-based limits are set to ensure that the quality of the receiving water is protected. Expected contaminants in municipal wastewater include **E. coli, total ammonia, and total residual chlorine**. This permit establishes final effluent limits based upon the following data for total ammonia and total residual chlorine. The E. coli limits will be set to instream standards for both the winter and summer recreation seasons.

- a. **Mixing zone:** This permit sets water quality based effluent limits so that mixing zone requirements, per *Chapter 1, Section 9, Wyoming Water Quality Rules and Regulations* are met. Mixing zone requirements ensure that a minimal area of the water body is impacted by the discharge during mixing of the discharge and receiving water. Mixing-zone-based effluent limits for this permit are calculated from a mass balance equation using only 10% dilution by the receiving water rather than 100%. The utilization of the 10% dilution in effluent limits calculations is known as the mixing zone “DEFAULT METHOD”. A summary of the mixing zone compliance specific to this permit is as follows:
- Total Residual Chlorine:** calculations utilize 10% dilution by the receiving water rather than 100%.
 - Total Ammonia:** calculations utilize 10% dilution by the receiving water rather than 100%.
 - E. Coli:** Are set equal to instream standards due to an impairment on the Big Horn River. Because of the permit being set to instream standards, the facility is already in compliance with the mixing zone policy for e.coli.
- b. **Wasteload allocation:** For receiving waters with perennial flow, a wasteload allocation calculation is performed to determine the effluent limit for each contaminant of concern. The effluent limits for these constituents are determined based in part on dilution provided by the receiving water and instream standards *per Chapter 1, Wyoming Rules and Regulations*. This involves a mass balance approach to determine the maximum allowable concentration in the effluent, so that when mixed with the receiving stream, the instream standard of the constituent is not violated. The wasteload allocation, with the mass balance approach, utilizes the upstream flow of the receiving stream, the maximum discharge volume, and the upstream concentration of the constituent to calculate the maximum allowable concentration of the constituent in the effluent. Development of the wasteload allocation is described below. Also refer to **Tables A** in the Statement-of-Basis, for wasteload allocation information.
- c. The low flow conditions of the receiving water for the wasteload allocation were considered. The low flow conditions can be determined by applying the 7Q10 (the minimum seven consecutive day flow that has the probability of occurring once in ten years) of the receiving water body. Using the 7Q10 values to establish the effluent limits will provide a margin of safety because “worse case” flow conditions are assumed. The effluent limits shown below are based on a 7Q10 flow data from the USGS gauging station number 06268600 (Big Horn River at Worland, WY). The period of record for this station is from the 1965-1969. Since there is no recent stream flow data for this station or others in the area, the 7Q10 values that were used in the previous permit will also be applied to this permit renewal for both interim, potential, and final effluent limits. If additional stream flow data becomes available, the permit will be reconsidered. Below are the 7Q10 values that will be used to establish the effluent limits listed above.

May-September:	69.2 cubic feet per second (cfs)
October-April:	141.0 cfs

- i). For this permit effluent limits the wasteload allocation will allow a 10% dilution credit of the critical low flow of the Big Horn River.

May-September:	6.9 cfs
October-April:	14.10 cfs

The design discharge flow for the WWTF is 1.95 million gallons per day (MGD). Since this value will be used in the wasteload allocation equation, the permit effluent limits will also include a flow limit of 1.95 MGD as a monthly average.

ii). If, after completion of the compliance schedule in this permit, the facility effluent is meeting mixing zone requirements, the permit may be opened up and new effluent limits for both total ammonia as N and total residual chlorine utilizing 100% dilution of the receiving stream, may be added to the permit. See illustration in **Table B** of the Statement-of-Basis.

Compliance Schedule

Monitoring for complete mix requirements are to be conducted on both sides of the Big Horn River (class 2AB) two longitudinal distances not greater than 2 stream/river widths downstream from the facility discharge. There should be no more than a 10% difference in monitoring results bank-to-bank; or be in compliance with instream standards. The facility shall conduct upstream (or background) monitoring for the same constituents on a monthly basis in conjunction with downstream monitoring requirements;

AND

The facility shall conduct monitoring ten longitudinal distances not greater than 10 stream/river widths downstream from the facility discharge. Samples at this monitoring point shall be taken **mid-stream**. Mixing zones for streams and rivers shall not exceed one-half of the crosssectional area or a length 10 times the stream width at critical low flow, whichever is more limiting. The monitoring results shall be less than instream water quality standards. The facility shall conduct this monitoring from **May 1, 2012 through April 30, 2013** and submit a written report demonstrating if the facility is meeting mixing zone requirements. The report is to be submitted by **June 28, 2013**.

Meeting either of the above requirements, (either the no more than a 10% difference bank to bank 2 stream/river widths downstream or meeting instream standards 10 stream/river widths downstream) to demonstrate complete mix requirements.

If the facility effluent fails to meet the mixing zone requirements listed above there are additional methods to do so. Including, but not limited to:

- A) STREAMIX Modeling
- B) Installation of a diffuser pipe across the Big Horn River
- C) Use Attainability Analysis

d. TABLES INDICATING WATER QUALITY BASED EFFLUENT LIMITS

AMMONIA LIMITS									
Season	7Q10 (cfs) 10% Dilution Credit	Max Effluent Discharge (MGD)	Instream pH (median)*	Instream Temp (C°) (Max)*	Back-ground Ammonia (mg/l) (Median)	Instream Chronic Ammonia Standard (mg/l)	Instream Acute Ammonia Standard (mg/l)	Calculated Effluent Limit (based on acute standard), Ammonia (mg/l)	Calculated Effluent Limit (based on chronic standard), Ammonia (mg/l)
May-Sept	6.92	1.95	8.2	22	0.1	1.11	3.83	12.60	3.65
Oct-April	14.10	1.95	8.2	14	0.1	1.79	3.83	21.69	9.69

*There are no new ambient river data available; therefore the same data from the previous permit is used in this permit.

Instream standards for ammonia are based upon a combination of the river and plant discharge, median pH and maximum temperature. Effluent characteristics of temperature are not known at this time. The background ammonia value is a default value utilized by the administrator.

Effluent Limits For E. coli: E. coli bacteria conditions reflect a primary contact recreation E. coli standard established in the *Wyoming Water Quality Rules and Regulations, Chapter 1* as 126 colonies/100 ml monthly average during the months May 1 through September 30 (summer recreation season), and a 236 colonies/100 ml daily maximum. The 236 colonies/100 ml is based on the “high use swimming areas” per *Chapter 1*, which is applied because this water, based on best professional judgment, is a high recreational use area. During the October 1-April 30 season (winter recreation), the E. coli standard is based on the monthly average standard for secondary contact recreation of 630 colonies/100 ml for both the monthly average and the daily maximum. See the table below for further information.

