LIST OF EXHIBITS

Exhibit A	Wesco's 2015 NPDES Permit, Statement of Basis, and Response to Comments
Exhibit B	Drainage Map of Winkleman Dome Draw
Exhibit C	Wesco's 2005 NPDES Permit
Exhibit D	Wesco's Comments to EPA on 2015 NPDES Permit
Exhibit E	Letter from USFWS
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Exhibit A

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

Permit No.: WY-0025232

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 WYNKOOP STREET
DENVER, COLORADO 80202-1129

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),

the Wesco Operating, Inc.,

is authorized to discharge from its **Tensleep #1 (Winkleman Dome Field)** wastewater treatment facility located in SW ¼ SE ¼ Section 18, Township 2 North, Range 1 West, latitude 43.14291° N and longitude 108.91771° W , in Fremont County, Wyoming

to an unnamed ephemeral tributary of Big Horn Draw, which is tributary to the Little Wind River,

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit.

This permit shall become effective May 1, 2015

This permit and the authorization to discharge shall expire at midnight, March 31, 2020

Signed this 12 day of March 2015

Callie A Videtich
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

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1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. Definitions.

The *30-day (and monthly) average*, other than for microbiological organisms (e.g., bacteria, viruses, etc.), is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for microbiological organisms unless specified otherwise in the permit. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

The *7-day (and weekly) average*, other than for microbiological organisms (e.g., bacteria, viruses, etc.), is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for microbiological organisms unless specified otherwise in the permit. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

Daily Maximum (*Daily Max.*) is the maximum measured value for a pollutant discharged during a calendar day or any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with daily maximum limitations expressed in units of mass (e.g., kilograms, pounds), the daily maximum is calculated as the total mass of pollutant discharged over the calendar day or representative 24-hour period. For pollutants with limitations expressed in other units of measurement (e.g., milligrams/liter, parts per billion), the daily maximum is calculated as the average of all measurements of the pollutant over the calendar day or representative 24-hour period. If only one measurement or sample is taken during a calendar day or representative 24-hour period, the single measured value for a pollutant will be considered the daily maximum measurement for that calendar day or representative 24-hour period.

Daily Minimum (*Daily Min.*) is the minimum value allowable in any single sample or instantaneous measurement collected during the course of a day.

Grab sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

Instantaneous measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

Composite samples shall be flow proportioned. The composite sample shall, at a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours, nor more than twenty-four (24) hours. Acceptable methods for the preparation of composite samples are as follows:

a. Constant time interval between samples, sample volume proportional to flow rate at the time of sampling;

b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time of the first sample was collected may be used;

c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

d. Continuous collection of sample with sample collection rate proportional to flow rate.

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

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Director means the Regional Administrator of the EPA Region 8 or an authorized representative.

EPA means the United States Environmental Protection Agency.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

CWA means the Clean Water Act (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4. In this permit the CWA may be referred to as "the Act".

Whole Effluent Toxicity (WET) is the total toxic effect of an effluent measured directly with a toxicity test. Acute toxicity occurs when 50 percent or more mortality is observed for either species (see Part 1.3.6) at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the effluent results to be considered valid.

1.2. Description of Discharge Point(s). The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under an NPDES permit is a violation of the CWA and could subject the person(s) responsible for such discharge to penalties under CWA Section 309.

Outfall Serial Number(s)	Description of Discharge Point(s)
001	Any discharge from the last of 4 sequential skim pits to an unnamed ephemeral tributary to Big Horn Draw, which is tributary to the Little Wind River. (Latitude 43.14291° N, Longitude 108.91771° W)

1.3. Specific Limitations and Self-Monitoring Requirements.

1.3.1. Effluent Limitations - Outfall 001.

1.3.1.1. General Effluent Limitations:

There shall be no discharge of waste pollutants into navigable waters from any source (other than produced water) associated with production, field exploration, drilling, well completion, or well treatment (i.e. drilling muds, drill cuttings, and produced sand).

1.3.1.2. **Effective immediately after permit issuance and expiring three (3) years after the effective date of this permit,** the quality of produced water effluent discharged by the facility shall, at a minimum, meet the limitations as set forth below:

Parameter	**Effluent Limitation**	
	30-Day Average a/	**Daily Maximum a/**
Specific Conductance, µS/cm	N/A	7,500
Total Dissolved Solids, mg/L	N/A	5,000
Chloride, mg/L	N/A	2,000
Sulfate, mg/L	1,000	1,800
Total Radium 226, pCi/L	N/A	60
The concentration of oil and grease shall not exceed 10 mg/L in any sample nor shall there be a visible sheen or cause a visible sheen in the receiving waters or deposits on the bottom or shoreline of the receiving waters.		
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time.		
There shall be no discharge of floating solids or visible foam in other than trace amounts.		

a/ See Permit Part 1.1, for definition of terms.

1.3.1.3. **Effective three (3) years after the effective date of this permit and lasting through the life of this permit,** the quality of produced water effluent discharged by the facility shall, at a minimum, meet the limitations as set forth below:

Parameter	Effluent Limitation	
	30-Day Average a/	Daily Maximum a/
Specific Conductance, µS/cm	N/A	7,500
Total Dissolved Solids, mg/L	N/A	5,000
Chloride, mg/L	230	860
Sulfate, mg/L	1,000	1,800
Sulfide (as H_2S), mg/L	0.002	N/A
Total Radium 226, pCi/L	N/A	60
The concentration of oil and grease shall not exceed 10 mg/L in any sample nor shall there be a visible sheen or cause a visible sheen in the receiving waters or deposits on the bottom or shoreline of the receiving waters.		
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time.		
There shall be no discharge of floating solids or visible foam in other than trace amounts.		

a/ See Permit Part 1.1, for definition of terms.

1.3.2. Self-Monitoring Requirements - Outfall 001.

Effective immediately and lasting through the effective term of this permit. Sampling and test procedures for pollutants listed in this part shall be in accordance with guidelines promulgated by the Administrator in 40 CFR Part 136, as required in 40 CFR § 122.41(j). At a minimum, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Parameter	Frequency	Sample/Monitoring Type a/
Total Flow, MGD b/	Monthly	Instantaneous
Specific Conductance, µS/cm	Monthly	Grab
pH, std units	Monthly	Grab
Oil and Grease, mg/L c/	Weekly	Visual
Sulfide (as H_2S), mg/L d/	Quarterly	Grab
Chloride, mg/L	Quarterly	Grab
Sulfate, mg/L	Quarterly	Grab
Total Radium 226, pCi/L	Quarterly	Grab
Total Dissolved Solids, mg/L	Semi-Annually	Grab
Mercury, Total, µg/L e/	Three times after effective date of permit	Grab
Whole Effluent Toxicity, Acute (see Part 1.3.6.)	Quarterly f/	Grab
Toxic Pollutants Screen (see Part 1.3.4.)	Three times after effective date of permit	Grab

a/ See Permit Part 1.1, for definition of terms.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in million gallons per day) during the reporting period and the maximum flow rate observed (in mgd) shall be reported.

c/ A weekly visual observation is required. If a visible sheen is detected, a grab sample shall be taken immediately and analyzed in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

d/ The analysis for sulfide (as H_2S) shall be done with an approved procedure that has a method detection level of no greater than 0.10 mg/L (100 ug/L). In the calculation of average sulfide (as H_2S) concentrations, those analytical results that are less than 0.10 mg/L shall be considered to be zero. If all individual analytical results that would be used in the calculations are less than 0.10 mg/L, then "less than 0.10 mg/L" shall be reported on the discharge monitoring report form. Otherwise, report the maximum value and the calculated average value.

e/ Monitoring periods shall be during the 1st , 3rd and 5th years after the effective date of this permit. Based on current approved analytical mercury method, Method 1631, Revision E, the method detection limit (MDL) for mercury is 0.0002 µg/L. If the mercury trigger level of 0.77 µg/L is exceeded during the life of the permit, the permittee is required to develop and implement the Mercury Minimization Plan (MMP), as described in Part 1.3.8.

f/ At a minimum, quarterly monitoring shall be conducted until the completion of four consecutive quarterly tests demonstrating no acute toxicity is present in the discharge for either test species. Thereafter, monitoring shall be conducted at least annually for the remainder of the term of this permit. See Part 1.3.6.

1.3.3. Compliance Schedule.

The effluent limitations for chloride and sulfide (as H_2S) have become either more restrictive or new with this permit renewal. In order to allow the permittee the opportunity to evaluate the measures necessary to meet these new limitations, the permittee shall comply with the following schedule:

Chloride and Sulfide (as H_2S)

The permittee shall achieve compliance with the effluent limitations for chloride and sulfide (as H_2S) in Part 1.3.1 of this permit in accordance with the following schedule.

The permittee shall submit the following to the permit issuing authority:

a. An outline of the measures to be taken to achieve compliance with the effluent limitations for chloride and sulfide (as H_2S) in Part 1.3.1 of this permit; and

b. A schedule for implementing the measures described in Part a above. The schedule should include, but does not need to be limited to, milestones for planning, design, bidding, construction, etc. of the necessary site improvements.

The measures and implementation schedule described above shall be submitted no later than **12 months after the effective date of this permit.**

The permittee shall submit to the permit issuing authority a report reflecting the progress made towards achieving the milestones outlined in the schedule in Part b above by no later than **18 months after the effective date of this permit.**

The permittee shall begin implementing the measures outlined in Part a above by no later than **24 months after the effective date of this permit.**

The permittee shall submit to the permit issuing authority a report reflecting the progress made towards achieving the milestones outlined in the schedule in Part b above by no later than **30 months after the effective date of this permit.**

The permittee shall achieve compliance with the effluent limitations for chloride and sulfide (as H_2S) in Part 1.3.1 of this permit by no later than **36 months after the effective date of this permit.**

Reports of compliance or noncompliance with, or any progress reports, on interim and final requirements contained in this Compliance Schedule shall be submitted no later than 14 days following each schedule date described above. If noncompliance is being reported, the reason for noncompliance shall be reported and the expected date when compliance will be achieved shall be given. The letter shall include the certification statement given in Part 4.7.4 of this permit and the letter shall be signed by a principal executive officer. All deliverables required in this section shall be submitted to the EPA at the address listed in Part 2.4.

1.3.4. Toxic Pollutants Screen. This permit requires the permittee to monitor for the constituents listed below in the toxic pollutants screen three times during the life of the permit. One monitoring period will be during the 1st year after the effective date of this permit and the second during the 3rd year after the effective date of this permit. Reporting of each of the first two screening datasets shall be submitted to the permit issuing authority, at the time of the DMR submittal for that reporting period in which the screening occurred. A third monitoring will be required as part of the application documentation for the renewal of this permit. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

All Volatile Organic Compounds listed in 40 CFR Part 122, Appendix D, Table II.

All Base/Neutral and Acid Organic Compounds listed in 40 CFR Part 122, Appendix D, Table II.

All metals listed in 40 CFR Part 122, Appendix D, Table III, except mercury which is included in the regular self-monitoring (Part 1.3.2.).

Fluoride as listed in 40 CFR Part 122, Appendix D, Table IV.

1.3.5. Method Detection Limits.

Monitoring methods must be sufficiently sensitive to meet the Method Detection Limits specified in the following table:

Parameter	Required Detection Limits and Required Units
Arsenic, Total	1 µg/L
Aluminum, Total Recoverable	50 µg/L
Antimony, Total Recoverable	50 µg/L
Beryllium, Total Recoverable	1 µg/L
Cadmium, Total Recoverable	5 µg/L
Chromium, Total Recoverable	5 µg/L
Chloride	5 mg/L
Copper, Total Recoverable	5 µg/L
Lead, Total Recoverable	1 µg/L
Magnesium, Total Recoverable	30 µg/L
Manganese, Total Recoverable	2 µg/L
Nickel, Total Recoverable	1 µg/L
Radium 226, Total Recoverable	0.2 pCi/L
Selenium, Total Recoverable	2 µg/L
Silver, Total Recoverable	5 µg/L
Sulfide/Hydrogen Sulfide (S=, HS-)	100 µg/L

Thallium, Total Recoverable	50 µg/L
Zinc, Total Recoverable	2 µg/L
Hardness, Total	10 mg/L as CaCO3
Uranium, Total Recoverable	5 µg/L
Gross Alpha and Beta Radiation	0.2 pCi/L
Dissolved Oxygen	1 mg/L
Calcium	10 mg/L
Fluoride	1 mg/L
Volatile Organic Compounds	5 µg/L
Acid & Base/Neutral Organic Compounds	10 µg/L
Chemical Oxygen Demand	3 mg/L

1.3.6. Acute Whole Effluent Toxicity Monitoring. At least once each calendar quarter after the effective date of the permit, the permittee shall conduct acute static-renewal toxicity tests on a grab sample of the produced water discharge from Outfall 001. At a minimum, quarterly monitoring shall be conducted until the completion of four consecutive quarterly tests demonstrating no acute toxicity is present in the discharge for either test species. Thereafter, monitoring shall be conducted at least annually for the remainder of the term of this permit. Quarterly monitoring shall be done on a one (1) week progression (i.e. if the first sample is in the first week of the quarter, during the next sampling period, sampling shall occur in the second week of the quarter, etc.). Annual monitoring shall be on a two (2) month progression (i.e. if the first sample is in January, during the next sampling period, sampling shall occur in March, etc). Regular quarterly/annual samples shall be collected and tested during the life of the permit term. Samples must be chilled to 0° to 6°C.

The static-renewal toxicity tests shall be conducted in accordance with the procedures set out in the latest revision of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", EPA-821/R-02-012 (October 2002). The permittee shall conduct an acute 48-hour static-renewal toxicity test using ***Daphnia magna*** and an acute 96-hour static-renewal toxicity test using ***Pimephales promelas***. A multi-dilution test consisting of five concentrations (12.5%, 25%, 50%, 75%, 100%) and a control is required.

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.

Regular quarterly/annual acute toxicity test results shall be reported on the Discharge Monitoring Report (DMR) submitted for the reporting period when the acute toxicity monitoring was conducted. A laboratory reporting form consistent with the Region 8 Toxicity Test Report Format for Acute Whole Effluent Toxicity, including all chemical and physical data as specified shall also be submitted to the permit issuing authority as an attachment to the DMR. Copies of the format may be downloaded from the Region 8 WET web page.

If acute toxicity occurs in a test, the permittee shall do the following:

(1) Notify the EPA Regional WET Coordinator within 48 hrs of when the permittee learned of the initial test failure;

(2) Promptly take all reasonable measures necessary to immediately reduce toxicity; and

(3) Initiate an additional test 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.

The EPA Regional WET Coordinator may waive either or both requirements (2) or (3) with justification (e.g., the toxicity has been ongoing and the permittee is in the process of conducting a toxicity identification evaluation/toxicity reduction evaluation as required in Part 1.3.7. of this permit).

Should acute toxicity occur in the second test, the permittee shall immediately begin testing once a month until further notified by the EPA Regional WET Coordinator. Accelerated monthly testing is only required for the species that failed the initial and second tests.

In addition to the accelerated monitoring, the permittee shall perform a toxicity identification evaluation/toxicity reduction evaluation as required by Part 1.3.7 of this permit to establish the cause of the toxicity, locate the source(s) of the toxicity, and develop control of, or treatment for the toxicity.

Test results from additional toxicity testing conducted (i.e. two week retest, monthly testing and TIE/TRE testing) shall be reported by the 28th of the month following the test to the following address:

Regional WET Coordinator
Wastewater Unit (8P-W-WW)
U.S. EPA, Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

1.3.7. Toxicity Identification Evaluation/Toxicity Reduction Evaluation (TIE/TRE). Should acute toxicity occur in the second test following failure in the first test, the permittee shall initiate corrective actions as follows:

1.3.7.1. Where the source of toxicity is known, the permittee shall:

1.3.7.1.1. Submit a TRE plan and schedule to eliminate acute toxicity in accordance with the whole effluent toxicity definition in Part 1.1. The plan and schedule shall be submitted to the EPA Regional WET Coordinator **within 30 days** of the date of when the permittee learned of the second test failure.

1.3.7.1.2. The EPA will review the TRE plan and schedule, and may provide written comments to the permittee. A final TRE plan and schedule that addresses any EPA comments, if provided, shall be submitted to the EPA Regional WET Coordinator prior to the initiation of any activities specified in the TRE plan and schedule.

1.3.7.1.3. Initiate the TRE plan **within 75 days** of the date of when the permittee learned of the second test failure.

1.3.7.1.4. Alternately, if the source of toxicity is known and can immediately be controlled through operational changes, and if follow-up testing indicates an absence of whole effluent toxicity, the permittee shall provide a written request for relief from accelerated testing and/or completion of a TRE.

1.3.7.1.5. Alternately, if the source of toxicity is known but the operational changes or site improvements as identified in the TRE plan and schedule, necessary to remove the toxicity require an extended period to implement, the permittee may provide a written request for relief from accelerated testing until operational changes or site improvements are complete and retesting can begin.

1.3.7.2. Where the source is unknown and the toxicity cannot be immediately controlled through operational changes, the permittee shall:

1.3.7.2.1. Initiate a TIE and develop and implement a TRE plan and schedule to eliminate acute toxicity in accordance with the whole effluent toxicity definition in Part 1.1 in accordance with the following schedule:

1.3.7.2.1.1. Submit a toxicity reduction (TRE) study plan detailing the toxicity reduction procedures to be employed and the schedule for completing the plan. The plan and schedule shall be submitted to the EPA Regional WET Coordinator **within 45 days** of the date of when the permittee learned of the second test failure. The EPA publications listed below shall be considered in developing the plan and schedule. Copies of the publications may be downloaded from the Region 8 WET web page.

"Methods for Aquatic Toxicity Identification Evaluations, Phase I Toxicity Characterization Procedures", Second Edition, EPA/600/6-91/003; February 1991.

"Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity", EPA/600/R-92/080, September 1993.

"Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity", EPA/600/R-92 /081, September 1993.

"Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants", EPA/833B-99/002, August 1999.

"Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs)", EPA/600/2-88/070, April 1989.

1.3.7.2.1.2. The EPA will review the TRE plan and schedule, and may provide written comments to the permittee. A final TRE plan and schedule that addresses any EPA comments, if provided, shall be submitted to the EPA Regional WET Coordinator prior to the initiation of any activities specified in the TRE plan and schedule.

1.3.7.2.1.3. Initiate the TRE plan **within 90 days** of the date of when the permittee learned of the second test failure.

1.3.7.3. The permittee shall comply with the final schedule for implementing the TRE plan; failure to comply with the schedule is a violation of the permit. Any modification to the TIE/TRE plan schedule must be submitted to the EPA Regional WET Coordinator for review prior to implementation of the modification.

1.3.7.4. The permittee shall submit quarterly TIE/TRE progress reports, including summary of findings, corrective actions required, and data generated in accordance with the final schedule for implementing the TRE plan, to the EPA Regional WET Coordinator.

1.3.7.5. The permittee shall complete required construction, if necessary, to implement the TRE controls as described in the final TRE report in accordance with the final schedule for implementing the TRE plan.

1.3.7.6. The permittee shall eliminate acute toxicity in accordance with the whole effluent toxicity definition in Part 1.1 and in accordance with the final schedule for implementing the TRE plan as soon as possible, but no later than the final compliance date specified in the final TRE plan and schedule.

1.3.7.7. Should the results for ten consecutive monthly acute tests indicate no acute toxicity prior to the end of the TRE scheduled completion, the TRE may be considered complete. The permittee may provide a written request to the EPA Regional WET Coordinator, allowing a reduction to regular quarterly whole effluent toxicity monitoring. The EPA Regional WET Coordinator 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 regular test procedures are to be the same as specified above (Part 1.3.6.) for both ***Daphnia magna*** and ***Pimephales promelas,*** unless otherwise specified in writing by the EPA Regional WET Coordinator.

1.3.7.8. Upon completion of the scheduled TIE/TRE, the permittee shall provide a written request to return to regular quarterly whole effluent toxicity monitoring and reporting as specified in Part 1.3.2 of the permit, to the EPA Regional WET Coordinator. If the request is approved, the regular test procedures are to be the same as specified above (Part 1.3.6.) for both ***Daphnia magna*** and ***Pimephales promelas,*** unless otherwise specified in writing by the EPA Regional WET Coordinator.

1.3.8. Mercury Minimization Plan (MMP). Within 90 days following an exceedance of the trigger value of 0.77 µg/L, the permittee is required to develop and implement an MMP tailored to the facility's potential to discharge mercury. At a minimum, the MMP shall include the following:

- Evaluation of existing best management plans or spill prevention and containment control plans;
- Identification and evaluation of current and potential mercury sources;
- Monitoring to confirm current or potential mercury sources;
- Identification of potential methods for reducing or eliminating mercury, including material substitution, material recovery, spill control and collection, waste recycling, process modifications, good housekeeping and disposal practices;
- Implementation of appropriate minimization measures identified in the MMP; and
- Effluent monitoring using sufficiently sensitive analytical methods to verify the effectiveness of the MMP.

1.3.9. Chemical Inventory Reporting Requirement.

The Permittee shall maintain an inventory of the quantities and concentrations of the specific chemicals used to formulate well treatment and workover fluids. If there is a discharge of these fluids, the chemical formulation, concentrations and discharge volumes of the fluids shall be submitted with the DMR. For discharges of well treatment and workover fluids, the type of operation that generated the discharge fluids shall also be reported.

2. MONITORING, RECORDING AND REPORTING REQUIREMENTS

2.1. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part 1 shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to use-disposal practice.

2.2. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Sludge monitoriug procedures shall be those specified in 40 CFR Part 503, or as specified in the permit.

2.3. Penalties for Tampering. The CWA provides that any person who knowingly falsifies, tampers with, or 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, or by imprisonment for not more than two years, or by both. Second conviction is punishable by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both.

2.4. Reporting of Monitoring Results. Effluent monitoring results obtained during the previous six (6) months shall be summarized and reported on **one** Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Until further notice, sludge monitoring results may be reported in the testing laboratory's normal format (there is no EPA standard form at this time), but should be on letter size pages. Whole effluent toxicity (biomonitoring) results must be reported on the most recent version of the EPA Region 8'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 4), and submitted to the EPA Region 8 Policy, Information Management & Environmental Justice Program and the Wind River Environmental Quality Commission at the addresses given below:

original to: U.S. EPA, Region 8
Policy, Information Management & Environmental Justice Program (8ENF-PJ)
Attention: Director
1595 Wynkoop Street
Denver, Colorado 80202-1129

copy to: Director
Wind River Environmental Quality Commission
Wind River Indian Reservation
P.O. Box 217
Fort Washakie, WY 82514

2.5. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136, 40 CFR Part 503, or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

2.6. Records Contents. Records of monitoring information shall include:

2.6.1. The date, exact place, and time of sampling or measurements;

2.6.2. The initials or name(s) of the individual(s) who performed the sampling or measurements;

2.6.3. The date(s) analyses were performed;

2.6.4. The time(s) analyses were initiated;

2.6.5. The initials or name(s) of individual(s) who performed the analyses;

2.6.6. References and written procedures, when available, for the analytical techniques or methods used; and

2.6.7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

2.7. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. Records of monitoring required by this permit related to sludge use and disposal activities must be kept at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Director at any time. Data collected on site, data used to prepare the DMR, copies of Discharge Monitoring Reports, and a copy of this NPDES permit must be maintained on site.

2.8. Twenty-four Hour Notice of Noncompliance Reporting.

2.8.1. The permittee shall report any noncompliance which **may endanger health or the environment** as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the EPA, Region 8, Site Assessment/Emergency Response Program at (303) 293-1788, and the Wind River Environmental Quality Commission at (307) 332-3164.

2.8.2. The following occurrences of noncompliance shall be reported by telephone to the EPA, Region 8, NPDES Enforcement Unit at (800) 227-8917 (8:00 a.m. - 4:30 p.m. Mountain Time), and the Wind River Environmental Quality Commission at (307) 332-3164 - (8:00 a.m. - 4:30 p.m. Central Time) by the first workday following the day the permittee became aware of the circumstances.

2.8.2.1. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part 3.7, Bypass of Treatment Facilities.);

2.8.2.2. Any upset which exceeds any effluent limitation in the permit (See Part 3.8, Upset Conditions.); or

2.8.2.3. Violation of a maximum daily discharge limitation for any of the pollutants listed in Part 1.3.1 of the permit.

2.8.3. In addition to the notifications described in Part 2.8.1 and Part 2.8.2., a written submission shall also be provided to the USEPA, Office of Enforcement, Compliance and Environmental Justice and to the Wind River Environmental Quality Commission within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

2.8.3.1. A description of the noncompliance and its cause;

2.8.3.2. The period of noncompliance, including exact dates and times;

2.8.3.3. The estimated time noncompliance is expected to continue if it has not been corrected; and

2.8.3.4. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2.8.4. The Director may waive the written report on a case-by-case basis for an occurrence of noncompliance listed under Part 2.8.2 above, if the incident has been orally reported in accordance with the requirements of Part 2.8.2.

2.8.5. Reports shall be submitted to the addresses in Part 2.4., Reporting of Monitoring Results.

2.9. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part 2.4 are submitted. The reports shall contain the information listed in Part 2.8.3.

2.10. Inspection and Entry. The permittee shall allow the Regional Administrator, or authorized representative of the Administrator (including an authorized contractor acting as a representative of the Administrator) or the Wind River Environmental Quality Commission, upon presentation of credentials and other documents as may be required by law, to:

2.10.1. 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;

2.10.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

2.10.3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

2.10.4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

3. COMPLIANCE RESPONSIBILITIES

3.1. Duty to Comply. The permittee must comply with all conditions of this permit. Any failure to comply with the permit may constitute a violation of the CWA and may be grounds for enforcement action, including, but not limited to permit termination, revocation and reissuance, modification, or denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility that will change any discharge from the facility, or of any activity that may result in failure to comply with permit conditions.

3.2. Penalties for Violations of Permit Conditions. The CWA provides for specified civil and criminal monetary penalties for violations of its provisions. However, the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, requires the EPA to adjust the civil monetary penalties for inflation on a periodic basis. The EPA previously adjusted its civil monetary penalties on December 31, 1996 (61 Fed. Reg. 69359-69365), with technical corrections and additions published on March 20, 1997 (62 Fed. Reg. 13514-13517), June 27, 1997 (62 Fed. Reg. 35037-35041), February 13, 2004 (69 Fed. Reg. 7121-7127) and December 11, 2008 (73 Fed. Reg. 75340-75346). On November 6, 2013 (78 Fed. Reg. 66643-66648) EPA once again adjusted its civil monetary penalties. The civil and criminal penalties, as of December 6, 2013, for violations of the CWA (including permit conditions) are given below:

3.2.1. Any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $37,500 per day for each violation.

3.2.2. Any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment for not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment for not more than 2 years, or both.

3.2.3. Any person who *knowingly* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $5,000 to $50,000 per day of violation, or

imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment for not more than 6 years, or both.

3.2.4. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment for not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment for not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

3.2.5. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Where an administrative enforcement action is brought for a Class I civil penalty, the assessed penalty may not exceed $16,000 per violation, with a maximum amount not to exceed $37,500. Where an administrative enforcement action is brought for a Class II civil penalty, the assessed penalty may not exceed $16,000 per day for each day during which the violation continues, with the maximum amount not to exceed $187,500.

3.3. 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.

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

3.5. Proper Operation and Maintenance. 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 a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

3.5.1 The permittee shall, as soon as reasonable and practicable, but no later than six (6) months after the effective date of this permit, do the following as part of the operation and maintenance program for the wastewater treatment facility:

3.5.1.1. Have a current O & M Manual(s) that describes the proper operational procedures and maintenance requirements of the wastewater treatment facility;

3.5.1.2. Have the O & M Manual(s) readily available to the operator of the wastewater treatment facility and require that the operator become familiar with the manual(s) and any updates;

3.5.1.3. Have a schedule(s) for routine operation and maintenance activities at the wastewater treatment facility; and

3.5.1.4. Require the operator to perform the routine operation and maintenance requirements in accordance with the schedule(s).

3.5.2. The permittee shall maintain a daily log in a **bound notebook(s)** containing a summary record of all operation and maintenance activities at the wastewater treatment facility. At a minimum, the notebook shall include the following information:

3.5.2.1. Date and time;

3.5.2.2 Name and title of person(s) making the log entry;

3.5.2.3. Name of the persons(s) performing the activity;

3.5.2.4. A brief description of the activity; and

3.5.2.5. Other information, as appropriate.

The permittee shall maintain the notebook in accordance with proper record-keeping procedures and shall make the log available for inspection, upon request, by authorized representatives of the U.S. Environmental Protection Agency or the Wind River Environmental Quality Commission.

3.6. Removed Substances. Collected screenings, grit, solids, sludge, or other pollutants removed in the course of treatment shall be buried or disposed in a manner consistent with all applicable federal (e.g., 40 CFR Part 257, 40 CFR Part 258, 40 CFR Part 503) and tribal regulations and in a manner so as to prevent any pollutant from entering any waters of the United States or creating a health hazard.

3.7. Bypass of Treatment Facilities.

3.7.1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts 3.7.2 and 3.7.3.

3.7.2. Notice:

3.7.2.1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass to the USEPA, Technical Enforcement Program, and the Wind River Environmental Quality Commission.

3.7.2.2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part 2.8, Twenty-four Hour Noncompliance Reporting, to the USEPA, Technical Enforcement Program, and the Wind River Environmental Quality Commission.

3.7.3. Prohibition of bypass.

3.7.3.1. Bypass is prohibited and the Director may take enforcement action against a permittee for a bypass, unless:

3.7.3.1.1. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

3.7.3.1.2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

3.7.3.1.3. The permittee submitted notices as required under Part 3.7.2.

3.7.3.2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part 3.7.3.1.

3.8. Upset Conditions

3.8.1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part 3.8.2 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limitations).

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

3.8.2.1. An upset occurred and that the permittee can identify the cause(s) of the upset;

3.8.2.2. The permitted facility was at the time being properly operated;

3.8.2.3. The permittee submitted notice of the upset as required under Part 2.8, Twenty-four Hour Notice of Noncompliance Reporting; and

3.8.2.4. The permittee complied with any remedial measures required under Part 3.4, Duty to Mitigate.

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

3.9. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the CWA 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.

3.10. Changes in Discharge of Toxic Substances. Notification shall be provided to the Director as soon as the permittee knows of, or has reason to believe:

3.10.1. 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":

3.10.1.1. One hundred micrograms per liter (100 µg/L);

3.10.1.2. 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;

3.10.1.3. 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

3.10.1.4. The level established by the Director in accordance with 40 CFR § 122.44(f).

3.10.2. 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":

3.10.2.1. Five hundred micrograms per liter (500 µg/L);

3.10.2.2. One milligram per liter (1 mg/L) for antimony;

3.10.2.3. 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

3.10.2.4. The level established by the Director in accordance with 40 CFR § 122.44(f).

4. GENERAL REQUIREMENTS

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

4.1.1. The alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit; or

4.1.2. There are any planned substantial changes to the existing sewage sludge facilities, the manner of its operation, or to current sewage sludge management practices of storage and disposal. The permittee shall give the Director notice of any planned changes at least 30 days prior to their implementation.

4.1.3. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source.