These limits are based upon Water Quality Criteria as established in *Wyoming Water Quality Rules and Regulations, Chapter 1*. The E. Coli limit is being set to the instream standards because the Big Horn River in this area is impaired for fecal coliform bacteria and is not supporting designated uses. Setting the E. coli limit to the instream standard will assure that the facility is not adding to the impairment for fecal coliform bacteria in this area. Also, because the limits are set to instream standards, the mixing zone compliance is achieved for this constituent. See the table below for further information:

E. coli Bacteria Standards, In Waters Designated for Primary Contact Recreation			
April through September			October through March
Monthly Average Standard	Daily Maximum Standards	Criteria	Monthly Average and Daily Maximum
126 colonies/100 mL	236 colonies/100 ml	High Use Swimming Areas	630 colonies/100 mL
	298 colonies/100 mL	Moderate Fully Body Contact	
	410 colonies/100 mL	Lightly Used Full Body Contact	
	576 colonies/100 mL	Infrequently Used Full Body Contact	

e. **TABLES INDICATING WATER QUALITY BASED EFFLUENT LIMITS**

TOTAL RESIDUAL CHLORINE LIMITS							
Season	10% 7Q10 (cfs)	Max Effluent Discharge (MGD)	Instream Standard, Total Residual Chlorine, chronic (mg/l)	Instream Standard, Total Residual Chlorine, acute (mg/l)	Background Concentration, Total Residual Chlorine, acute (mg/l)	Calculated Effluent Limit, (based on acute standard), mg/l	Calculated Effluent Limit, (based on chronic standard), mg/l
May-Sept	6.92	1.95	0.011	0.019	0	0.06	0.04
Oct-April	14.1	1.95	0.011	0.019	0	0.11	0.06

Effluent Limits For Total Residual Chlorine: For total residual chlorine, the upstream concentration is estimated at zero, a default value. The chronic instream standard for total residual chlorine is 0.011 mg/l, and the acute instream standard is 0.019 mg/l. The resulting wasteload allocation calculation determined the effluent limits based on the chronic and acute standard, as shown in Table A and B. The more stringent effluent limit is based on the calculations using the chronic standard.

3. PERCENT REMOVAL REQUIREMENTS:

The arithmetic mean of the BOD concentration for effluent samples collected in a period of 30-day average shall demonstrate a minimum of sixty-five percent (65%) removal of BOD, as measured by dividing the respective differences between the mean influent (prior to treatment of the stabilization ponds) and effluent concentrations for the calendar month (30-day average) by the respective mean influent concentration for the calendar month (30-day average), and multiplying the quotient by 100. See the below equation for clarification:

Percent Removal:

$$\left[\frac{\text{Influent} - \text{Effluent}}{\text{Influent}} \right] \times 100$$

4. ANTIDegradation, IMPAIRMENT REVIEW: The discharge of wastewater and the effluent limits that are established in this permit have been reviewed to ensure that the levels of water quality necessary to protect the designated uses of the receiving waters are maintained and protected. An antidegradation review has been conducted and verifies that the permit conditions, including the effluent limitations established, provide a level of protection to the receiving water consistent with the antidegradation provisions of Wyoming surface water quality standards. An evaluation has been completed to and the receiving water has been listed on the 303(d) list as a waterbody that cannot support designated uses due to fecal coliform impairment.

5. Downstream pH and Temperature: Ambient instream monitoring for pH and Temperature 2 stream widths downstream from the facility outfall shall be conducted quarterly for the life of this permit. This is not to be considered a compliance point, but is simply to gather downstream water quality data to set future permit limits.

6. Whole Effluent Toxicity (WET) testing and limits: The permit contains “Whole Effluent Toxicity” (WET) limits and self-monitoring requirements. On a quarterly basis, acute toxicity testing must be performed on two species. Acute toxicity occurs when 50 percent or more mortality is observed at any effluent concentration. Due to the fact that there is more than a four to one dilution factor in the receiving stream, WDEQ has determined that acute toxicity (mortality) testing is more appropriate than chronic toxicity (growth and reproduction) testing.

7. Industrial Pretreatment Provisions: This permit also contains the industrial pretreatment requirements of the U.S. Environmental Protection Agency; which is also administered by EPA. Those requirements are intended to ensure that industrial discharges to the plant do not cause an upset of the system or violation of the effluent limits that are established in the permit.

8. Major Discharger: This facility is classified as a “major” discharger per the U.S. Environmental Protection Agency. The permit will be submitted to the U.S. Environmental Protection Agency, Region 8 for review.

TABLE A
CALCULATED EFFLUENT LIMITS

Wasteload Allocation (WLA) Calculations *,			10% Dilution Credit Allowed					
Facility:	City of Worland Wastewater Lagoon							
Permit Number:		WY0020176	Wasteload Allocation Formula:			$C_d = (Q_r C_r - Q_s C_s) / Q_d$		
		Q_s		Q_d	Q_r	C_r	C_s	C_d
Season	Parameter	Low Flow, cfs (7Q10)	Low Flow, MGD (7Q10)	Discharge Rate, MGD	Combined Flow, MGD	Water Quality Standard	Background Con. (LA)	Limit (WLA)
May - Sept	TRC, chronic	6.92	4.46	1.95	6.41	0.011	0	0.04
Oct - April	TRC, chronic	14.10	9.09	1.95	11.04	0.011	0	0.06
May - Sept	TRC, acute	6.92	4.46	1.95	6.41	0.019	0	0.06
Oct - April	TRC, acute	14.10	9.09	1.95	11.04	0.019	0	0.11
May - Sept	Ammonia, chronic	6.92	4.46	1.95	6.41	1.11	0	3.65
Oct - April	Ammonia, chronic	14.10	9.09	1.95	11.04	1.71	0	9.69
May - Sept	Ammonia, acute	6.92	4.46	1.95	6.41	3.83	0	12.60
Oct - April	Ammonia, acute	14.10	9.09	1.95	11.04	3.83	0	21.69
*All units are mg/l, unless otherwise specified.					Effluent Limits Are Shaded, In Bold			

TABLE B
CALCULATED EFFLUENT LIMITS TABLE

This table is provided for illustrative purposes only. It shows what the potential effluent limits could be if the facility demonstrates that they are meeting mixing zone requirements without utilizing the default method. The potential effluent limits are shaded in blue.

Wasteload Allocation (WLA) Calculations *			100% Dilution Credit Allowed					
Facility:	City of Worland Wastewater Lagoon							
Permit Number:		WY0020176	Wasteload Allocation Formula:			$C_d = (Q_r C_r - Q_s C_s) / Q_d$		
		Q_s		Q_d	Q_r	C_r	C_s	C_d
Season	Parameter	Low Flow, cfs (7Q10)	Low Flow, MGD (7Q10)	Discharge Rate, MGD	Combined Flow, MGD	Water Quality Standard	Background Con. (LA)	Limit (WLA)
May - Sept	TRC, chronic	69.20	44.63	1.95	46.58	0.011	0	0.26
Oct - April	TRC, chronic	141.00	90.95	1.95	92.90	0.011	0	0.52
May - Sept	TRC, acute	69.20	44.63	1.95	46.58	0.019	0	0.45
Oct - April	TRC, acute	141.00	90.95	1.95	92.90	0.019	0	0.91
May - Sept	Ammonia, chronic	69.20	44.63	1.95	46.58	1.11	0	26.52
Oct - April	Ammonia, chronic	141.00	90.95	1.95	92.90	1.71	0	81.46
May - Sept	Ammonia, acute	69.20	44.63	1.95	46.58	3.83	0	91.50
Oct - April	Ammonia, acute	141.00	90.95	1.95	92.90	3.83	0	182.46
*All units are mg/l, unless otherwise specified.						POTENTIAL EFFLUENT LIMITS		

This permit renewal shall become effective on **May 1, 2012**.