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

4.3. Permit Actions. 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.

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

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

4.6. 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 Director, it shall promptly submit such facts or information.

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

4.7.1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

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

4.7.2.1. The authorization is made in writing by a person described above and submitted to the Director; and

4.7.2.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

4.7.3. Changes to authorization. If an authorization under Part 4.7.2 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 Part 4.7.2 must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

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

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

4.8. Penalties for Falsification of Reports. The CWA 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 six months per violation, or by both.

4.9. Availability of Reports. Except for data determined to be confidential under 40 CFR Part 2, Subpart B, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Director. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

4.10. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

4.11. Property Rights. The issuance of this permit does not convey any property rights of any sort, 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, tribal or local laws or regulations.

4.12. 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.

4.13. Transfers. This permit may be automatically transferred to a new permittee if:

4.13.1. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date;

4.13.2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

4.13.3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part 4.13.2.

4.14. Permittees in Indian Country. The EPA has not approved the Eastern Shoshone or Northern Arapaho Tribes or the State of Wyoming to implement the CWA NPDES program on the Wind River Indian Reservation. "Indian country" is defined at 18 U.S.C. § 1151. Therefore, the EPA directly implements the CWA NPDES program on the Wind River Indian Reservation.

4.15. 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:

4.15.1. Water Quality Standards. The 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.

4.15.2. Wasteload Allocation. A wasteload allocation is developed and approved by the Wind River Indian Reservation and/or the EPA for incorporation in this permit.

4.15.3. Water Quality Management Plan. A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit.

4.16. Toxicity Limitation-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include whole effluent toxicity limitations if whole effluent toxicity is detected in the discharge.

4.17 Mercury Limitation – Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) if the Mercury Minimization Plan is not found to be effective or if a water column of the fish tissue criterion is developed.

Statement of Basis

PERMITTEE:	**Wesco Operating, Inc.**
FACILITY:	**Tensleep #1 (also known as Winkleman Dome)**
PERMIT NUMBER:	**WY-0025232**
RESPONSIBLE OFFICIAL:	Robert Kirkwood (Engineer) Wesco Operating, Inc. P.O. Box 1706 Casper, Wyoming 82602 (307) 265-5178 Ext 16
FACILITY CONTACT:	Robert Kirkwood (307) 265-5178 Ext 16 or Tom Kirkwood (307) 265-5178 Ext 28 E-mail: tkirkwood@tribcsp.com
PERMIT TYPE:	Minor Industrial (Renewal) Indian Country
FACILITY LOCATION:	SW ¼ SE ¼ Section 18, Township 2 North, Range 1 West in Fremont County, Wyoming
DISCHARGE POINT:	Outfall 001, Lat. 43.14291° N, Long. 108.91771° W

Background Information

The EPA directly implements the Clean Water Act (CWA) National Pollutant Discharge System (NPDES) on Indian country lands within the State of Wyoming. This facility is located on the Wind River Indian Reservation and is thus in "Indian country" as defined at 18 U.S.C. 1151. The EPA has not approved the Eastern Shoshone or Northern Arapaho Tribes (Tribes) or the State of Wyoming to implement the CWA NPDES program in Indian country.

This permit authorizes the discharge of produced water from outfall 001 at the oil production wastewater treatment facility for the Wesco Operating, Inc. -Tensleep #1 (also known as Winkleman Dome) oil production facility located in Fremont County, Wyoming. Refer to Figure 1 for location map. This facility is within the exterior boundaries of the Wind River Indian Reservation.

This permit is a renewal of NPDES Permit Number WY-0025232, which expired on September 30, 2010, and was administratively extended.

Produced oil, water, and gas are separated in tanks by gravity, heat, and emulsion breaking chemicals. A flow diagram is shown in Figure 2. Produced water is discharged through a series of four (4) settling ponds where the remaining oil is removed by floatation and skimming prior to discharge to an unnamed ephemeral tributary to Bighorn Draw, which is tributary to the Little Wind River.

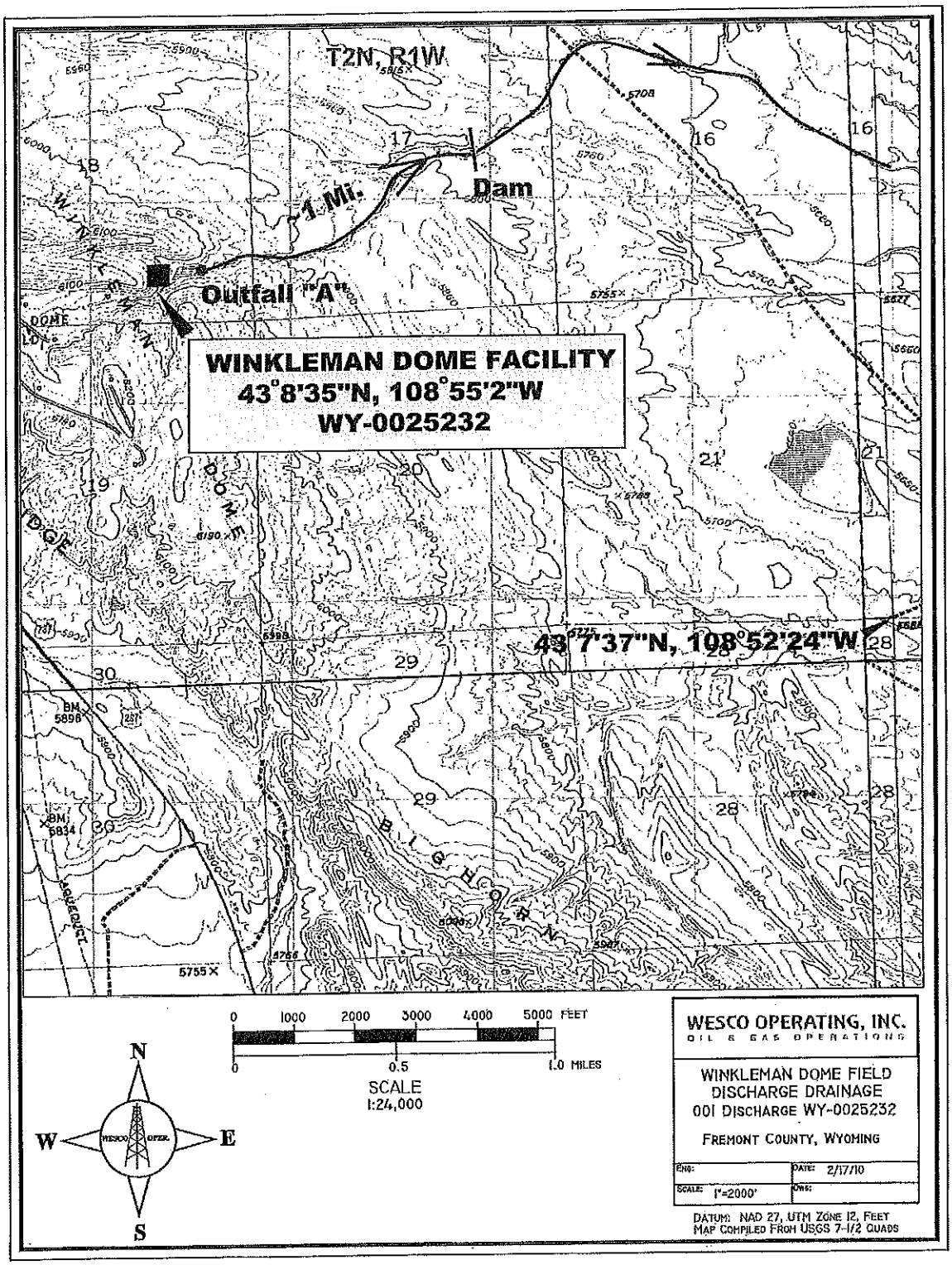

Figure 1. Wesco Operating, Inc – Tensleep #1 (Winkleman Dome) Map showing location of facility and discharge point (Outfall A).

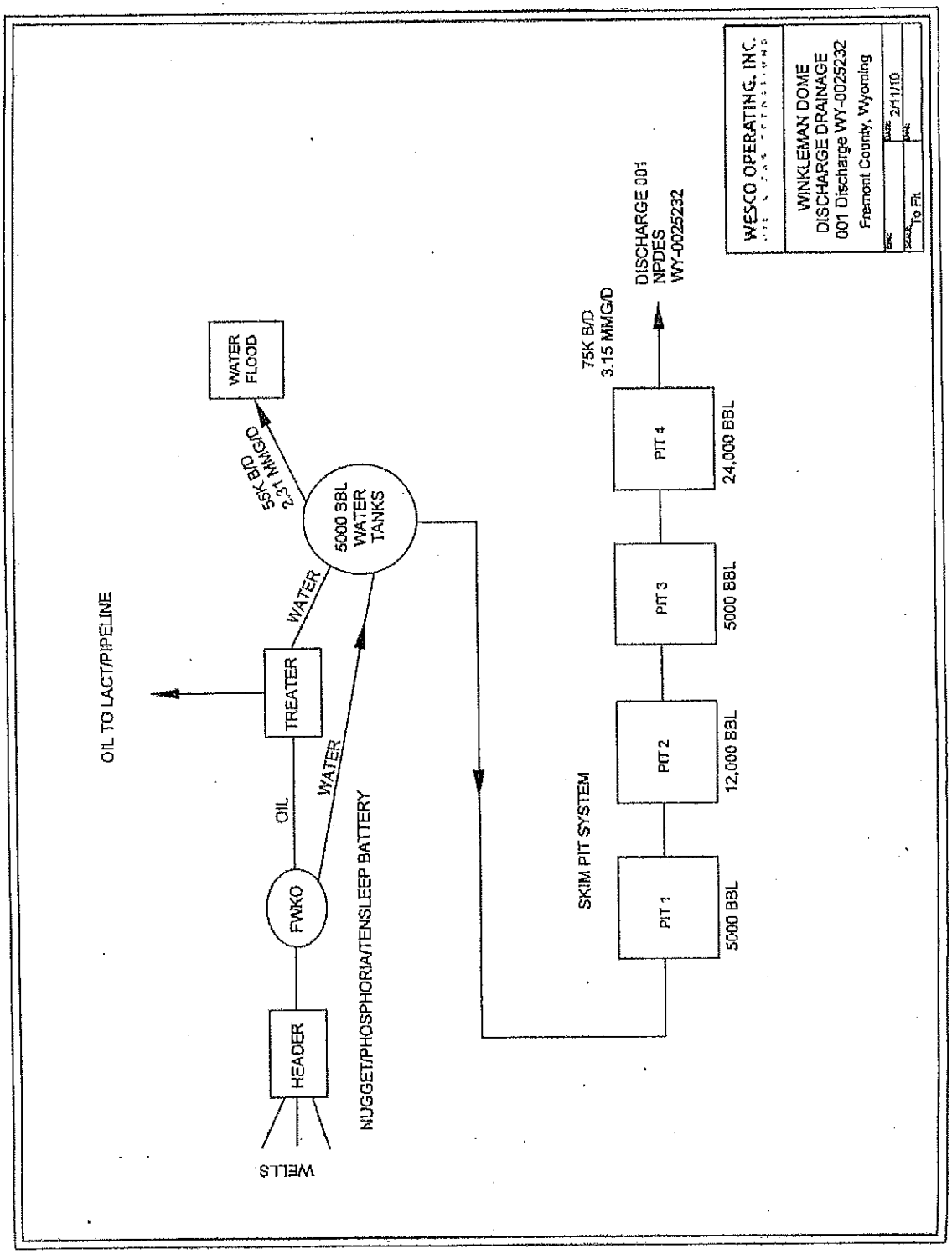

Figure 2. Wesco Operating, Inc. - Tensleep #1 (Winkleman Dome)
Flow Diagram

Receiving Waters

The discharge from Outfall 001 at this facility will enter an unnamed tributary to Bighorn Draw, which is tributary to the Little Wind River. Without the continuous, significant volume of discharged produced water, the unnamed tributary and Bighorn Draw would be ephemeral drainageways with only precipitation runoff providing water. Currently, located on-line of the drainageway between the facility and Little Wind River, are five earthen berms/dikes which retain the produced water. These retention areas support wetland and wildlife habitats and provide a water source for livestock. Two additional, potential impoundments have been identified along this drainageway by the U.S. Department of Interior, Fish and Wildlife Service to further utilize the produced water discharge. These structures retain mixed produced water and precipitation runoff during normal discharge periods but may overflow during and after precipitation events. During dry periods, evaporation may increase the concentration of dissolved solids in the downstream ponds.

The Tribes adopted surface water quality requirements that apply to waters within the exterior boundaries of the Wind River Indian Reservation. These water quality requirements were adopted into tribal code as Water Quality Rules and Regulations effective September 25, 2007. The water quality requirements were submitted to the EPA and returned to the Tribes with comments. The tribal requirements have not yet been formally approved by the EPA, however, the EPA is considering them when determining reasonable potential (RP) and evaluating the need for any water quality based effluent limitations (WQBELs) in this renewal permit. EPA relied on CWA Section 301(b)(1)(C) and principles of tribal sovereignty in establishing WQBELs based on these tribally-adopted water quality requirements.

In the Tribes' water quality requirements, designated uses were established in which the Tribes classified the unnamed tributary and Bighorn Draw from the confluence with Little Wind River, upstream to perennial flow as Class 3B. Class 3B waters are tributary waters including adjacent wetlands that are not known to support fish populations or drinking water supplies and where those uses are not attainable. Class 3B waters are intermittent and ephemeral streams with sufficient hydrology to normally support and sustain communities of aquatic life including iuvertebrates, amphibians, or other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles. In general, 3B waters are characterized by frequent linear wetland occurrences or impoundments within or adjacent to the stream channel over its entire length. Such characteristics will be a primary indicator used in identifying Class 3B waters. Uses designated on Class 3B waters include aquatic life other than fish, primary contact recreation, wildlife, indnstrial, agricultural, cultural/traditional and aesthetic uses.

Inspections

An EPA Region 8 enforcement letter dated December 28, 2010, was sent to Wesco Operating, Inc. (attention of: Robert Kirkwood) regarding the compliance inspection for this permit and other facilities operated under Wesco Operating, Inc., which were completed in June 2010. The deficiencies cited in the letter concerned missing information in the operations and maintenance (O and M) manuals submitted to the EPA by Wesco Operating, Inc. for its facilities; that the corrective actions taken were not documented in the log sheets of the manuals; and that the manuals provided were limited to pits and outfalls only (did not include additional appurtenances such as piping or valves that route wastewater to the pits).

Photographs from the inspection done by EPA Region 8 (July 28, 2010) can be found in the inspection documentation records.

Applicable Technology and Water Quality Considerations

Permit limitations for the Winkleman Dome facility are derived through evaluating applicable treatment technology standards and the Tribes' narrative/numeric water quality criteria. The applicable treatment technology standards for the site are found in 40 CFR Part 435, Oil and Gas Extraction Point Source Category, Subpart E – Agricultural and Wildlife Water Use Subcategory.

Treatment technology standards establish a level of effluent quality that must be met by all facilities affected by the applicable category. The level of effluent quality established by the treatment standards may not be sufficient, however, to protect all water uses. As required by the CWA, the EPA must conduct an evaluation of the numeric water quality criteria and the assimilative capacity for the receiving stream. The results of this evaluation are used to establish permit limits to ensure the receiving stream quality and its existing and designated uses are protected. An evaluation of the narrative water quality standards that may be applicable to this facility is performed to further protect the characteristics and water quality of the receiving stream.

Technology Based Effluent Limitations

Applicable Effluent Guidelines and Standards

The Winkleman Dome is an onshore facility located landward of the inner boundary of the territorial seas. The facility is also located west of the 98th meridian and, therefore, Subpart E applies, allowing the discharge of produced water for which the produced water has a use in agricultural or wildlife propagation. The effluent guideline defines "use in agricultural or wildlife propagation" to mean "that the produced water is of good enough quality to be used for wildlife or livestock watering or other agricultural nses and that the produced water is actually put to such use during periods of discharge." 40 CFR § 435.51(c).

The actual effluent limitation from Subpart E is found in 40 CFR § 435.52, which provides:

(a) There shall be no discharge of waste pollutants into navigable waters from any source (other than produced water) associated with production, field exploration, drilling, well completion, or well treatment (*i.e.*, drilling muds, drill cuttings, and produced sands).

(b) Produced water discharges shall not exceed the following daily maximum limitation:
Oil and Grease: 35 mg/L.

The permittee provided the EPA with documentation (letter dated September 6, 2011) that the discharge of produced water is actnally put to use during periods of discharge. Correspondence from the U.S. Bureau of Indian Affairs (June 13, 2011) and the U.S. Fish and Wildlife Service (August 17, 2011) describes and supports the potential beneficial uses of the produced water from the facility. The beneficial uses include providing wetland habitats for "designated tribal significant species, state species of concern and federal trust resource species".

Additional Technology Based Effluent Limitations

Under the applicable technology requirements for the Agricultural and Wildlife Water Use Subcategory of Part 435, discharges of produced water must be of good enough quality to be used for wildlife or livestock watering or other agricultural uses. The EPA's previous permit limitations for total dissolved solids (TDS), chloride, and sulfate were based on similar requirements for livestock protection imposed by the State of Wyoming on oil and gas production facilities outside the Wind River Indian Reservation in the State of Wyoming. For this renewal permit, the EPA reviewed current information from literature and studies to establish limitations which are protective of livestock and wildlife consumption of the produced water discharge.

In the previous permit, emphasis was placed on controlling conductance, chloride, sulfate, and TDS for protection of livestock.

Water Quality for Wyoming Livestock and Wildlife Report

The Water Quality for Wyoming Livestock and Wildlife document published in 2007 by the University of Wyoming Department of Veterinary Sciences, University of Wyoming Department of Renewable Resources, Wyoming Game and Fish Department, and Wyoming Department of Environmental Quality includes a review of the health effects of inorganic contaminants to livestock and wildlife. The EPA evaluated this document to determine the impacts of these contaminants on the beneficial use of produced water, as contemplated in Subpart E.

For livestock watering, the 3,000 mg/L limit on sulfate in the previous permit may not be adequately protective. In the report, "Water Quality for Wyoming Livestock & Wildlife, A Review of the Literature Pertaiuing to Health Effects of Inorganic coutaminants", the summary for sulfur contained the following statement: *"assuming normal feedstuff sulfate concentration, acute death may occur in ruminants at concentrations greater than 2,000 mg/L, especially if not allowed time to acclimate. Assuming normal feedstuff S concentrations, keeping water SO_4 concentrations less than 1,800 mg/L should minimize the possibility of acute death in cattle. Concentrations less than 1,000 mg/L should not result in any easily measured loss in performance."* [a]

Therefore, the following limit was determiued to be protective of the beneficial use:

Pollutant	Acute	Chronic
Sulfate, mg/L	1,800	1,000

In addition, the study recommends that water for cattle consumption contain less than 2.0 mg/L of fluoride and assumes that this concentration should be safe for sheep, cervids, and horses.[b] Fluoride is addressed below.

[a] M. F. Raisbeck, S. L. Riker, C. M. Tate, R. Jackson, M. A. Smith, K. J. Reddy and J. R. Zygmunt (2007): Water quality for Wyoming livestock and wildlife. A Review of the Literature Pertaining to Health Effects of Inorganic Contaminants UW AES bulletin B-1183. pp 94; Fluoride Chapter 4, pp 15-19 http://www.wyomingextension.org/agpubs/pubs/B1183.pdf (verified 03/22/11)

[b] M. F. Raisbeck, S. L. Riker, C. M. Tate, R. Jackson, M. A. Smith, K. J. Reddy and J. R. Zygmunt (2007): Water quality for Wyoming livestock and wildlife. A Review of the Literature Pertaining to Health Effects of Inorganic Contaminants UW AES bulletin B-1183. pp 94; Sulfate Chapter 10, pp 45-48 http://www.wyomingextension.org/agpubs/pubs/B1183.pdf (verified 03/22/11)

Water Quality Based Effluent Limitations

The Tribes adopted water quality requirements that apply to waters within the exterior boundaries of the Wind River Indian Reservation. These requirements were adopted into tribal code as Water Quality Rules and Regulations effective September 25, 2007.

The water quality requirements were submitted to the EPA for review. Comments were returned to WREQC, which is now in the process of reviewing the requirements based on the EPA's comments. The Tribes' updated water quality requirements have not been formally submitted to the EPA for approval. Although the EPA has not approved these water quality requirements, the WREQC expects dischargers within the tribal reservation boundaries to comply with their adopted rules. EPA relied on CWA Section 301(b)(1)(C) and principles of tribal sovereignty in establishing WQBELs based on these tribally-adopted water quality requirements.

Numeric Water Quality Requirements

To ensure that any potential permit effluent limitations based on the Tribes' adopted water quality requirements are fully protective of the designated aquatic life use, a comparison of the Tribes' criteria with the EPA's published recommended CWA Section 304(a) criteria was performed. In most cases, the Tribes' criteria were equivalent to EPA's published criteria. The tribal exceptions were for cadmium (acute – 19.12 µg/L; chronic – 6.22 µg/L) and silver (acute – 37.44 µg/L), which were higher than the EPA's criteria. Where the two sets of criteria varied, the EPA chose the more stringent of the two. The selected criteria used in evaluation of RP and setting permit effluent limitations are listed in Table 1.

Table 1 – Applicable Water Quality Criteria - expressed as µg/L

Pollutant	More Stringent of EPA Water Quality Criteria and Adopted Wind River Tribal Water Quality Criteria	
	Aquatic Life	
	Acute	Chronic
Aluminum, Total	750	87
Arsenic, Total	340	150
Cadmium, Total	7.7 (1)	0.64 (1)
Chloride	860,000	230,000
Chromium (III)	1,773.3 (1)	230.7 (1)
Chromium (VI), Hexavalent	16	11
Copper, Total	49.6 (1)	29.3 (1)
Iron, Total	--	1,000
Lead, Total	280.8 (1)	10.9 (1)
Manganese, Total	9,033 (1)	3,105 (1)
Mercury, Total	1.4	0.77
Nickel, Total	1,513 (1)	168 (1)
Oil and Grease	Narrative, 10 mg/L	
pH	6.5 to 9.0	
Selenium, Total	--	4.6
Silver, Total	34.9 (1)	--
Sulfide (as H_2S)	--	2
Zinc, Total	379 (1)	382 (1)

(1) Criterion is hardness dependent. Table values adjusted for hardness using the recommended cap of 400 mg/L for waters having a hardness value greater than 400 mg/L.

Narrative Water Quality Requirements

The narrative water quality requirements for the Wind River Indian Reservation were evaluated to determine if permit limits were necessary to protect the characteristics and uses of the receiving stream. The Tribes have adopted narrative requirements for toxic pollutants, settleable solids and floating and suspended solids. The following are the Tribes' narrative water quality requirements:

> Section 13 - Toxic Pollutants. Except for those substances referenced in Section 21 (e) and (f) of these regulations, toxic pollutants attributable to or influenced by human activities shall not be present in any Reservation surface water in concentrations or combinations which constitute pollution as defined herein.

Section 15 - Settleable Solids. In all Reservation waters, substances attributable to or influenced by human activities that will settle to form sludge, bank, or bottom deposits shall not be present in quantities which could result in significant aesthetic degradation, significant degradatiou of habitat for aquatic life or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.

Section 16 - Floating and Suspended Solids. In all Reservation surface waters, floating and suspended solids attributable to or influenced by human activities shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.

Permit Limitations Based on Narrative Water Quality Requirements

Floating, Suspended and Settleable Solids

Permit requirements for implementing the narrative requirements for discharges of floating solids and oil which causes a visible sheen or deposits on the bank or bottom are included in the renewal permit as effluent limitations:

The concentration of oil and grease shall not exceed 10 mg/L in any sample nor shall there be a visible sheen or cause a visible sheen in the receiving waters or deposits on the bottom or shoreline of the receiving waters.

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

Reasonable Potential (RP) Evaluation for Water Quality Based Effluent Limitations

Effluent Monitoring Data

The permit renewal application provided data for pollutants believed to be present as well as: biochemical oxygen demand, chemical oxygen demand, total organic carbon, ammonia, temperature, pH and actual flow. The EPA also reviewed the submitted data from discharge monitoring reports (DMR) for the period of December 31, 2005 to December 31, 2012, and a toxic pollutants screen report submitted on August 8, 2005. A summary of data collected is given below in Tables 2-4:

Table 2 - DMR Data

Sample Date	Specific Conductivity (µS /cm)	TDS (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Radium 226 (pCi/L)	Oil and Grease (mg/L)	pH max. (s.u.)	Flow (mgd)
12/31/2005	2,610	1,722	281	704	11.1	8.26	8.4	0.96
6/30/2006	2,650	1,690	270	619	12.8	8.56	8.5	0.97
12/31/2006	2,610	1,620	229	623	12.2	9.57	8.0	1.45
6/30/2007	2,680	1,480	206	583	7.7	9.76	8.5	1.15
12/31/2007	2,410	1,530	66.5	493	66.5	8.58	8.3	1.23
6/30/2008	2,450	1,550	240	499	6.7	9.16	8.5	1.02
12/31/2008	2,370	1,680	212	637	8.3	9.14	8.3	1.27
6/30/2009	2,430	1,790	254	673	1.9	9.07	8.0	1.29
12/31/2009	2,410	1,479	245	385	5.1	9.07	8.2	1.27
6/30/2010	2,190	1,495	214	632	5.5	12.0	8.5	1.18
12/31/2010	2,250	1,538	204	684	28.7	8.08	8.3	1.16
6/30/2011	2,240	1,420	1,841	457	8.7	11.6	8.7	1.18
12/31/2011	2,690	1,830	221	664	8.3	8.5	8.4	1.25
6/30/2012	2,250	-	246	488	8.2	3.61	8.2	1.35
12/31/2012	2,400	1,490	83	704	8.0	4.7	8.5	1.17
minimum	2,190	1,420	83	385	1.9	3.61	8.0	0.96
average	2,443	1,594	223	578	9.5	8.64	8.0-8.7	1.19
maximum	2,690	1,830	281	684	28.7	12.0	8.7	1.45
Limit	7,500	5,000	2,000	3,000	60	10	6.5-8.5	---

An evaluation of the chloride data using the statistical program ProUCL 4.1 revealed that 2 data points (66.5 and 1,841) were statistically outliers within the dataset. Therefore, these two data points will not be utilized in the RP evaluation.

Table 3 – Permit Application Data

Parameter	Units	Max	No. of Samples
BOD	mg/L	153	1
COD	mg/L	258	2
TOC	mg/L	5.72	1
TSS	mg/L	1,479	1
Ammonia (as N)	mg/L	0.4	1
Flow	mgd	1.27	1
Temperature (winter)	°C	27	1
Temperature (summer)	°C	33	1
Sulfate	mg/L	620	1
Bromide	mg/L	0.5	1
Color	mg/L	80	1
Fluoride	mg/L	3.0	1
Nitrate-Nitrite (as N)	mg/L	0.1	1
Nitrogen, Total Organic (as N)	mg/L	1.2	1
Phosphorus (as P), Total	mg/L	<0.1	1
Radioactivity Alpha, Total	pCi/L	49.2	2
Radioactivity Beta, Total	pCi/L	49.9	2
Radium, Total	pCi/L	12.8	1
Radium 226	pCi/L	11	1
Sulfide (as H_2S)	mg/L	82	2
Sulfite	mg/L	6.5	1
Surfactants	mg/L	<1.0	1
Barium, Total	mg/L	0.189	1
Boron, Total	mg/L	1.17	1
Cobalt, Total	mg/L	<0.001	1
Iron, Total	mg/L	0.052	2
Magnesium, Total	mg/L	39.4	1
Molybdenum, Total	mg/L	0.001	1
Tin, Total	mg/L	<0.001	1
Titanium, Total	mg/L	0.002	1
Arsenic, Total	mg/L	0.005	2
Cadmium, Total	mg/L	<0.001	1
Chromium, Total	mg/L	0.003	1
Copper, Total	mg/L	0.037	1
Lead, Total	mg/L	0.002	1
Mercury, Total	µg/L	0.028	2
Selenium, Total	mg/L	0.006	1
Zinc, Total	mg/L	0.026	1
Benzene	µg/L	27	1
Ethyl benzene	µg/L	5.8	1
Toluene	µg/L	14	1

Table 4 – Toxic Pollutants Screening Data

Parameter	Units	Data	Reporting Limit	No. of Samples
Calcium	mg/L	126	0.5	1
Chloride	mg/L	222	5	1
Magnesium	mg/L	39.4	0.5	1
Hardness, as $CaCO_3$	mg/L	477	10	1
COD	mg/L	258	3	1
Sulfide (as H_2S)	mg/L	82	1	1
Arsenic	µg/L	5	1	1
Aluminum	µg/L	ND	50	1
Cadmium	µg/L	ND	5	1
Chromium	µg/L	ND	5	1
Copper	µg/L	ND	5	1
Iron	µg/L	52	50	1
Lead	µg/L	ND	2	1
Manganese	µg/L	ND	50	1
Mercury	µg/L	0.028	0.006	1
Nickel	µg/L	ND	5	1
Selenium	µg/L	ND	1	1
Silver	µg/L	ND	5	1
Uranium	µg/L	ND	5	1
Ziuc	µg/L	ND	5	1
Gross alpha	pCi/L	49.2	1	1
Gross alpha precision	pCi/L	7.8	-	1
Gross beta	pCi/L	49.9	2	1
Gross beta precision	pCi/L	14.6	-	1
Radium 226	pCi/L	11.0	0.2	1
Radium 226 precision	pCi/L	1.4	-	1

Reasonable Potential (RP) Evaluation

Quantitative RP Analysis

The NPDES regulations in 40 CFR § 122.44(d)(1)(i) – (iii) require permit writers to assess effluent with respect to EPA-approved water quality standards to evaluate the impact of direct dischargers on downstream water quality. This assessment is used to determine permit limitatious that are protective of water quality uses. EPA considered it appropriate to assess effluent discharged from this facility and evaluate RP with respect to tribally-approved water quality requirements. Reasonable potential for pollutants in the discharge to cause or contribute to an exceedance of applicable water quality requirements was evaluated for all parameters of concern measured and reported iu the permit application, hazard screening, or DMR. The effluent data was compared to applicable acute and chrouic aquatic life criteria values presented in Table 1 after consideration of pollutant variability in the discharge and available dilution in the receiving water. A quantitative RP evaluation was performed using the Region 8 RP Tool, which assesses RP from effluent data with statistical procedures consistent with EPA's Technical Support Document for Water Quality Based Toxics Control, March 1991. A confidence interval of 95% was used for all RP calculations. See results in Table 5 below.

Table 5 – Reasonable Potential Evaluation (metals, anions, etc.)