Self monitoring of effluent quality and quantity is required on a regular basis with reporting of results quarterly. The permit is scheduled to expire on **April 30, 2017**.

Marcia Porter
Water Quality Division
Department of Environmental Quality
Drafted: December 20, 2011

AUTHORIZATION TO DISCHARGE UNDER THE
WYOMING POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, (hereinafter referred to as "the Act"), and the Wyoming Environmental Quality Act,

Worland, City of

is authorized to discharge from the Worland Wastewater Lagoon treatment facilities located in

SE Section 13, Township 47 N, Range 92 ½ W, Washakie County

Longitude (003) -107.95477; Latitude 44.03867

Longitude (004) -107.953889; Latitude 44.041389

to receiving waters named

Big Horn River via a natural wetland (both class 2AB), Big Horn River basin.

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

This permit renewal/modification shall become effective **May 1, 2012**.

This permit and the authorization to discharge shall expire **April 30, 2017** at midnight.

John F. Wagner, Administrator
Water Quality Division

John V. Corra, Director
Department of Environmental Quality

Date of Issuance:_____

PART I

A. EFFLUENT LIMITATIONS - SEE ANY ADDITIONAL REQUIREMENTS UNDER PART III

Effective **May 1, 2012** and lasting through **December 31, 2015**, the quality of effluent discharged by the permittee shall, at a minimum, meet the limitations set forth below. The permittee is authorized to discharge from outfall serial number(s) **003-004**

1. Such discharges shall be limited as specified below:

(Interim) Effluent Concentration

<u>Parameter</u>	<u>Monthly Average (b)</u>	<u>Weekly Average (b)</u>	<u>Daily Maximum (a) (b)</u>
Biochemical Oxygen Demand (BOD), mg/l	30	45	90
E. coli, colonies/100 ml, May-September	126	N/A	236
E. coli, colonies/100 ml, October-April	630	N/A	630
Total Flow, MGD	1.95	N/A	N/A
Total Suspended Solids, mg/l	100	150	300
Total Residual Chlorine (mg/l), May-September	N/A	N/A	0.04
Total Residual Chlorine (mg/l), October-April	N/A	N/A	0.06
Ammonia as N (mg/l), May-September	3.65	N/A	12.60
Ammonia as N (mg/l), October-April	9.69	N/A	21.69
pH, s.u. (c)	N/A	N/A	6.5-9.0
Biochemical Oxygen Demand (BOD), % Removal (d)	65	N/A	N/A
Whole Effluent Toxicity, <i>Acute</i>	N/A	N/A	P/F

- (a) Any single analysis and/or measurement beyond this limitation shall be considered a violation of the conditions of this permit.
- (b) Monthly Average, Weekly Average and Daily Maximum are defined in Part I.E.3.

- (c) The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units in any single grab sample.
- (d) Compliance with percent removal requirements is based on 30-day average sampling. More frequent sampling is optional. The arithmetic mean of the BOD concentration for effluent samples collected in a period of 30-day average shall demonstrate a minimum of sixty-five percent (65%) removal of BOD, as measured by dividing the respective differences between the mean influent and effluent concentrations for the calendar month by the respective mean influent concentration for the 30-day average, and multiplying the quotient by 100.

$$\left[\frac{\text{Influent} - \text{Effluent}}{\text{Influent}} \right] \times 100$$

Samples taken to determine compliance with the effluent limitations specified above shall be taken at the outfall from the final treatment unit and prior to admixture with diluent waters or the receiving stream.

There shall be no discharge of floating solids or visible foam in other than trace amounts, nor shall the discharge cause formation of a visible sheen or visible hydrocarbon deposits on the bottom or shoreline of the receiving water.

All waters shall be discharged in a manner to prevent erosion, scouring, or damage to stream banks, stream beds, ditches, or other waters of the state at the point of discharge. In addition, there shall be no deposition of substances in quantities which could result in significant aesthetic degradation, or degradation of habitat for aquatic life, plant life or wildlife; or which could adversely affect public water supplies or those intended for agricultural or industrial use.

B. SELF-MONITORING REQUIREMENTS

1. Effective **May 1, 2012** and lasting through **April 30, 2017**, the permittee shall monitor this discharge(s) as shown below:

<u>Parameter</u>	<u>Frequency (a)</u>	<u>Sample Type (b)</u>
E. coli, colonies/100 ml	7 times quarterly (c)	Grab
pH, units	Monthly (d)	Grab
Total Flow, MGD	Weekly	Instantaneous or Continuous
Total Residual Chlorine, mg/l (e)	Daily	Grab
Ammonia, mg/l	Monthly	Grab
BOD, mg/l, influent	Monthly	Grab
BOD, mg/l, effluent	Twice Monthly	Grab
BOD, % Removal	Monthly	Calculate
TSS, mg/l, effluent	Monthly	Grab
Whole Effluent Toxicity, Acute	Quarterly	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall from the final treatment unit and prior to admixture with diluent water or the receiving stream.

- (a) If the discharge occurs on an intermittent basis, samples shall be collected during the period when that intermittent discharge occurs.
 - (b) See "definitions" under the Monitoring and Reporting portion of this permit.
 - (c) During each calendar quarter, a minimum of seven E.coli samples must be collected and analyzed. During one month of each quarter, five samples must be collected. During this month, samples shall be collected on a weekly basis, except for those months that have four weeks. In this case, the fifth sample shall be collected during the second or third weeks of the month. For the remaining two months of the quarter, at least one E. coli sample must be collected and analyzed anytime during the month.
 - (d) A minimum of 14 days between sampling events is the definition of twice per month.
 - (e) Monitor only if chlorine is used in the wastewater treatment process.
2. Effective **May 1, 2012** and lasting through **April 30, 2017**, the permittee shall monitor this Downstream Monitoring Point (DMP1) as shown below:

DMP1 : Downstream sampling shall be taken 2 stream widths downstream from the confluence of the wetland and the Big Horn River (both class 2AB):

<u>Parameter</u>	<u>Frequency</u>	<u>Sample Type</u>
pH	Quarterly	Grab
Temperature, °C	Quarterly	Grab

C. WHOLE EFFLUENT TOXICITY

1. Effluent Limitations (Toxic Pollutants)

Effective immediately upon issuance of this permit renewal, there shall be no acute toxicity occurring in the effluent from this facility.