Parameter	Aquatic Life Water Quality Criteria		Maximum Reported Effluent Concentration	Reasonable Potential?	
	Acute	Chronic		Acute	Chronic
Chloride, mg/L	860	230	281	No	Yes
Fluoride, mg/L	2 (2)	N/A	3	Yes (3)	N/A
Oil & Grease, mg/L	N/A	10	12	Yes	Yes
Sulfate, mg/L	1,800 (2)	1,000 (2)	704	No	No
Sulfide (as H_2S), mg/L	-	0.002	82	-	Yes
Aluminum, µg/L	750	87	ND	No	No
Arsenic, µg/L	340	150	5	No	No
Cadmium, µg/L	7.7 (1)	0.6 (1)	<1	No	Maybe (3)
Chromium (III), µg/L	1,773	231	<3	No	No
Copper, µg/L	49.6 (1)	29.3 (1)	37	No	Yes (3)
Iron, µg/L	N/A	1,000	52	-	No
Lead, µg/L	280.9 (1)	10.9 (1)	2	No	No
Mercury, µg/L	1.40	0.77	.028	No	No
Nickel, µg/L	1,513(1)	168 (1)	ND	No	No
Selenium, µg/L	N/A	4.6	6	N/A	Yes (3)
Silver, µg/L	34.9(1)	N/A	ND	No	No
Zinc, µg/L	379(1)	382 (1)	26	No	No

(1) Calculated based on hardness value of 400 mg/L

(2) Criteria limit is not an aquatic life water quality limit, but rather a recommended limit for livestock and wildlife propagation.

(3) Insufficient data to confidently determine existence of RP. Additional data is necessary.

The results of the quantitative evaluation identified chloride, fluoride, oil and grease, sulfide (as H_2S), copper, and selenium as having RP to cause or contribute to exceedances of the water quality criteria. For fluoride, cadmium, copper, and selenium, insufficient quantitative data is available to adequately assess RP to exceed the numeric criteria.

To confidently evaluate quantitatively the RP of a pollutant to impair the receiving body of water in which the facility discharges, a sufficient quantity of data of known quality to assess variability must be available.

Qualitative RP Analysis

In cases where the permittee reported a pollutant present at concentrations far in excess of the applicable water quality criterion and there are only one or two data points available, the EPA is proposing to add effluent limitations in order to protect the designated uses and applicable criteria for aquatic life in the renewal permit. In this case, the EPA believes further monitoring to support a RP analysis is unnecessary. In some cases, however, where sampling shows small exceedances of the applicable water quality criterion, but there is insufficient monitoring data to support a RP determination, EPA is not proposing to add an effluent limit and is instead imposing monitoring requirements.

Sulfide (as H_2S)

Sulfide (as H_2S) can be toxic to aquatic life. The water quality criterion for sulfide (as H_2S) is 2 µg/L (chronic) to protect aquatic life. An evaluation of the data provided by the permittee indicates a significant exceedance of the criterion. An effluent limit, therefore, has been included in this permit.

Fluoride, Copper, Selenium, Cadmium

Additional qualitative review of the limited data for fluoride, copper aud selenium and cadmium showed inconsistencies that raised questions about the finding of RP through quantitative methods. For example, when two data points were reported, the highest value reported was above the reporting limit and the other value reported was not (copper), or only one data point was provided (fluoride). Also, the reported results are in some cases very close to the criteria value (selenium) or an analytical method was used that provided a reporting level at or above the criteria value (cadmium). For these pollutants, the data provided is insufficieut to confidently determine the potential for these pollutants to impact the receiving streams in which the facility discharges. Effluent limitations will not be established for fluoride, copper, selenium, or cadmium at this time, however, monitoring will be required using sufficiently sensitive analytical methods in order to collect adequate data to quantitatively assess RP during the next permit renewal. Additional information received from the U.S. Fish and Wildlife (August 17, 2011) has expressed their primary concern about potential selenium levels and its cumulative impact within surface water storage.

Mercury

Although the mercury level did not exceed the aquatic life water quality criterion, the metal was detected in at least one sample and therefore, additional monitoring using clean methods are required in order to compile a more complete data set for future evaluation. Also, the reissued permit includes a trigger level established at the chronic water quality criteria of 0.77 µg/L and a requirement to develop and implement a mercury minimization plan if that trigger level is detected.

Organic Compounds

The permit application data submitted included one analysis of some volatile and semi-volatile organic compounds based on whether the permittee believes that the analyte is present in the discharge. The data presented in Table 3 indicates the effluent contains measurable concentratious of benzene, ethyl benzene, and toluene.

The data were evaluated with respect to EPA and Tribal water quality criteria for human health protection and EPA Maximum Contaminant Levels (MCL) for drinking water to determine if there was RP for pollutants in the discharge to exceed the criteria in Table 6 below. Only benzene was identified at concentrations which exceeded the recommended criteria for humau health protection and the MCL. Since the Tribes have not designated the receiving water as a drinking water source, the human health criteria and MCLs are not directly applicable to the water body and effluent limitations will not be established based on this evaluation.

Table 6 - Effluent Organic Compounds Detected and Water Quality Criteria Comparison

Parameter	Efflnent Concentration (µg/L)	Water Quality Criteria (Human Health) (µg/L)		Drinking Water MCL (µg/L)
		Water + Organism	Organism only	
Benzene	27	2.2	51	5
Ethyl Benzene	5.8	530	2,100	700
Toluene	14	1,300	15,000	1,000

Although no effluent limitations were established for benzene in the permit, the effort required to reduce the concentration of other pollutants (e.g. sulfide (as H_2S)) in the discharge will concurrently reduce the conceutration of volatile organic compounds in the discharge. Additional monitoring for volatile and semi-volatile organic compounds will, however, be required as part of the toxic pollutants screening mouitoring requirements in this renewal permit.

Other Effluent Limitations

The daily maximum limitations for Total Radium 226 of 60 pCi/L, Specific conductance of 7500 µS/cm and total dissolved solids of 5000 mg/L have been retained in this reuewal permit and are based on previous permit limitations.

pH limitations have been revised from a range of 6.5 - 8.5 to a range of 6.5 - 9.0 based on tribal requirements for aquatic life protection. The basis for the previous maximum range value for pH of 8.5 could not be verified from review of the permit record and therefore the limit has been revised for this renewal permit.

Additional Toxics Monitoring Requirements

Included in the permit is additional effluent monitoring to screen for hazardous/toxic constituents (Permit Part 1.3.4.). The requirement to monitor for these pollutants of concern is to develop a dataset to evaluate the reasonable potential for these pollutants to impact the receiving streams into which the facility discharges and to comply with the tribal narrative criteria for toxic pollutants.

Whole Effluent Toxicity (WET) (Permit Part 1.3.6.)

Whole Effluent Toxicity monitoring data of record consists of one test, performed in 2002 (both species *Ceriodaphnia dubia* and *Pimephales promelas* tests passed). As a means to demonstrate compliance with the tribal narrative criteria for toxic pollutants, WET has been included in this permit. Additional WET monitoring requirements that are representative of the discharge effluent (40 CFR § 122.44(d)(1)(ii)) are included in this permit to generate data used to determine whether RP for WET has been demonstrated.

For this permit, acute testing will be required on a quarterly basis after the effective date of the permit until the permittee demonstrates no test failures for either species (*Daphnia magna, Pimephales promelas)* tested for four consecutive quarters. Upon successful completion of four consecutive quarterly tests demonstrating no acnte toxicity in the discharge, annual monitoring shall be required.

For the purposes of this permit, *Daphnia magna* will be utilized as a toxicity indicator testing organism in lien of *Ceriodaphnia dubia* due to its higher tolerance for the naturally occurring high TDS levels within the produced water from the wells.

If acute toxicity occurs in a test, e.g. LC_{50} <100% efflnent, the permittee will be required to:

(1) Notify the EPA Regional WET Coordinator within 48 hrs of when the permittee learned of the initial test failure;

(2) Promptly take all reasonable measures necessary to immediately rednce toxicity; and

(3) Initiate an additional test within two (2) weeks of the date of when the permittee learned of the test failnre. If only one species fails, retesting may be limited to this species.

The EPA Regional WET Coordinator may waive either or both requirements (2) or (3) with justification (e.g., the toxicity has been ongoing and the permittee is in the process of conducting a toxicity identification evaluation/toxicity reduction evaluation).

If acute toxicity occurs in the two week re-test, the permittee will be required to:

Immediately begin testing once a month until further notified by the EPA Regional WET Coordinator. Accelerated monthly testing is only required for the species that failed the initial and second tests.

Follow conditions for Toxicity Identification/Toxicity Reduction Evaluation (Permit Part 1.3.7.).

In addition to the accelerated monitoring, the permittee shall perform a toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) as to establish the cause of the toxicity, locate the source(s) of the toxicity, and develop control of, or treatment for the toxicity.

The permittee will be required to submit a TRE Plan within 30 or 45 days of learning of the second test failure depending on whether the toxicant is known or unknown at that time.

The TRE Plan may be reviewed by EPA to ensure its adequacy for addressing toxicity in the discharge. EPA may provide comments to the permittee on the TRE Plan and may request that the Plan include additional or specific monitoring, etc. to ensure that all potential sources of toxicity are addressed during the evaluation.

The permittee will be required to implement the provisions of the Plan within 75 or 90 days after learning of the second test failure depending on whether the toxicant is known or unknown at that time.

EPA has provided a summary of useful reference materials in Permit Part 1.3.7.2.1.1 for assistance in developing a TRE Plan should toxicity occur during the term of the permit.

Effluent Limitations – Outfall 001

Based on the technology and water quality considerations and protecting beneficial uses, the following effluent limitations will be required for this facility:

Interim Effluent Limitations

Table 7 - **Effective immediately after permit issuance and expiring three (3) years after effective date of this permit,** the quality of effluent discharged by the facility shall, as a minimum, meet the limitations as set forth below:

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	Daily Maximum a/	Basis for Limitation b/
Specific Conductance, µS/cm	N/A	7,500	ELPP
Total Dissolved Solids, mg/L	N/A	5,000	ELPP
Chloride, mg/L	N/A	2,000	ELPP
Sulfate, mg/L	1,000	1,800	RCLW
Total Radium 226, pCi/L	N/A	60	ELPP
The concentration of oil and grease shall not exceed 10 mg/L in any sample nor shall there be a visible sheen or cause a visible sheen in the receiving waters or deposits on the bottom or shoreline of the receiving waters.			ELPP, WQR
The pH of the discharge shall not be less than 6.5 nor greater than 9.0 at any time.			WQR
There shall be no discharge of floating solids or visible foam in other than trace amounts.			ELPP, WQR

a/ See Permit Part 1.1., for definition of terms.

b/ ELPP = Effluent limitations in previous permit; WQR = water quality requirements adopted by the Tribes for the Wind River Indian Reservation; RCLW = Recommended criteria for livestock and wildlife, based on the report " Water Quality for Wyoming Livestock & Wildlife, A Review of the Literature Pertaining to Health Effects of Inorganic Contaminants", University of Wyoming department of Veterinary Sciences, et al.

Final Effluent Limitations

Table 8 - **Effective three (3) years after the effective date of this permit and lasting through the life of this permit,** the quality of effluent discharged by the facility shall, as a minimum, meet the limitations as set forth below:

Effluent Characteristic	**Effluent Limitation**		**Basis for Limitation b/**
	30-Day Average a/	**Daily Maximum a/**	
Specific Conductance, µS/cm	N/A	7,500	ELPP
Total Dissolved Solids, mg/L	N/A	5,000	ELPP
Chloride, mg/L	230	860	WQR
Sulfate, mg/L	1,000	1,800	RCLW
Sulfide (as H_2S), mg/L	0.002	N/A	WQR
Total Radium 226, pCi/L	N/A	60	ELPP
The concentration of oil and grease shall not exceed 10 mg/L in any sample nor shall there be a visible sheen or cause a visible sheen in the receiving waters or deposits on the bottom or shoreline of the receiving waters.			ELPP , WQR
The pH of the discharge shall not be less than 6.5 or greater than 9.0 at any time.			WQR
There shall be no discharge of floating solids or visible foam in other than trace amounts			ELPP, WQR

a/ See Permit Part 1.1. for definition of terms.

b/ ELPP = Effluent limitations in previous permit; WQR = water quality requirements adopted by the Tribes for the Wind River Indian Reservation; RCLW = Recommended criteria for livestock and wildlife, based on the report " Water Quality for Wyoming Livestock & Wildlife, A Review of the Literature Pertaining to Health Effects of Inorganic Contaminants", University of Wyoming department of Veterinary Sciences, et al.

Self-Monitoring Requirements – Outfall 001

Sampling and test procedures for pollutants listed in this part shall be in accordance with guidelines promulgated by the Administrator in 40 CFR Part 136, as required in 40 CFR § 122.41(j). At a minimum, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Table 9 – **Effective immediately and lasting through the effective term of this permit**

Effluent Characteristic	**Frequency**	**Sample/Monitoring Type a/**
Total Flow, mgd b/	Monthly	Instantaneous
Specific Conductance, µS/cm	Monthly	Grab
pH, std units	Monthly	Grab
Oil and grease, c/	Weekly	Visual
Sulfide (as H_2S), mg/L d/	Quarterly	Grab
Chloride, mg/L	Quarterly	Grab
Sulfate, mg/L	Quarterly	Grab
Total Radium 226, pCi/L	Quarterly	Grab
Total Dissolved Solids, mg/L	Semi-Annually	Grab
Mercury, Total, µg/L e/	Three times after effective date of permit	Grab
Whole Effluent Toxicity, Acute (Permit Part 1.3.6.)	Quarterly f/	Grab
Toxic Pollutants Screen (Permit Part 1.3.4.)	Three times after effective date of permit	Grab

a/ See Permit Part 1.1., for definition of terms.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in million gallons per day) during the reporting period and the maximum flow rate observed (in mgd) shall be reported.

c/ A weekly visual observation is required. If a visible sheen is detected, a grab sample shall be taken and analyzed immediately and analyzed in accordance with the requirements of 40 CFR Part 136. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

d/ The analysis for sulfide (as H_2S) shall be done with an approved procedure that has a method detection level of no greater than 0.10 mg/L (100 µg/L). In the calculation of average sulfide (as H_2S) concentrations, those analytical results that are less than 0.10 mg/L shall be considered to be zero. If all individual analytical results that would be used in the calculations are less than 0.10 mg/L, then "less than 0.10 mg/L" shall be reported on the discharge monitoring report form. Otherwise, report the maximum value and the calculated average value.

e/ Monitoring periods shall be during the 1st , 3rd and 5th years after the effective date of this permit. Based on current approved analytical mercury method, Method 1631, Revision E, the method detection limit (MDL) for mercury is 0.0002 µg/L. If the mercury trigger level of 0.77 µg/L is detected during the life of the permit, the permittee is required to develop and implement the Mercury Minimization Plan (MMP), as described further below in this Statement of Basis.

f/ At a minimum, quarterly monitoring shall be conducted until the completion of four consecutive quarterly tests demonstrating no acute toxicity is present in the discharge for either test species. Thereafter, monitoring shall be conducted at least annually for the remainder of the term of this permit. See Permit Part 1.3.6.

Compliance Schedules (Permit Part 1.3.3)

The effluent limitations for chloride and sulfide (as H_2S) have become either more restrictive or new with this permit renewal. In order to allow the permittee the opportunity to evaluate the measures necessary to meet these new limitations, the permittee shall comply with the schedule outlined in Permit Part 1.3.3. The compliance schedule for chloride and sulfide (as H_2S) shall be 36 months in duration.

The sulfate limit shall be met immediately since this limit is a technology based limit under 40 CFR Part 435, Snbpart E. Under the CWA and EPA's regulations, compliance schedules may not be used for technology-based effluent limits.

Toxic Pollutants Screen (Permit Part 1.3.4.)

This permit requires the permittee to monitor for the constituents listed below in the toxic pollutants screen three times during the life of the permit. One monitoring period will be during the 1st year after the effective date of this permit and the second during the 3rd year after the effective date of this permit. Reporting of each of the first two screening datasets shall be submitted to the permit issuing authority, at the time of the DMR submittal for that reporting period in which the screening occurred. A third monitoring will be required as part of the application documentation for the renewal of this permit. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

- All Volatile Organic Compounds listed in 40 CFR Part 122, Appendix D, Table II.
- All Base/Neutral and Acid Organic Compounds listed in 40 CFR Part 122, Appendix D, Table II.
- All metals listed in 40 CFR Part 122, Appendix D, Table III, except mercury which is included in the regular self-monitoring.
- Fluoride as listed in 40 CFR Part 122, Appendix D, Table IV.

Method Detection Limits (Permit Part 1.3.5.)

Monitoring methods must be sufficiently sensitive to meet the Method Detection Limits specified in Table 10 below:

Table 10- Required Method Detection Limits

Parameter	Required Detection Limits and Required Units
Arsenic, Total	1 µg/L
Aluminum, Total Recoverable	50 µg/L
Antimony, Total Recoverable	50 µg/L
Beryllium, Total Recoverable	1 µg/L
Cadmium, Total Recoverable	5 µg/L
Chromium, Total Recoverable	5 µg/L
Chloride	5 mg/L
Copper, Total Recoverable	5 µg/L
Lead, Total Recoverable	1 µg/L
Magnesium, Total Recoverable	30 µg/L
Manganese, Total Recoverable	2 µg/L
Nickel, Total Recoverable	1 µg/L
Radium 226, Total Recoverable	0.2 pCi/L
Selenium, Total Recoverable	2 µg/L
Silver, Total Recoverable	5 µg/L
Sulfide/Hydrogen Sulfide (S=, HS-)	100 µg/L
Thallium, Total Recoverable	50 µg/L
Zinc, Total Recoverable	2 µg/L
Hardness, Total	10 mg/L as CaCO3
Uranium, Total Recoverable	5 µg/L
Gross Alpha and Beta Radiation	0.2 pCi/L
Dissolved Oxygen	1 mg/L
Calcium	10 mg/L
Fluoride	1 mg/L
Volatile Organic Compounds	5 µg/L
Acid & Base/Neutral Organic Compounds	10 µg/L
Chemical Oxygen Demand	3 mg/L

Mercury Minimization Plan (MMP) (Permit Part 1.3.8.)

CWA Section 301(a) prohibits the discharge of any pollutant, including mercury, from a point source into waters of the United States except in compliance with Section 402 of the CWA. CWA Section 402 establishes the NPDES program, under which the EPA are authorized to administer the program issue permits that allow the discharge of pollutants into waters of the United States. These permits must contain (1) technology-based effluent limitations, which represent the degree of control that can be achieved by point sources using various levels of pollution control technology and (2) water quality-based effluent limitations (WQBELs), when necessary to ensure that the receiving waters achieve applicable water quality requirements.

Most WQBELs are expressed as numeric limits on the amounts of specified pollutants that may be discharged. However, WQBELs may also be expressed in narrative form such as Best Management Practices (BMPs) or pollutant minimization measures when it is infeasible to calculate a numeric limit (40 CFR § 122.44(k)(3)). In addition, BMPs may be imposed in the form of NPDES permit conditions to supplement numeric effluent limitations when the permitting authority determines that such requirements are necessary to carry out the purposes and intent of the CWA (40 CFR § 122.44(k)(4)).

On January 8, 2001, the EPA announced the availability of its recommended CWA Section 304(a) water quality criterion for methylmercury. This water quality criterion, 0.3 milligram (mg) methylmercury per kilogram (kg) fish tissue wet weight, describes the concentration of methylmercury in freshwater and estuarine fish and shellfish tissue that should not be exceeded. The EPA recommended that the criterion be used as guidance by states, territories, and authorized tribes in establishing or updating water quality standards for waters of the United States. The EPA completed the Guidance for implementing the January 2001 Methylmercury Water Quality Criterion in April 2010.[c]

According to the Methylmercury Guidance, where a water column translation is not available and the permit writer determines that a numeric limit is infeasible to calculate, the permit writer should include the following permit conditions:

1. The reissued permit will include a trigger level established at the chronic water quality criteria of 0.77 µg/L and a requirement to develop and implement a Mercury Minimization Plan (MMP) if that trigger level is detected;
2. Require the permittee to implement a MMP tailored to the facility's potential to discharge mercury. This MMP may be used as a trigger level, reduction goal or used to supplement an enforceable numeric limit to further manage mercury discharges;
3. Require effluent monitoring using a sufficiently sensitive EPA-approved method to determine if the MMP is effective. (EPA Clean Sampling Method 1669 and Analytical Method 1631); and
4. Include a reopener clause to modify the permit conditions if the MMP is not found to be effective or if a water column of the fish tissue criterion is developed.

[c] United States Environmental Protection Agency, Office of Science and Technology (April 2010): Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion – Final, http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/pollutants/methylmercury/upload/mercury2010.pdf

The Permittee is required in the reissued permit to develop an MMP tailored to the facility's potential to discharge mercury. At a minimum, the MMP shall include the following:

- Evaluation of existing best management plaus or spill prevention and containment control plans;
- Identification and evaluation of current and potential mercury sources;
- Monitoring to confirm current or potential mercury sources;
- Identification of potential methods for reducing or eliminating mercury, including material substitution, material recovery, spill control and collection, waste recycling, process modifications, good housekeeping and disposal practices;
- Implementation of appropriate minimization measures identified in the MMP; and
- Effluent monitoring using sufficiently sensitive analytical methods to verify the effectiveness of the MMP.

Chemical Inventory Reporting Requirement (Permit Part 1.3.9)

In response to public comment, the following chemical inventory requirement has been added:

> The Permittee shall maintain an inventory of the quantities and concentratious of the specific chemicals used to formulate well treatment aud workover fluids. If there is a discharge of these fluids, the chemical formulation, concentrations and discharge volumes of the fluids shall be submitted with the DMR. For discharges of well treatment and workover fluids, the type of operation that generated the discharge fluids shall also be reported.

Reporting Requirements

Effluent mouitoring results obtained during the previous six (6) months shall be summarized and reported on **one** Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28 day of the month following the reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported.

Endangered Species Act (ESA) Requirements

Section 7(a) of the Endangered Species Act requires federal agencies to ensure that any actions authorized, funded or carried out by an agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Federally listed threatened, endangered and candidate species fouud in Fremont County, Wyoming include:

Species	Status
Bald Eagle (Haliaeetus leucocephalus)	R
Yellow-billed Cuckoo (*Coccyzus americanus*)	C
Greater Sage Grouse (*Centrocercus urophasianus*)	C
Blowout Penstemon (*Penstemon haydenii*)	E
Fremont County Rockcress (*Boechera pusilla*)	C
Ute Ladies Tresses (*Spiranthes diluvialis*)	T
Desert Yellowhead (*Yermo xanthocephalus*)	T
Grizzly Bear (*Ursus arctos horribillis*)	T
Black-footed Ferret (*Mustela nigripes*)	E
Gray Wolf (*Canis lupus*)	R
Canada Lynx (*Lynx canadensis*)	T
North American Wolverine (*Gulo gulo luscus*)	C

T Threatened R Recovery
E Endangered C Candidate

It does not appear that discharges from the Wesco Operating, Inc. - Winkleman Dome facility will result in significant impact to any endangered species or critical habitats. This permit renewal is not likely to adversely affect any of the species listed by the U. S. Fish and Wildlife Service nnder the Endangered Species or critical habitats of the tributary leading to Bighorn Draw and Little Wind River.

National Historic Preservation Act (NHPA) Requirements

Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The EPA has evaluated its planned reissuance of the NPDES permit for Wesco Operating, Inc. - Winkleman Dome facility to assess this action's potential effects on any listed or eligible historic properties or cultural resources. This correspondence is typically conducted with the Tribal Historic Preservation Office (THPO).

The EPA does not anticipate any impacts on listed/eligible historic or cultnral properties because this permit is a renewal aud will not be associated with any new gronnd disturbances or changes to the volume or point of discharge. During the public comment period, the EPA notified the Tribal Historic Preservation Offices (THPOs) of the Eastern Shoshone and Northern Arapaho Tribes of the planned issuance of this NPDES permit and requested their input on potential effects on historic properties and EPA's preliminary determination in this regard. EPA received no comments.

Miscellaneous

The effective date and the expiration date of the permit will be determined at the time of permit issuance. The intention is to renew the permit for a period of approximately five years, but not to exceed 5 years.

Permit drafted by Staff, 8P-W-WW
Permit reviewed by Robert Shankland, SEE, 8P-W-WW
Permit reviewed by Bruce Kent, Senior Environmental Scientist, 8P-W-WW

Addendum to the Statement of Basis and Permit

EPA is currently conducting a water quality assessment sampling effort on the Wind River Indian Reservation including some water bodies downstream of WY-0025232 Wesco Winkleman Dome and WY-0024953 Phoenix Sheldon Dome discharge locations. EPA NPDES staff have reviewed preliminary monitoring results for these locations and have not identified any specific ambient water quality conditions which indicate the need for additional effluent limitations or monitoring beyond what is currently contained in the final permits as written.

The proposed permit was public noticed on June 10, 2013. Comments were received from the permittee and the general public. The comments received and the responses to those comments are given in separate documents titled "Response to General Comments on Permits WY-0020338, WY-0024953, WY-0024945, WY-0025232, WY-0025607" and "Response to Comments Specific to Wesco Winkleman Dome WY-0025232." The changes listed below were made as a result of comments received. The changes will not require going back to public notice.

Changes to Statement of Basis

1. Page 4: The definition of a 3B stream classification has been corrected.

2. Page 6: The statement "The limits of 7,500 µS/cm for conductance, 2,000 mg/L for chloride, 3,000 mg/L for sulfate, and 5,000 mg/L for TDS have been in effect since the facility has been covered under an NPDES permit." was deleted.

3. Page 7, Table 1; Page 10, Table 3; Page 11, Table 4; Page 12, Table 5; Page 13, Sulfide; Page 17, Table 8; Page 18, Table 9 and footnote d/; and Page 19, Compliance Schedule: The clarification of the pollutant sulfide "as H_2S" in lieu of Total Sulfide has been added.

4. Page 15, Subnote (3): Changed "Conduct an additional test…" to read "Initiate an additional test…".

5. Page 20: A section heading "Method Detection Limits (Permit Part 1.3.5.) was added to provide a physical document separation and clarification from the "Toxic Pollutants Screen" requirements. This is intended to provide detection limits for those compounds/elements should they be required to be monitored.

6. Page 22: A new section "Chemical Inventory Reporting Requirement (Permit Part 1.3.9)" has been added.

Changes to the Permit

1. Page 2, Table of Contents: Part 1.3.5. – Method Detection Limits was added. All subsequent Part numbering was adjusted accordingly.

2. Page 2, Table of Contents: Part 1.3.9. – Inventory Reporting Requirement was added.

3. Page 5, Part 1.3.1.3. Table; Page 6, Part 1.3.2. Table and footnote d/; Page 7, Compliance Schedule: For the pollutant sulfide, "as H_2S" was added in lieu of Total Sulfide.

4. Page 8, Method Detection Limits Part 1.3.5.: The new Part heading was added.

5. Page 15, Part 3.2, Penalties for Violations of Permit Conditions: This Part was updated to read "…. February 13, 2004 (69 Fed. Reg. 7121-7127) and December 11, 2008 (73 Fed. Reg. 75340-75346). On November 6, 2013 (78 Fed. Reg. 66643-66648) EPA once again adjusted its civil monetary penalties. The civil and criminal penalties, as of December 6, 2013, for violations of the Act (including permit conditions) are given below:"

6. Page 16, Part 3.2.5.: This Part was updated to read "…Where an administrative enforcement action is brought for a Class II civil penalty, the assessed penalty may not exceed $16,000 per day for each day during which the violation continues, with the maximum amount not to exceed $187,500."

In addition to the above changes, EPA also made other minor editorial clarifications to the permit and the statement of basis documents.

Revised by EPA Staff February 24, 2015

Response to Comments Specific to Wesco Winkleman Dome WY0025232
March 9, 2015

1. Wesco commented that a review of the published Tribal Water Quality Standards (WQS) approved by EPA did not list WQS for the Wind River Reservation. Since the Wind River Environmental Quality Commission (WREQC) rules have not been published or made available, Wesco is not able to determine the basis or justification of how the standards were developed or the applicability of the standards to the draft National Pollutant Discharge Elimination System (NPDES) permit. Wesco contends that it is not reasonable for the EPA to enforce regulatory standards that have not been approved, formally adopted or finalized so that it may be reviewed by the regulated community.

   Response: *The commenter correctly notes that EPA has not approved tribal WQS for the Wind River Indian Reservation. However, EPA disagrees with the commenter's assertion that the water quality requirements adopted by the Eastern Shoshone Tribe and Northern Arapaho Tribe (the Tribes) have not been published or made available – as the Tribes held public hearings on and provided public notice of the requirements, subsequent to the Joint Business Council adoption of draft standards through Tribal Resolution #2007-9377 on October 17, 2007. At that time, the Joint Business Council announced a 45-day public notice period and scheduled three hearings. The draft Tribal standards were available to the public from October 17, 2007, through January 31, 2008, at the WREQC building in Fort Washakie, WY. The three hearings were scheduled to be held in Crowheart, WY, on January 28th; Fort Washakie, WY, on January 29, 2008; and Arapahoe, WY, on January 31, 2008. EPA staff attended the January 29, 2008 hearing. EPA therefore disagrees with the commenter's contention that the regulated community was denied the opportunity to review the tribally-adopted water quality requirements.*

   With respect to the commenter's contention that it is "not reasonable for the EPA to enforce regulatory standards that have not been approved, formally adopted, or finalized," EPA first notes that the water quality-based effluent limitations (WQBELs) at issue in this permit were developed based on water quality requirements that have been adopted by the Tribes. To the extent that the commenter's concern is that the Tribally-adopted water quality requirement have not been formally approved by EPA, EPA relied on Clean Water Act (CWA) Section 301(b)(1)(C) and principles of tribal sovereignty in establishing WQBELs based on tribally-adopted water quality requirements.

2. Wesco contends that the drainage in Big Horn Draw has been inaccurately classified as Class 3B as identified in the draft NPDES permit. Wesco asserts the drainage should be classified as Class 4B because, without the discharge of produced water from the Winkleman Dome field, Big Horn Draw would return to a seasonal ephemeral drainage as it existed prior to the development of the Winkleman Dome field.

Response: *EPA has reviewed the classifications provided in the tribally-adopted water quality requirements and, while Bighorn Draw has not been assigned a particular classification by the Tribes, EPA believes it best meets the 3B classification due to the current conditions of the waterbody, including the flow from the Wesco discharge. The following definition for Class 3B waters comes from the Tribes' water quality law:*

> (ii) Class 3B. Class 3B waters are tributary waters including adjacent wetlands that are not known to support fish populations or drinking water supplies and where those uses are not attainable. Class 3B waters are intermittent and ephemeral streams with sufficient hydrology to normally support and sustain communities of aquatic life including invertebrates, amphibians, or other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles. In general, 3B waters are characterized by frequent linear wetland occurrences or impoundments within or adjacent to the stream channel over its entire length. Such characteristics will be a primary indicator used in identifying Class 3B waters.

As described in the Tribes' water quality law, Class 3B waters are characterized by frequent linear wetland occurrences or impoundments within or adjacent to the stream channel over its entire length. Currently there are a series of impoundments on the unnamed tributary to Bighorn Draw which provide wetland and riparian habitat over the length of the waterbody. These impoundments "support and sustain communities of aquatic life including invertebrates, amphibians, or other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles." As a result, the receiving water for the Wesco discharge meets the definition of a Class 3B water, and EPA will continue to use that classification for purposes of developing effluent limitations for this permit.

3. Wesco also commented that if the receiving water had been properly classified as a 4B water, whole effluent toxicity (WET) requirements in the permit should be removed.