2. Whole Effluent Testing (Acute).

Effective immediately upon issuance of this permit renewal, the permittee shall, at least once each calendar quarter, conduct acute static replacement toxicity tests on a grab sample of the discharge. Quarterly samples shall be collected on a two (2) day progression; i.e., if the first quarterly sample is on a Monday, during the next quarter, sampling shall begin on a Wednesday, etc. ***Because of logistics involved with getting samples to the contract laboratory to be analyzed before expiration of hold times, WET sampling is not required on Friday, Saturday, or Sunday.***

The replacement static toxicity tests shall be conducted in accordance with the procedures set out in 40 CFR 136.3 and the R8/R9/R10 Toxicity Training Tool, January 2010. In the case of conflicts in method, 40 CFR 136.6 will prevail. The permittee shall conduct an acute 48-hour static toxicity test using *Ceriodaphnia dubia* and an acute 96-hour static toxicity test using *Pimephales promelas*. All tests will be conducted utilizing a multi-dilution series consisting of at least five (5) concentrations and a control as defined below:

100% effluent
62.5% effluent
50% effluent
25% effluent
12.5% effluent
control (or 0% effluent)

All tests will be conducted utilizing a minimum of 5 replicates for each test. In the event of inconclusive test results, the WDEQ reserves the right to require the permittee to perform additional tests at alternate dilutions and/or replicates. The WDEQ also reserves the right to require the submission of all information regarding all initiated tests, regardless of whether the tests were carried to completion or not.

Acute toxicity occurs when 50 percent or more mortality is observed for either species at any effluent concentration. If more than 10 percent control mortality occurs, the test is not valid. The test shall be repeated until satisfactory control survival is achieved.

If acute toxicity occurs, an additional test shall be conducted within two (2) weeks of the date of when the permittee learned of the test failure. If only one species fails, retesting may be limited to this species. Should acute toxicity occur in the second test, testing shall occur once a month until further notified by the permit issuing authority.

Quarterly test results shall be reported along with the Discharge Monitoring Report (DMR) submitted for the end of the reporting calendar quarter (e.g., whole effluent results for the calendar quarter ending March 31, shall be reported with the DMR due April 28, with the remaining reports submitted with DMRs due each July 28, October 28 and January 28). Monthly test results shall be reported along with the DMR submitted for that month and shall include all chemical and physical data as specified.

If the results for five consecutive quarters of testing indicate no acute toxicity, the permittee may request the permit issuing authority to allow a reduction to quarterly acute toxicity testing on only one species on an alternating basis. The permit issuing authority may approve or deny the request based on the results and other available information without an additional public notice. If the request is approved, the test procedures are to be the same as specified above for the test species.

3. Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

Should toxicity be detected in the permittee's discharge, a TIE-TRE shall be undertaken by the permittee to establish the cause of the toxicity, locate the source(s) of the toxicity, and develop control of, or treatment for the toxicity. Failure to initiate, or conduct an adequate TIE-TRE, or delays in the conduct of such tests, shall not be considered a justification for noncompliance with the whole effluent toxicity limits contained in this permit. A TRE plan needs to be submitted to the permitting authority within 45 days after confirmation of the continuance of effluent toxicity.

4. Chronic Toxicity Limitation-Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include chronic whole effluent toxicity limitations if any other information or data are developed indicating that chronic whole effluent toxicity limits are needed as required under 40 CFR 122.44 (d). Also see Part IV.P. of this permit for additional whole effluent toxicity reopener provisions.

If acceptable to the permit issuing authority, and if in conformance with current regulations, this permit may be reopened and modified to incorporate TRE conclusions relating to additional numerical limitations, a modified compliance schedule, and or modified whole effluent protocol.

D. COMPLIANCE SCHEDULE

1. Compliance Schedules

Event	Description	Due Date(s)
Implementation Schedule	Submit <u>semi annual reports</u> summarizing the progress in making the determination if the facility is meeting mixing zone requirements for a major discharge into a class 2AB water. Submit any laboratory data gathered for both upstream and downstream monitoring locations detailed in the tables below.	Received no later than July 28, 2012; January 28, 2013; and the final report is due, along with any laboratory data, by June 28, 2013. Submit to addresses in the table below. The first report is due on July 28, 2012.

Wyoming Department of Environmental Quality-
Water Quality Division
WYPDES Permitting
Herschler Building, 4 West
122 West 25th Street
Cheyenne, WY 82002
Telephone: (307) 777-7781

2. **Upstream Monitoring Point (UMP1):** The facility shall conduct upstream (or background) monitoring for the following constituents on the Big Horn River (class 2AB) prior to any admixture with facility outfall in conjunction with downstream monitoring requirements to establish if the facility is meeting mixing zone requirements. This monitoring is monthly from **May 1, 2012 through April 30, 2013.**

<u>Parameter</u>	<u>Frequency</u>	<u>Sample Type</u>
Total Ammonia (as N), mg/L	Monthly	Grab
Total Residual Chlorine (TRC), mg/L*	Monthly	Grab

*Monitor only if chlorine is used in the wastewater treatment process

3. **DMP1, DMP2, DMP3:** Downstream sampling shall be taken at two-stream widths downstream of the outfall from each side of the Big Horn River (**DMP1** and **DMP2**). DMP3 is located center stream, ten-stream widths downstream. These samples shall be collected and analyzed on a monthly basis from **May 1, 2012 through April 30, 2013**, during discharges from outfall 003 and/or 004, for the parameters listed below.

<u>Parameter</u>	<u>Frequency</u>	<u>Sample Type</u>
Total Ammonia (as N), mg/L	Monthly	Grab
Total Residual Chlorine (TRC), mg/L*	Monthly	Grab

*Monitor only if chlorine is used in the wastewater treatment process

E. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and approval by, the permit issuing authority. Sludge samples shall be collected immediately prior to the disposal practice at a location representative of the sludge.

2. Reporting

Effluent monitoring results obtained during the previous month(s) shall be summarized and reported on a Discharge Monitoring Report Form. If the permit requires whole effluent toxicity (WET) (biomonitoring) testing, WET test results must be reported on the most recent version of EPA Region VIII's Guidance for Whole Effluent Reporting. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements (see Part II.A.11.), and submitted to the state water pollution control agency at the following address. The reports must be received by the agency no later than the 28th day of the month following the completed reporting period. The first report is due on **June 28, 2012**.

Wyoming Department of Environmental Quality-Water Quality Division 122 West 25th Street, 4 West Cheyenne, WY 82002 Telephone: (307) 777-7781	U.S. Environmental Protection Agency 1595 Wynkoop Street Denver, CO 80202 Telephone: (303) 293-1622
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If no discharge occurs during the reporting period, "no discharge" shall be reported. If discharge is intermittent during the reporting period, sampling shall be done while the facility is discharging.

3. Definitions

Concentration Values

- a. Daily Maximum (mg/l) - The highest single reading from any grab or composite sample collected during the reporting period.
- b. Monthly Average (mg/l) - The arithmetic mean (geometric mean in the case of fecal coliform or E.coli) of all composite and/or grab samples collected during a calendar month.
- c. Weekly Average (mg/l) - The arithmetic mean (geometric mean in the case of fecal coliform or E. coli) of all composite and/or grab samples collected during any week. A week begins at 12:01 am Sunday morning and ends at 12:00 midnight Saturday evening.

Quantity Values

- d. Daily Maximum - The highest single daily quantity reading (see Calculations below) recorded during the reporting period.
- e. Monthly Average - The arithmetic mean (geometric mean in the case of fecal coliform or E. coli bacteria) of all the daily quantity readings (see Calculations below) recorded during a calendar month.
- f. Weekly Average - The arithmetic mean (geometric mean in the case of fecal coliform or E. coli bacteria) of all the daily quantity readings (see Calculations below) recorded during a week. A week begins at 12:01 am Sunday morning and ends at 12:00 midnight Saturday evening.