Response: *EPA disagrees. WET monitoring and/or limitations are appropriate when necessary to ensure compliance with applicable water quality requirements.*

4. Wesco commented that the monitoring requirement for sulfide at a detection level of 0.002 mg/L (2 µg/L) is unachievable through current laboratory analytical methods. A letter from an analytical chemistry lab was attached to the comments that stated the current laboratory capabilities for analyzing sulfide as hydrogen sulfide.

   Response: *EPA understands the permittee's concern. EPA notes that the effluent limitation in the proposed permit was expressed incorrectly as total sulfide. The references to "sulfide" in the effluent limit table in Section 1.3.1.3 and the monitoring requirement table 1.3.2 and footnote d of that table have been replaced with "sulfide (as H_2S)". Since there currently is no approved analytical method for sulfide (as H_2S) under 40 CFR Part 136 which can detect the pollutant at that low of a concentration, EPA added in a Reporting Level for sulfide (as H_2S) in the final permit of 0.10 mg/L (100 µg/L).*

   As the laboratory indicated in their letter, it can reliably achieve a detection level of 0.04 mg/L (40 µg/L) sulfide (as H_2S) with current EPA approved methods under 40 CFR Part 436. Thus, EPA has set the reporting level for this permit at 2.5 times higher than the reported detection level for the laboratory.

5. Wesco commented that they would be unlikely to economically achieve effluent level below 100 mg/L sulfide as hydrogen sulfide. The comment further stated that any limit for a constituent previously not considered in their permit was unwarranted. In addition, Wesco commented that if a limit for sulfide was put in the permit, they were requesting an alternate compliance point be established in the Big Horn Draw.

   Response: *EPA believes that the sulfide (as H_2S) limitation of 0.002 mg/L is appropriate for protection of aquatic life and understands some treatment will be required to achieve discharge concentrations below the reporting level of 0.10 mg/L. The comment did not include any specific treatment cost or economic analysis to support the assertion that the limitations were not achievable. The new sulfide (as H_2S) permit limitation is based on protection of the aquatic life designated use for the receiving water in the Tribes' water quality law. The aquatic life criterion for sulfide (as H_2S), 0.002 mg/L, was adopted by the Tribes in their water quality law, and the value is equivalent to EPA's published recommended criterion for sulfide (as H_2S) for protection of aquatic life. Since there is no dilution available in the receiving water, the value is to be met at the end of the pipe. EPA determined that a limit was necessary due to the level of the pollutant currently discharged by the facility as described in the Reasonable Potential (RP) discussion in the Statement of Basis. EPA also believes the compliance period of three years allowed to achieve the necessary reductions is sufficient to design and install treatment necessary to achieve compliance with the final effluent limitations. EPA has successfully worked with similar facilities to identify appropriate physical treatment methods for (as H_2S) at a relatively low cost and believes the same technology can be employed for this discharge.*

   As discussed above, there is no dilution available in the receiving water and therefore, an alternate compliance point in Big Horn Draw for sulfide (as H_2S) would not allow the Tribes' water quality criteria to be met from the discharge point to the drainage and in Big Horn Draw, and thus would not be consistent with 301(b)(1)(C).

6. Wesco commented that data collected from fluoride and selenium monitoring requirements in the permit would be compared with surface water standards that are lower than drinking water standards. They contended that setting surface water standards at levels less that drinking water standards was not reasonable or practicable.

   Response: *Effluent limitations are not established for these pollutants in the permit, and the monitoring requirement is intended to generate data to inform EPA's permit writing in future permit cycles. If that data shows that fluoride and selenium may require effluent limits, EPA will use its normal process to evaluate and, if necessary, establish appropriate effluent levels to ensure protection of all designated uses of the waterbody, including aquatic life uses. At that time, EPA will review all available standards, as the use of drinking water standards alone to set effluent limitations is not always protective of other uses such as aquatic life use. No changes will be made to the fluoride and selenium monitoring requirements in the permit.*

7. The permittee commented that the existing beneficial use of water would be jeopardized by the loss of the discharge and provided a supplemental letter from USFWS. Wesco indicates the USFWS reviewed discharge water quality reports and determined the quality was sufficient for wetland enhancement. Other comments supported the use of the discharge in providing riparian habitat and benefits to aquatic and non-aquatic life including plants, as well as domestic and wildlife uses, in an area where little or no water is available for this type of habitat or uses.

   Response: *EPA understands that the discharge currently provides riparian meadow/wetland and open surface water habitat for waterfowl including migratory bird species. EPA evaluated appropriate water quality criteria for aquatic life and wildlife in establishing the effluent limitations for the renewal permit. The new and revised permit limitations will ensure that the discharge quality is sufficient to maintain both aquatic life and agricultural/wildlife uses in those riparian/wetland and open water areas.*

8. The permittee commented that as written, Wesco would likely lose its ability to discharge the produced water and may have to shut in producing wells once the injection capability of the field is reached.

   Response: *Under the CWA, EPA does not typically mandate how permittees must meet their permit limits, and permittees are generally free to use whatever operational or treatment methods they choose to achieve compliance. The Wesco facility data indicates all proposed effluent limitations, with the exception of sulfide (as H_2S), can currently be met without additional treatment. EPA has worked with a similar discharger on the Wind River Indian Reservation to successfully implement low cost treatment of sulfide (as H_2S). Such treatment technology could be applied to the discharge from this facility, as well.*

9. One commenter stated sulfide far exceeds the chronic standard, as presented on Table 5 (chronic standard 0.002 mg/L and maximum reported level is 82 mg/L), and noted that the permit allows Wesco three (3) years to implement actual sulfide reduction. Commenter queried what intermediate steps can be taken towards reduction of sulfide in the water, noting that because the produced water is discharged to an ephemeral stream, there is little dilution that occurs. Commenter stated that this allows sulfide (and other toxics) to build up on soils. Commenter stated that monitoring should be established around large snow and flood events that would impact the sulfide concentrations in the immediate soils.

   Response: *In the interim time towards achieving final compliance with effluent limitations for sulfide (as H_2S), Wesco is required to follow the compliance schedule in Section 1.3.3 of the permit. The Section includes requirements to provide progress reports on steps taken towards achieving compliance at regular intervals during the permit term.*

   As stated in the Statement of Basis, EPA acknowledged that there is no dilution available in the receiving water. As such, the effluent limitations are established using the applicable water quality criteria at the end-of-the-pipe to ensure that the Tribes' water quality requirements are achieved in the receiving water.

   The commenter asserts that sulfide and other toxics will build up on soils and that monitoring should be established around large snow and flood events that would affect the sulfide concentrations in the immediate soils. The comment does not present any supporting evidence for the assertion and it is not clear if the comment centers on soils around the facility or discharge location or sediments contained in the receiving water. EPA has not established water quality criteria for sediments in surface water and does not have a basis for deriving permit limitations.

10. One commenter acknowledges that no drinking water use has been established for the receiving water, but nonetheless argues that benzene should not be discharged. EPA should not permit any level of benzene to be discharged to the ephemeral stream because of potential future impacts over the life of the permit and because assuming that benzene will be reduced by treating other pollutants is not protective enough of human health.

    Response: *As described above, EPA can only write NPDES permit limits - including no discharge limits – using the authorities provided by CWA Sections 301 and 402. Thus, the permit writer must determine whether a pollutant may be limited by a TBEL or a WQBEL. As described in the Statements of Basis for this permit, the permit writers had limited data regarding the concentrations of benzene in the effluent. The permit writers reviewed the available literature on benzene to determine what concentration of benzene in the discharges would ensure that they are of good enough quality for livestock and wildlife watering, as required by 40 CFR Part 435, Subpart E. Neither EPA nor the Tribes have water quality criteria for benzene for livestock watering.*

Likewise, there is very little research into the effects of benzene in drinking water on cattle. The permit writers identified a single published report by the American Petroleum Institute and based on Canadian research suggesting that benzene concentrations of 31,400 µg/L in drinking water would be protective of beef cattle. This is roughly three orders of magnitude higher than the limited concentration data available to EPA for the discharges. Without a firm scientific basis to establish a TBEL based on livestock watering, permit writers could not establish a TBEL for benzene.

The permit writers also considered whether a WQBEL for benzene would be necessary. There are no uses of the receiving water that implicate human health, including drinking water use or recreational uses. Thus, the only designated use for the receiving water other than livestock watering is aquatic life. While there are recommended human health criteria and a Safe Drinking Water Act (SDWA) Maximum Contaminant Level (MCL) for benzene, there are no aquatic life criteria for benzene. Without a designated use or criterion against which to develop a discharge limit, permit writers could not establish WQBELs for benzene.

Although the reported values of benzene in the discharge do not warrant including effluent limitations, EPA included monitoring requirements for benzene in the Toxic Pollutants Screening requirements of the permits and can re-open the permit to include a limitation for benzene in the event the level of benzene in the discharge changes.

11. One comment stated EPA Region 8 should consider this permit a "priority permit" and initiate best practices that have been developed in support of EPA's Plan EJ 2014. Commenter stated that extending the public comment period is one tactic that can be used, but should not be the only tactic that EPA makes available in support of increased public involvement and allowing tribal members ample opportunity to participate in this permitting process.

Response: *EPA Region 8's EJ Implementation Plan identifies permits which are a priority for enhanced public participation. Based on the information available during permit development and the criteria for identifying priority permits in Region 8's EJ implementation plan, these permits were not identified as permits for review under EPA's Plan EJ 2014. Specifically, these permits did not fall into the following category:*

> *"Non-Major" industrial NPDES permits (as defined in 40 CFR § 122.2) under the CWA that are identified by EPA on a national or regional basis as a focus area, for new sources or new dischargers, or existing sources with major modifications, including, but not limited to, a new outfall, a new or changed process that results in the discharge of new pollutants, or an increase in production that results in an increased discharge of pollutants.*

However, prior to proposing these permits Region 8 did conduct tribal consultation in accordance with the EPA Policy on Consultation and Coordination with Indian Tribes.

12. One comment stated EPA's federal trust responsibility should be towards the protection of human life, and not towards providing a source of drinking water for cows. Commenter stated that EPA's long, drawn-out TAS process has weakened the ability of the Tribes to protect natural resources within the exterior boundaries of the Reservation, as a function of their sovereignty. Commenter asserted that it is important that EPA respect and consider the water quality requirements established by the Tribes through their own governmental processes.

Response: *Consistent with the federal government's trust responsibility to federally recognized tribes, EPA implements environmental programs in Indian country to protect human health and the environment there. As described above, EPA drafted these permits using the permit process outlined in the CWA and EPA's regulations. Thus, these permits include both technology based effluent limits (TBELs) to ensure that the discharges are "of good enough quality" for livestock and wildlife watering and WQBELs to ensure protection of the tribally designated uses of the receiving waters. EPA relied on CWA Section 301(b)(1)(C) and principles of tribal sovereignty in establishing these WQBELs.*

13. The document is extremely difficult to read from a layman's perspective and raises environmental justice concerns. For instance, measurements are not consistently presented in the same manner (ug/L and µg/L), abbreviations are not defined and tables in the permit are not numbered.

Response: *EPA acknowledges that the permit and statement of basis contain terms and conditions not familiar to the general public. It is difficult to balance accessibility of the documents to the general public with the technical and legal precision necessary to ensure this is a technically sound and legally enforceable permit.*

Specific comments on Statement of Basis:

14. Background information: What are emulsion breaking chemicals and what are the effects of these being discharged to the environment?

Response: *Emulsion breaking chemicals help separate the oil and water. The permit has WET testing to determine if any chemical or mix of chemicals in the discharge is causing toxicity in the environment.*

15. Do the setting ponds only allow for skimming of oil or do they take out mercury or other constituents of concern?

Response: *The settling ponds allow suspended solids to settle out of the water.*

16. The map showing the location of the facility does not contain any reference points showing roads or where the produced water enters Bighorn Draw or where the Draw empties into the Little Wind River.

Response: *The map is from the permit application which only requires the map to show a 1-mile radius around the facility in accordance with 40 CFR § 122.21(f)(7). The permit includes coordinates of the discharge point for individuals seeking to identify its location on a map.*

17. The abbreviations on this map [the flow diagram] need to be defined. The individual stations along the flow diagram need to be defined. More information needs to be provided on the treatment ponds. Is the discharge located upstream or downstream of the Northern Arapaho Utilities? Where is their diversion for the community water system?

Response: *The flow diagram contains the information required by 40 CFR § 122.21(g)(2), and the map showing the location of the discharge point contains the information required by 40 CFR § 122.21(f)(7). The permit includes coordinates of the discharge point for individuals seeking more information concerning its location.*

18. No discussion is provided about the importance of ephemeral streams in an arid area, especially the benefits provided.

Response: *The statement of basis does not discuss the importance of ephemeral streams; however, EPA considered the Tribal water quality requirements and developed permit conditions to protect the uses of these streams.*

19. There is no discussion of groundwater impacts. The Water Code of the Northern Arapaho and Eastern Shoshone Tribes recognizes the interconnection of surface and groundwater and that water is a unitary resource.

Response: *These permits are for discharges to surface water. NPDES permits protect the uses of surface waters; the CWA does not directly regulate impacts to groundwater. EPA based the effluent limits in this permit on the water quality requirements adopted by the Tribes and principles of tribal sovereignty.*

20. One commenter notes that Tribal water quality requirements indicate that traditional use plants are located in the area of the discharge from Wesco's Winkleman Dome facility. Noting that tribal members harvest plants for traditional use, the commenter asks if additional wetlands couldn't be created and fenced in to act as a buffer to the existing wetlands, presumably to reduce the perceived impact to human health.

Response: *NPDES permits include terms and conditions necessary to protect water quality uses and meet TBEL requirements. EPA does not generally specify what treatment technology or best management practices must be used to meet those terms and conditions. In this case, EPA developed effluent limits for the discharge which should protect all of the uses identified by the Tribes in the water quality requirements.*

21. There is no discussion of the outcome of EPA's inspections and Wesco's response other than mentioning photographs in the inspection records. How does the public access these records? EPA should provide more information about the inspections and Wesco's response.

Response: *EPA finds that the compliance information provided in the statement of basis is adequate for summarizing Wesco's compliance history and explaining decisions made in the permit on that basis. General compliance information for individual facilities can be accessed online at EPA's Envirofacts database at http://www.epa.gov/enviro/index.html. The public can also access a facility's inspection records by sending a Freedom of Information Act request to the U.S. EPA Region 8 or by visiting our office during business hours at 1595 Wynkoop St Denver, CO 80202. For anyone wishing to visit to access records, please call EPA in advance so that we can arrange to have someone available to help pull the files and make copies.*

22. Please define the difference between acute and chronic standards in Table 1.

Response: *Water quality criteria for aquatic life contain two expressions of allowable magnitude: maximum concentration to protect against acute (short-term) effects; and a continuous concentration to protect against chronic (long-term) effects. Acute criteria are established to protect against lethality or immobilization in a short time frame. Chronic criteria are established to protect against longer term (often greater than 28-day) harms, such as impacts to an aquatic species' survival, growth, or reproduction.*

23. Comments from the Bureau of Indian Affairs suggested that the existing quality, while aesthetically unsightly, rapidly increases as the water drops in elevation from the last production pond and provides beneficial habitat for aquatic species and plants as it travels downstream through a series of manmade ponds. They also assert that loss of the water, though it is unsightly and appears unclean, would be a detriment to the natural resources it enhances under the current conditions. Loss of riparian zones, erosion, sedimentation, gully washes and downsizing/downcutting would occur. Loss of water for livestock and many wildlife species would also occur.