Flow Values

- g. Daily Flow - The flow volume recorded on any single day. The daily flow volume may be determined by using an instantaneous reading (if authorized by this permit) or a continuous recorder.
- h. Monthly Average Flow - The arithmetic mean of all daily flow values recorded during a calendar month.
- i. Weekly Average Flow - The arithmetic mean of all daily flow values recorded during a week. A week begins at 12:01 am on Sunday morning and ends at 12:00 midnight Saturday evening.

Calculations

- j. Daily Quantity (kg/day) - The quantity, in kilograms per day, of pollutant discharged on a single day. The Daily quantity shall be calculated by multiplying the composite or grab sample concentration value for that day in milligrams/liter (mg/l) times the flow volume (in millions of gallons per day - MGD) for that day times 3.78. If a flow volume reading for the day the sample is collected is not available, the average flow volume reading for the entire reporting period shall be used.
- k. Daily Quantity (#/day) - The quantity, in number per day, of bacteria or other pollutants discharged on a single day. The number per day shall be calculated by multiplying the composite or grab sample result for that day, in number per 100 milliliters (#/100 ml), times the flow volume (in millions of gallons per day - MGD) times 3.78×10^7 . If a flow volume reading for the day the sample is collected is not available, the average flow volume reading for the entire reporting period shall be used.
- l. Geometric Mean - Calculated in accordance with the procedure described in the most recent edition of "Standard Methods for the Examination of Water and Wastewater".

Miscellaneous

- m. A "composite" sample, for monitoring requirements, is defined as a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow.
- n. An "instantaneous" measurement for monitoring requirements is defined as a single reading, measurement, or observation.
- o. "MGD", for monitoring requirements, is defined as million gallons per day.
- p. "Net" value, if noted under Effluent Characteristics, is calculated on the basis of the net increase of the individual parameter over the quantity of that same parameter present in the intake water measured prior to any contamination or use in the process of this facility. Any contaminants contained in any intake water obtained from underground wells shall not be adjusted for as described above and, therefore, shall be considered as process input to the final effluent. Limitations in which "net" is not noted are calculated on the basis of gross measurements of each parameter in the discharge, irrespective of the quantity of those parameters in the intake waters.
- q. A "pollutant" is any substance or substances which, if allowed to enter surface waters of the state, causes or threatens to cause pollution as defined in the Wyoming Environmental Quality Act, Section 35-11-103.

4. Test Procedures

Test procedures for the analysis of pollutants, collection of samples, sample containers, sample preservation, and holding times, shall conform to regulations published pursuant to 40 CFR, Part 136, unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date and time of sampling;
- b. The dates and times the analyses were performed;
- c. The person(s) who performed the analyses and collected the samples;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine the results.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form. Such increased frequency shall also be indicated.

7. Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the administrator at any time. Data collected on site, copies of Discharge Monitoring Reports and a copy of this WYPDES permit must be maintained on site during the duration of activity at the permitted location.

8. Penalties for Tampering

The Act provides that any person who falsifies, tampers with or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two (2) years per violation, or both.

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Table 1
Outfalls
WY0020176
Worland Wastewater Lagoons

Outfall	Qtr/Qtr	Section	Township-North	Range-West	Latitude	Longitude	Receiving Water
003*	NESE	13	47	92 & 1/2	44.03867	-107.95477	Big Horn River via a natural wetland (both Class 2AB), Big Horn River basin.
004*	NESE	13	47	92 & 1/2	44.04138	-107.95388	Big Horn River via a natural wetland (both Class 2AB), Big Horn River basin.
UMP1	NESE	13	47	92 & 1/2	44.04111	-107.95432	Big Horn River (Class 2AB), upstream of admixture with facility outfall, Big Horn River basin.
DMP1	NWNW	13	47	92 & 1/2	44.04202	-107.95374	Big Horn River (Class 2AB), two-stream widths downstream of admixture with facility outfall, east bank, Big Horn River basin.
DMP2	NWNW	13	47	92 & 1/2	44.04212	-107.95415	Big Horn River (Class 2AB), two-stream widths downstream of admixture with facility outfall, west bank, Big Horn River basin.
DMP3	SWSW	12	47	92 & 1/2	44.04433	-107.95486	Big Horn River (Class 2AB), ten-stream widths downstream of admixture with facility outfall, center stream, Big Horn River basin.
*Asterisk denotes outfalls for which WDEQ has field-verified the Latitude and Longitude locations. These are considered to be the most accurate location data available for these outfalls, and will supersede Latitude and Longitude values presented in the application.							

PART II

A. MANAGEMENT REQUIREMENTS

1. Changes

The permittee shall give notice to the administrator of the Water Quality Division as soon as possible of any physical alterations or additions to the permitted facility. Notice is required when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29 (b); or
- b. The alteration or addition could change the nature or increase the quantity of pollutants discharged.

2. Noncompliance Notification

- a. The permittee shall give advance notice of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- b. The permittee shall report any noncompliance which may endanger health or the environment as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances. The report shall be made to the Water Quality Division, Wyoming Department of Environmental Quality at (307) 777-7781.
- c. For any incidence of noncompliance, including noncompliance related to non-toxic pollutants or non-hazardous substances, a written submission shall be provided within five (5) days of the time that the permittee becomes aware of the noncompliance circumstance.

The written submission shall contain:

- (1) A description of the noncompliance and its cause;
 - (2) The period of noncompliance, including exact dates and times;
 - (3) The estimated time noncompliance is expected to continue if it has not been corrected; and
 - (4) Steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.
- d. The following occurrences of unanticipated noncompliance shall be reported by telephone to the Water Quality Division, Watershed Management Section, WYPDES Program (307) 777-7781 as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances.

- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - (2) Any upset which exceeds any effluent limitation in the permit; or
 - (3) Violation of a maximum daily discharge limitation for any toxic pollutants or hazardous substances, or any pollutants specifically identified as the method to control a toxic pollutant or hazardous substance listed in the permit.
- e. The administrator of the Water Quality Division may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Quality Division, WYPDES Program (307) 777-7781.
- f. Reports shall be submitted to the Wyoming Department of Environmental Quality at the address in Part I under Reporting and to the Planning and Targeting Program, 8ENF-PT, Office of Enforcement, Compliance, and Environmental Justice, U.S. EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129.
- g. The permittee shall report all instances of noncompliance that have not been specifically addressed in any part of this permit at the time the monitoring reports are due.

3. Facilities Operation

The permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, as a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypass of Treatment Facilities

- a. Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

- b. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs c. and d. of this section. Return of removed substances to the discharge stream shall not be considered a bypass under the provisions of this paragraph.
- c. Notice:
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice at least 60 days before the date of the bypass.
 - (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.A.2.
- d. Prohibition of bypass.
 - (1) Bypass is prohibited and the administrator of the Water Quality Division may take enforcement action against a permittee for a bypass, unless:
 - (a) The bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The permittee submitted notices as required under paragraph c. of this section.
- e. The administrator of the Water Quality Division may approve an anticipated bypass, after considering its adverse effects, if the administrator determines that it will meet the three conditions listed above in paragraph d. (1) of this section.

6. Upset Conditions

- a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improper designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph c. of this section are met.

- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required under Part II.A.2; and
 - (4) The permittee complied with any remedial measures required under Part II.A.4.
- d. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

7. Removed Substances

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

8. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with a schedule of compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities; or
- b. If such alternative power source as described in paragraph a. above is not in existence and no date for its implementation appears in Part I, take such precautions as are necessary to maintain and operate the facility under its control in a manner that will minimize upsets and insure stable operation until power is restored.

9. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal act and the Wyoming Environmental Quality Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give the administrator of the Water Quality Division advance notice of any planned changes at the permitted facility or of any activity which may result in permit noncompliance.

10. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

11. Signatory Requirements

All applications, reports or information submitted to the administrator of the Water Quality Division shall be signed and certified.

- a. All permit applications shall be signed as follows:
 - (1) For a corporation: by a responsible corporate officer;
 - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
 - (3) For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected official.
- b. All reports required by the permit and other information requested by the administrator of the Water Quality Division shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described above and submitted to the administrator of the Water Quality Division; and
 - (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
- c. If an authorization under paragraph II.A.11.b. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph II.A.11.b must be submitted to the administrator of the Water Quality Division prior to or together with any reports, information or applications to be signed by an authorized representative.

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

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

B. RESPONSIBILITIES

1. Inspection and Entry

If requested, the permittee shall provide written certification from the surface landowner(s), if different than the permittee, that the administrator or the administrator's authorized agent has access to all physical locations associated with this permit including well heads, discharge points, reservoirs, monitoring locations, and any waters of the state.

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

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

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the regional administrator of the Environmental Protection Agency and the administrator of the Water Quality Division. The administrator of the Water Quality Division shall then provide written notification to the new owner or controller of the date in which they assume legal responsibility of the permit. The permit may be modified or revoked and reissued to change the name of the permittee and incorporate such other requirements as described in the federal act.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the federal act, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Wyoming Department of Environmental Quality and the regional administrator of the Environmental Protection Agency. As required by the federal act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the federal act.

4. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the federal act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Changes in Discharge of Toxic Substances

Notification shall be provided to the administrator of the Water Quality Division as soon as the permittee knows of, or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21 (g) (7); or

- (4) The level established by the director of the Environmental Protection Agency in accordance with 40 CFR 122.44 (f).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21 (g) (7); or
 - (4) The level established by the director of the Environmental Protection Agency in accordance with 40 CFR 122.44 (f).

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. As long as the conditions related to the provisions of "Bypass of Treatment Facilities" (Part II.A.5), "Upset Conditions" (Part II.A.6), and "Power Failures" (Part II.A.8) are satisfied then they shall not be considered as noncompliance.

7. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the federal act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state or federal law or regulation. In addition, issuance of this permit does not substitute for any other permits required under the Clean Water Act or any other federal, state, or local law.

10. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights nor any infringement of federal, state or local laws or regulations.

11. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

12. Duty to Provide Information

The permittee shall furnish to the administrator of the Water Quality Division, within a reasonable time, any information which the administrator may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the administrator, upon request, copies of records required by this permit to be kept.

13. Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the administrator of the Water Quality Division, it shall promptly submit such facts or information.

14. Permit Action

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

15. Permit Fees

Once this permit has been issued, the permittee will be assessed a \$100.00 per-year permit fee by the Water Quality Division. The fee year runs from January 1st through December 31st. This permit fee will continue to be assessed for as long as the permit is active, regardless of whether discharge actually occurs. This fee is not pro-rated. If the permit is active during any portion of the fee year, the full fee will be billed to the permittee for that fee year. In the event that this permit is transferred from one permittee to another, each party will be billed the full permit fee for the fee year in which the permit transfer was finalized. See the Wyoming Environmental Quality Act §35-11-312 for further information.

PART III

A. OTHER REQUIREMENTS

1. Percentage Removal Requirements

The arithmetic mean of the Total BOD, and the Total Suspended Solids concentrations for effluent samples collected in a period of 30 consecutive days shall not exceed 35 percent of the arithmetic mean of the concentrations for influent samples collected at approximately the same times during the same period (65 percent removal). This is in addition to the concentration limitations on Total BOD, and Total Suspended Solids. In the case of stabilization pond treatment systems, this section does not apply to the parameter Total Suspended Solids.

2. Violations Resulting from Overloading

Should there be a violation of any conditions of this permit, the Wyoming Department of Environmental Quality has the authority under Sections 35-11-901 and 35-11-902 of the Wyoming Environmental Quality Act to proceed in a court of competent jurisdiction to restrict or prohibit further connections to the treatment system covered by this permit by any sources not utilizing the system prior to the finding that such a violation occurred.

3. Discharge Duration

If the rate of discharge is controlled, that rate and duration of discharge shall be reported.

4. Flow Measurement

At the request of the administrator of the Water Quality Division, the permittee must be able to show proof of the accuracy of any flow measuring device used in obtaining data submitted in the monitoring report. The flow measuring device must indicate values of within plus or minus ten (10) percent of the actual flow being measured.

5. Sewer Overflow Located Prior to Waste Treatment Facility

Overflow structures shall be maintained and operated in such a manner that no discharge shall occur except to prevent health hazards, severe property damage or loss of treatment capacity.

Such overflows shall satisfy Wyoming water quality standards and/or any appropriate federal or state effluent limitations. Following documentation of specific water quality standard or effluent standard violations resulting from such overflows, specific numerical effluent limitations, or the requirement for elimination of the overflow structures, may be included upon reissuance or revision of this permit.

6. Compliance with Construction Grant

In the case of publicly owned treatment works, the permittee shall comply with those terms of any construction grant implementing the provisions of Section 201(b) through (g) of the Clean Water Act.

7. 208(b) Plans

This permit may be modified, suspended or revoked to comply with the provisions of any 208 (b) plan certified by the Governor of the State of Wyoming.

8. Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations (and compliance schedule, if necessary) or other appropriate requirements if one or more of the following events occurs:

- a. The state water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit;
- b. A total maximum daily load (TMDL) and/or watershed management plan is developed and approved by the state and/or the Environmental Protection Agency which specifies a wasteload allocation for incorporation in this permit;
- c. A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit;
- d. Downstream impairment is observed and the permitted facility is contributing to the impairment;
- e. The limits established by the permit no longer attain and/or maintain applicable water quality standards;
- f. The permit does not control or limit a pollutant that has the potential to cause or contribute to a violation of a state water quality standard.
- g. If new applicable effluent guidelines and/or standards have been promulgated and the standards are more stringent than the effluent limits established by the permit.
- h. In order to protect water quality standards in neighboring states, effluent limits may be incorporated into this permit or existing limits may be modified to ensure that the appropriate criteria, water quality standards and assimilative capacity are attained.

9. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. If necessary to comply with any applicable effluent standard or limitation issued or approved under Sections 301 (b) (2) (C) and (D), 304 (b) (2) and 307 (a) (2) of the federal act, if the effluent standard or limitation so issued or approved:
 - (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) Controls any pollutant not limited in the permit.

10. Toxicity Limitation - Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include a new compliance date, additional or modified numerical limitations, a new or different compliance schedule, a change in the whole effluent protocol or any other conditions related to the control of toxicants if one or more of the following events occur:

- a. Toxicity was detected late in the life of the permit near or past the deadline for compliance;
- b. The toxicity reduction evaluation (TRE) results indicate that compliance with the toxic limits will require an implementation schedule past the date for compliance and the permit issuing authority agrees with the conclusion;
- c. The TRE results indicate that the toxicant(s) represent pollutant(s) that may be controlled with specific numerical limits and the permit issuing authority agrees that numerical controls are the most appropriate course of action;
- d. Following the implementation of numerical controls on toxicants, the permit issuing authority agrees that a modified whole effluent protocol is necessary to compensate for those toxicants that are controlled numerically;
- e. The TRE reveals other unique conditions or characteristics which, in the opinion of the permit issuing authority, justify the incorporation of unanticipated special conditions in the permit.

11. Severability

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

12. Penalties for Falsification of Reports

The federal act provides that any person who knowingly makes any false statement, representation or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation or by imprisonment for not more than two years per violation or both.

B. INDUSTRIAL PRETREATMENT PROGRAM (CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS)

1.0 – Implementation Requirements

- a. The permittee has been delegated primary responsibility for enforcing against discharges prohibited by *40 CFR 403.5* and applying and enforcing any national Pretreatment Standards established by the United States Environmental Protection Agency in accordance with Section 307 (b) and (c) of *The Clean Water Act (CWA)*, as amended by *The Water Quality Act (WQA)*, of 1987.
- b. The Permittee shall operate an industrial pretreatment program in accordance with the General Pretreatment Regulations found in 40 CFR Part 403, and the approved pretreatment program submitted by the Permittee. The pretreatment program was approved on **2/6/1992** and has subsequently incorporated substantial modifications as approved by the Approval Authority. The approved pretreatment program, and any approved modifications thereto, is hereby incorporated by reference and shall be implemented in a manner consistent with the following procedures, as required by 40 CFR Part 403:
 - i. In accordance with 40 CFR 122.44(j)(1), Identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR part 403.
 - ii. Industrial user information shall be updated at a minimum of once per year or at that frequency necessary to ensure that all Industrial Users are properly permitted and/or controlled. The records shall be maintained and updated as necessary;
 - iii. The Permittee shall sample and inspect each Significant Industrial User (SIU) at least once per calendar year. This is in addition to any industrial self-monitoring activities. If the Permittee performs sampling for any SIU, then the Permittee shall perform any repeat sampling and analysis within 30 days of becoming aware of the violation;

- iv. The Permittee shall evaluate whether each SIU needs a plan to control Slug Discharges. SIUs must be evaluated within 1 year of being designated an SIU. Where needed, the Permittee shall require the SIU to prepare or update, and then implement the plan. Where a slug prevention plan is required, the Permittee shall ensure that the plan contains at least the minimum required elements. If required, the Permittee shall incorporate slug control requirements into the control mechanism for the SIU;
- v. The Permittee shall investigate instances of non-compliance with Pretreatment Standards and requirements indicated in required reports and notices or indicated by analysis, inspection, and surveillance activities.
- vi. The Permittee shall enforce all applicable Pretreatment Standards and requirements and obtain remedies for noncompliance by any industrial user;
- vii. The Permittee shall control, through the legal authority in the approved pretreatment program, the contribution to the Publicly Owned Treatment Works (POTW) by each industrial user to ensure compliance with applicable Pretreatment Standards and requirements. In the case of industrial users identified as significant. This control shall be achieved through permit, order, or similar means and shall contain, at a minimum, the following conditions:
 - (A) Statement of duration (in no case more than five (5) years);
 - (B) Statement of non-transferability without, at a minimum, prior notification to the Permittee and provision of a copy of the existing control mechanism to the new owner or operator;
 - (C) Effluent limits, including Best Management Practices, based on applicable Pretreatment Standards, Categorical Pretreatment Standards, local limits, and State and local law;
 - (D) Self-monitoring, sampling, reporting, notification and record keeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, including documentation on BMP compliance, based on the applicable Pretreatment Standards, Categorical Pretreatment Standards, local limits, and State and local law; and,
 - (E) Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond deadlines mandated by federal statute or regulation.
 - (F) Requirements to control Slug Discharges, if determined by the POTW to be necessary.
- viii. The Permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program;
- ix. The approved program shall not be substantially modified by the Permittee without the approval of the EPA. Substantial and non-substantial modifications shall follow the procedures outlined in 40 CFR 403.18;
- x. The Permittee shall develop, implement, and maintain an enforcement response plan; and

- xi. The Permittee shall notify all Industrial Users of the users' obligations to comply with applicable requirements under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA).
- xii. The Permittee shall establish, where necessary, legally binding agreements with contributing jurisdictions to ensure compliance with applicable Pretreatment requirements by industrial users within these jurisdictions. These legally binding agreements must identify the agency responsible for the Pretreatment implementation and enforcement activities in the contributing jurisdictions and outline the specific roles, responsibilities and pretreatment activities of each jurisdiction.

2.0 Local Limits Evaluation

- c. The Permittee shall prohibit the introduction of the following pollutants into the POTW.:
 - i. Any pollutant which may cause Pass Through or Interference;
 - ii. 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 sixty (60) degrees Centigrade (140 degrees Fahrenheit) using the test methods specified in 40 CFR 261.21;
 - iii. 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;
 - iv. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, or other interference with the operation of the POTW;
 - v. 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;
 - vi. 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 forty (40) degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
 - vii. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
 - viii. 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;
 - ix. Any trucked or hauled pollutants, except at discharge points designated by the POTW; and,
 - x. Any specific pollutant that exceeds a local limitation established by the POTW in accordance with the requirements of 40 CFR 403.5(c) and (d).

- d. The Permittee shall establish and enforce specific local limits to implement the general and specific prohibitions found in 40 CFR 403.5(a) and (b). The Permittee shall continue to develop these limits as necessary and effectively enforce such limits.

In accordance with 40 CFR 122.44(j)(2)(ii), a technical evaluation of the need to develop or revise local limits shall be submitted to the Approval Authority within **12 months** of the effective date of this permit.

This evaluation should be conducted in accordance with EPA's "Local Limits Development Guidance" July 2004. Where the Permittee determines that revised or new local limits are necessary, the Permittee shall submit the proposed local limits to the Approval Authority in an approvable form in accordance with 40 CFR 403.18.

3.0 Pretreatment Sampling Requirements

- e. The Permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR Part 122 Appendix D (NPDES Application Testing Requirements) Table II at least **once per year** and the toxic pollutants in Table III at least **four times per year**. If, based upon information available to the Permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table V, or any other pollutant in quantity or concentration known or suspected to adversely affect POTW operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least **four times per year** on both the influent and the effluent.
- i. Along with the Permittee's pretreatment annual report, the Permittee will submit a list of compounds included in Table V that are suspected or known to be present in its influent wastewater. This determination shall be based on a review of the Permittee's pretreatment program records. The state permitting authority and/or Approval Authority may review and comment on the list and the list may be revised if, in the opinion of the state permitting authority and/or Approval Authority, the list is incomplete. The Permittee will perform **quarterly** analysis on the influent for the revised list of compounds for which there are acceptable testing procedures.
- ii. Where the pollutants monitored in accordance with this section are reported as being above the method detection limit, the results for these pollutants shall be reported in the Permittee's pretreatment annual report, if required by EPA.
- f. The Permittee shall analyze the treatment facility sludge (biosolids) prior to disposal, for the presence of toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table III at least once per year. If the Permittee does not dispose of biosolids during the calendar year, the Permittee shall certify to that in the Pretreatment Annual Report and the monitoring requirements in this paragraph shall be suspended for that calendar year.
- i. The Permittee shall review the pollutants in 40 CFR Part 122, Appendix D, tables II and V. If any of the pollutants in these tables were above detection in the influent samples during the previous 2 years or the last two analyses, whichever is greater, the Permittee shall sample and analyze its sewage sludge for these pollutants. The Permittee shall perform this evaluation and analysis at least once per year.

- ii. The Permittee shall use sample collection and analysis procedures as approved for use under 40 CFR Part 503 or specified in the EPA Region 8 General Permit for biosolids.
- iii. The Permittee shall report the results for these pollutants in the Permittee's pretreatment annual report, if required by EPA.
- g. All analyses shall be in accordance with test procedures established in 40 CFR Part 136. Where analytical techniques are not specified or approved under 40 CFR Part 136, the Permittee shall use its best professional judgment and guidance from the State and the Approval Authority regarding analytical procedures. All analytical procedures and method detection limits must be specified when reporting the results of such analyses.
- h. Sampling methods shall be those defined in 40 CFR Part 136, 40 CFR Part 403, as defined in this permit, or as specified by the Approval Authority. Where sampling methods are not specified, the influent and effluent samples collected shall be composite samples consisting of at least twelve (12) aliquots collected at approximately equal intervals over a representative 24-hour period and composited according to flow. Where automated composite sampling is inappropriate, at least four (4) grab samples shall be manually taken at equal intervals over a representative 24-hour period, and composited prior to analysis using approved methods; alternatively, the individual grab samples may be analyzed separately and the results from the respective grab samples mathematically combined based on flow (i.e., flow weighted) for the final result.

4.0 Annual Report Requirements

- i. The Permittee shall prepare annually a list of industrial users, which during the preceding twelve (12) months have significantly violated Pretreatment Standards or requirements. This list is to be published annually in a newspaper of general circulation in the Permittee's service area.

In addition, on or before March 28, the Permittee shall submit a pretreatment program annual report to the Approval Authority and the state permitting authority that contains the information requested by EPA, or at a minimum the following information:

- i. An updated list of all SIUs. For each SIU listed the following information shall be included:
 - (A) All applicable Standard Industrial Classification (SIC) codes and categorical determinations, as appropriate. In addition, a brief description of the industry and general activities;
 - (B) Permit status. Whether each SIU has an unexpired control mechanism and an explanation as to why any SIUs are operating without a current, unexpired control mechanism (e.g. permit);
 - (C) A summary of all monitoring activities performed within the previous twelve (12) months. The following information shall be reported:

Total number of SIUs inspected; and
Total number of SIUs sampled.

- ii. For all industrial users that were in Significant Non-Compliance during the previous twelve (12) months, provide the name of the violating industrial user; indicate the nature of the violations, the type and number of actions taken (administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. Indicate if the company returned to compliance and the date compliance was attained. Determination of Significant Non-Compliance shall be performed.
- iii. A summary of all enforcement actions not covered by the paragraph above conducted in accordance with the approved Enforcement Response Plan.
- iv. A list of all SIUs whose authorization to discharge was terminated or revoked during the preceding twelve (12) month period and the reason for termination;
- v. A report on any Interference, Pass Through, upset or NPDES permit violations known or suspected to be caused by non-domestic discharges of pollutant and actions taken by the Permittee in response;
- vi. Verification of publication of industrial users in Significant Non-Compliance;
- vii. Identification of the specific locations, if any, designated by the Permittee for receipt (discharge) of trucked or hauled waste, if modified;
- viii. Information as required by the Approval Authority or state permitting authority on the discharge to the POTW from the following activities:
 - (A) Ground water clean-up from underground storage tanks;
 - (B) Trucked or hauled waste; and,
 - (C) Groundwater clean-up from RCRA or Superfund sites.
- ix. A description of all changes made during the previous calendar year to the Permittee's pretreatment program that were not submitted as substantial or non substantial modifications to EPA.
- x. The Permittee shall evaluate actual pollutants loadings against the approved Maximum Allowable Headworks Loadings (MAHLs). Where the actual loading exceeds the MAHL, the Permittee shall immediately begin a program to either revise the existing local limit and/or undertake such other studies as necessary to evaluate the cause(s) of the exceedence. The Permittee shall provide a summary of its intended action.
- xi. Other information that may be deemed necessary by the Approval Authority.

5.0 Notification Requirements

- j. The Permittee must notify the **WYOMING DEQ** and the Approval Authority, of any new introductions by new or existing industrial users or any substantial change in pollutants from any industrial user within sixty (60) days following the introduction or change, as required in 40 CFR 122.42(b)(1-3). Such notice must identify:

- i. Any new introduction of pollutants into the POTW from an industrial user which would be subject to Sections 301, 306, and 307 of the Act if it were directly discharging those pollutants; or
- ii. Any substantial change in the volume or character of pollutants being introduced into the POTW by any industrial user. For the purposes of this section, "substantial change" shall mean a level of change which has a reasonable probability of affecting the Permittee's ability to comply with its permit conditions or to cause a violation of stream standards applied to the receiving water.;
- iii. For the purposes of this section, adequate notice shall include information on:
 - a. The identity of the industrial user;
 - b. The nature and concentration of pollutants in the discharge and the average and maximum flow of the discharge to be introduced into the POTW; and
 - c. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from or biosolids produced at such POTW.

6.0 Approval Authority Enforcement

- k. Section 309(f) of the Act provides that EPA may issue a notice to the POTW stating that a determination has been made that appropriate enforcement action must be taken against an industrial user for noncompliance with any Pretreatment Standards and requirements. The notice provides the POTW with thirty (30) days to commence such action. The issuance of such permit notice shall not be construed to limit the authority of the permit issuing authority or Approval Authority.
- l. The state permitting authority and/or the EPA retains, at all times, the right to take legal action against the industrial contributor for violations of a permit issued by the Permittee, violations of any Pretreatment Standard or requirement, or for failure to discharge at an acceptable level under national standards issued by EPA under 40 CFR, chapter I, subchapter N. In those cases where a NPDES permit violation has occurred because of the failure of the Permittee to properly develop and enforce Pretreatment Standards and requirements as necessary to protect the POTW, the state permitting authority and/or Approval Authority shall hold the Permittee responsible and may take legal action against the Permittee as well as the Indirect Discharger(s) contributing to the permit violation.