Response: *Under the CWA, EPA does not typically mandate how permittees must meet their permit limits, and permittees are generally free to use whatever operational and or treatment methods they choose to achieve compliance with WQBELs.*

Exhibit B

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

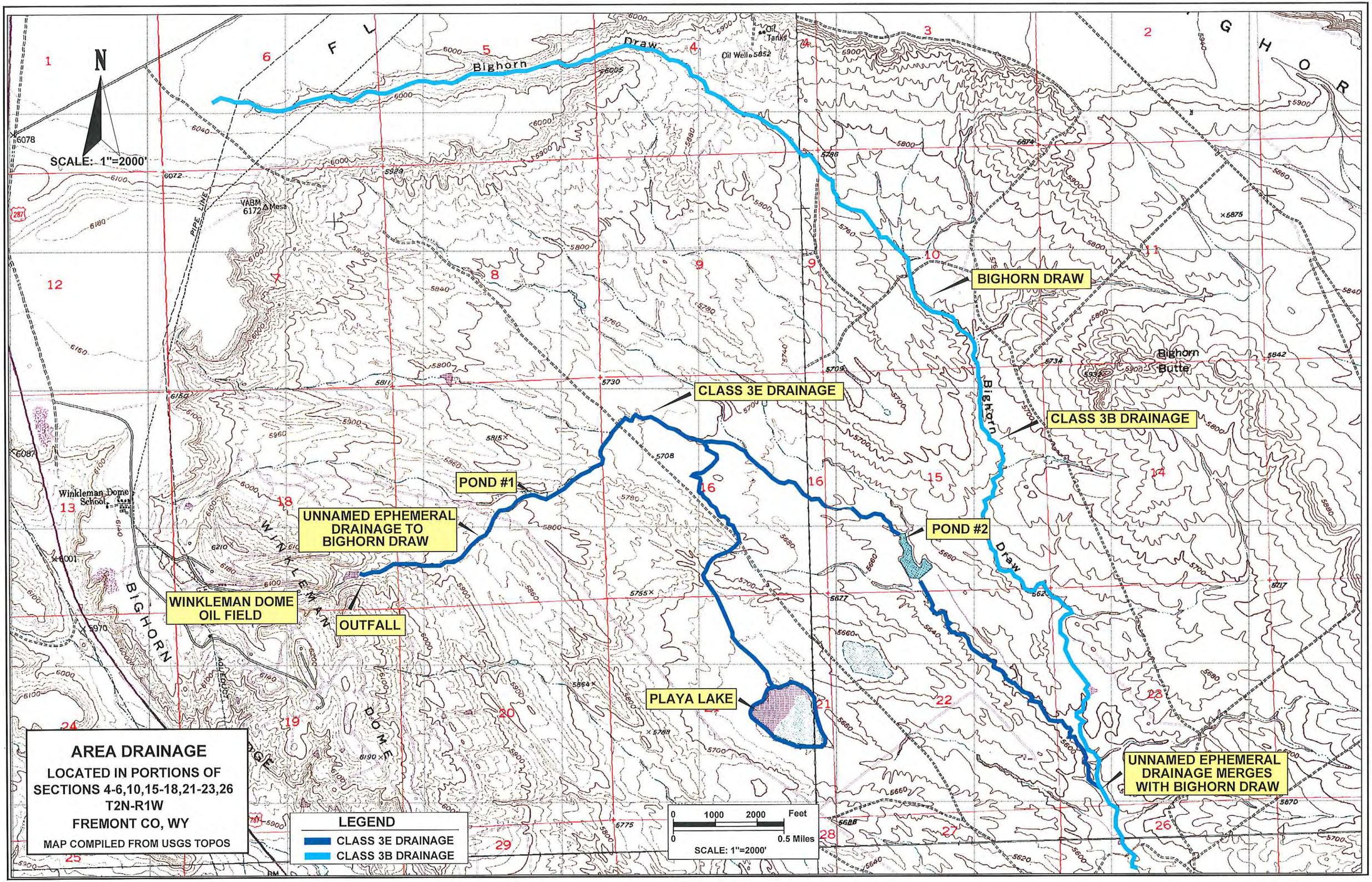
N
SCALE: 1"=2000'
BIGHORN DRAW
CLASS 3E DRAINAGE
CLASS 3B DRAINAGE
POND #1
POND #2
UNNAMED EPHEMERAL DRAINAGE TO BIGHORN DRAW
WINKLEMAN DOME OIL FIELD
OUTFALL
PLAYA LAKE
UNNAMED EPHEMERAL DRAINAGE MERGES WITH BIGHORN DRAW
AREA DRAINAGE
LOCATED IN PORTIONS OF SECTIONS 4-6,10,15-18,21-23,26 T2N-R1W
FREMONT CO, WY
MAP COMPILED FROM USGS TOPOS
LEGEND
CLASS 3E DRAINAGE
CLASS 3B DRAINAGE
0 1000 2000 Feet
0 0.5 Miles
SCALE: 1"=2000'
Bighorn Draw
Bighorn Butte
Winkleman Dome School
YABM 6172 Mesa
Oil Tanks
Oil Well 5852
PIPE LINE
WINKLEMAN DOME
BIGHORN

Exhibit C

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
http://www.epa.gov/region08

SEP 30 2005

Ref: 8P-W-P

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RECEIVED
OCT 04 2005
By

Robert Kirkwood
Engineer
WESCO Operating, Inc.
P.O. Box 1706
Casper, Wyoming 82602

Re: **WESCO Operating, Inc. - Tensleep #1;**
NPDES Permit No. **WY-0025232**

Dear Mr. Kirkwood:

Enclosed is National Pollutant Discharge Elimination System (NPDES) Permit No. WY-0025232 and Statement of Basis, with responses to comments on the draft permit, issued today to WESCO Operating, Inc. for the discharge from the WESCO Operating, Inc. - Tensleep #1 facility. Please note that **EPA has added a new condition 1.3.4., Special Studies,** that requires the permittee to respond to the findings of the Wind River Environmental Quality Commission's report entitled "Wind River Environmental Quality Commission Analysis of the Impacts of Oil and Gas NPDES Permits Produced Water Discharges."

This permit shall become effective on November 1, 2005, unless, within thirty (30) days following the date of receipt of this permit, WESCO Operating, Inc. or one of the commenters petitions the Environmental Appeals Board (EAB) to review any conditions of this permit in accordance with the provisions of 40 CFR Section 124.19.

The EAB has a website at "http://www.epa.gov/eab". This webpage has a frequently asked questions section (http://www.epa.gov/eab/eabfaq.htm) dealing with filing issues. You may wish to refer to this website for instructions on how to proceed in filing an appeal with EAB.

All pleadings filed by mail must be addressed to the Environmental Appeals Board, MC 1103B, U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460. Documents that are hand-carried must be delivered to the Board at its offices at 607 14th Street, N.W., Suite 500, Washington, D.C. 20005. Documents may be filed with the Clerk of the Environmental Appeals Board only between the hours of 8:30 a.m. and 4:30 p.m. Eastern Time Monday through Friday (excluding Federal holidays).

Expires Sept. 30, 2010

The preprinted Discharge Monitoring Report (DMR) forms for the enclosed permit are being processed and will be mailed to you before the due date of the first DMR. Your facility should use these forms to report all discharge data at the frequency required in your permit. If you have not received your DMR prior to the end of the first monitoring period please contact William Kennedy at (303) 312-6285.

If you have any questions regarding the monitoring requirements, schedules, or permit limitations, please direct them to Michael Reed at (303) 312-~~6132.~~ no longer his #

Sincerely,

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosures

cc: Don Aragon, Wind River Environmental Quality Commission

Statement of Basis

FACILITY:	**WESCO Operating, Inc. - Tensleep #1**
PERMIT NO:	**WY-0025232**
RESPONSIBLE OFFICIAL:	Robert Kirkwood
ADDRESS:	P.O. Box 1706 Casper, Wyoming 82602
PHONE:	(307) 265-5178
PERMIT TYPE:	Minor Industrial (Renewal)

Background Information

This proposed permit authorizes the discharge of produced water from outfall 001 (latitude 43° 08' 36" N, longitude 108° 54' 58" W) at the oil production wastewater treatment facilities for the WESCO Operating, Inc. - Tensleep #1 oil production facility located in Section 18, Township 2 North, Range 1 West in Fremont County. This facility is within the exterior boundaries of the Wind River Indian Reservation. This permit is a renewal of NPDES Permit Number **WY-0025232**, which expired on June 30, 2002, and was administratively extended. Since the issuance of the pervious permit, the ownership has canged from Amoco Production Company to CAM West and then to WESCO Operating, Inc.

Produced oil, water, and gas are separated in tanks by gravity, heat and emulsion breaking chemicals. A flow diagram is attached as Attachment A. Water is discharged through settling ponds where the remaining oil is removed by floatation and skimming prior to discharge to an ephemeral tributary to Big Horn Draw, which is tributary to the Little Wind River.

Receiving Waters

The discharge from Outfall 001 at this facility will enter an ephemeral tributary to Big Horn Draw, which is tributary to the Little Wind River. The discharge provides wildlife and stock watering opportunities. In addition, aquatic communities have developed in this ephemeral drainage, which are dependent upon the flow of this produced water.

The Northern Arapaho and the Eastern Shoshone Tribes have not adopted and EPA has not approved Tribal water quality standards for waters within the Wind River Reservation. Therefore, there are no water quality criteria to base development of water quality based limits. There are, however, applicable federal effluent limitation guidelines as discussed below.

Monitoring Data

Monitoring data from the period January 1996 to December 2004 is presented in Attachment B.

Effluent Limitations

These permit activities are covered under the effluent guideline for onshore oil and gas operations, subject to the Oil and Gas Extraction Point Source Category (40 CFR Part 435). The Oil and Gas Extraction Point Source Category Subpart C - Onshore Subcategory establishes the effluent limitation for produced water from Onshore operations as "No Discharge" [40 CFR 435.32 (a)]. However, Subpart E - Agricultural and Wildlife Water Use Subcategory allows the discharge of produced water from facilities west of the 98th meridian for use in agricultural and wildlife propagation. The effluent guideline further requires " . . . that the produced water is of good enough quality to be used for wildlife or livestock watering or other agricultural uses and that the produced water is actually put to such use during periods of discharge."

The following effluent limitations will be required for this facility for outfall 001:

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
Specific Conductance, µmhos/cm			7500
Total Dissolved Solids, mg/L			5000
Chlorides, mg/L			2000
Sulfates, mg/L			3000
Total Radium 226, pCi/l			60
Oil and Grease, mg/L	N/A	N/A	10
The pH of the discharge shall not be less than 6.5 nor greater than 8.5 at any time.			
The discharge shall be free from substances in amounts which would cause a visible sheen or visible deposits in the receiving water or adjoining shoreline.			
No emulsion breaking chemicals shall be used without the permission of the EPA			
There shall be no addition of hexavalent chromium.			
There shall be no discharge of floating solids or visible foam in other than trace amounts.			
The discharge shall not present a hazard to humans, wildlife, or livestock.			

a/ See Definitions, Part 1.1. of the Permit for definition of terms.

These limits are based on EPA's Best Professional Judgement to implement the requirements of the Oil and Gas Extraction Point Source Category Subpart C - Onshore Subcategory and Subpart E - Agricultural and Wildlife Water Use Subcategory [40 CFR 435] and consideration of: 1) current uses of the receiving waters, 2) the current desires of the Tribes to have similar requirements on the Wind River Reservation and in the State of Wyoming,

and 3) State of Wyoming Chapter 2.H - Surface Discharge of Water Associated with the Production of Oil and Gas requirements. These limits were contained in the previous permit except for Specific Conductance, Total Dissolved Solids, Chlorides, and Sulfates. These new limits will be effective one year after the effective date of the Permit. Permit Condition 1.3.3. contains a compliance schedule for meeting these limitations. These limits were added to protect the agricultural and wildlife water use requirements of Oil and Gas Extraction Point Source Category Subpart C - Onshore Subcategory and Subpart E - Agricultural and Wildlife Water Use Subcategory [40 CFR 435].

There are no water quality based limits proposed for this permit as the Northern Arapaho and the Eastern Shoshone Tribes have not adopted and EPA has not approved Tribal water quality standards for waters within the Wind River Reservation. Permit Condition 4.15.1 includes a reopener provision under which the permit may be reopened and modified, as appropriate, if Tribal Water Quality Standards are adopted and approved by EPA.

While EPA's National Water Quality Criteria are not directly applicable to the receiving waters, it should be noted that the quality of the produced water discharges may not meet these National Water Quality Criteria for aquatic life protection. If restrictive limits were placed in this permit to protect sensitive aquatic life as suggested by the National Water Quality Criteria, the permittee would cease discharge. This would be the most cost-effective option to meet these restrictive limits. Then, this water would be lost to wildlife, stock, and adaptive aquatic communities. In this permit to prevent this loss of water for these adapted, dependent aquatic communities and yet be protective of these aquatic communities, EPA will include in the permit a reopener clause and additional effluent monitoring to screen for hazardous/toxic constituents and to develop data for future water quality based limits, protective of these unique aquatic communities (see discussion under the "Hazard Screening Requirements").

Self-Monitoring Requirements

The following self-monitoring requirements are included in this permit for each outfall:

Effluent Characteristic	Frequency	Sample Type a/
Total Flow, mgd b/	Monthly	Instantaneous
Specific Conductance, µmhos/cm	Monthly	Grab
Total Dissolved Solids, mg/L	Quarterly	Grab
Chlorides, mg/L	Quarterly	Grab
pH, units	Monthly	Grab
Oil and grease, visual c/	Monthly	Visual c/
Sulfates, mg/L	Quarterly	Grab
Total Radium 226, pCi/l	Quarterly	Grab

a/ See Definitions, Part 1.1., for definition of terms.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in million gallons per day) during the reporting period and the maximum flow rate observed (in mgd) shall be reported.

c/ A monthly visual observation is required. If a visible sheen is detected, a grab sample shall be taken and analyzed immediately. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

Hazard Screening Requirements

EPA will include in the permit a reopener clause and additional effluent monitoring to screen for hazardous/toxic constituents and to develop data for future water quality based limits, protective of these unique aquatic communities. Within 30 days of issuance of this permit, a sample will be collected from each outfall and analyzed for the constituents specified below, at the required detection limits. Within 90 days of issuance of this permit, a summary report on the produced water will be submitted to the US EPA and the Wind River Environmental Quality Commission. This summary report will include the results and detection limits for each of the constituents. Based upon the results of this screening, this permit may be reopened and effluent limits and monitoring requirements established for constituents that may present a hazard.

Parameter	Required Detection Limits and Required Units
Arsenic, Total	1 µg/l
Aluminum, Total Recoverable	50 µg/l
Cadmium, Total Recoverable	5 µg/l
Chromium, Total Recoverable	5 µg/l
Chlorides	5 mg/l
Copper, Total Recoverable	5 µg/l
Iron, Total Recoverable	50 µg/l
Lead, Total Recoverable	2 µg/l
Manganese, Total Recoverable	50 µg/l
Mercury, Total Recoverable	0.001 µg/l
Nickel, Total Recoverable	5 µg/l

Parameter	Required Detection Limits and Required Units
Radium 226, Total Recoverable	0.2 pCi/l
Selenium, Total Recoverable	1 µg/l
Silver, Total Recoverable	5 µg/l
Sulfide/Hydrogen Sulfide (S=, HS-)	100 µg/l
Zinc, Total Recoverable	5 µg/l
Hardness, Total	10 mg/l as CaCO3
Uranium, Total Recoverable	5 µg/l
Gross Alpha and Beta Radiation	0.2 pCi/l
Dissolved Oxygen	1 mg/l
Chemical Oxygen Demand	3 mg/l

Reporting Requirements

The facility is required to report quarterly on a discharge monitoring report. If no discharge occurred during that period, the report is to be marked "no discharge".

Reopenner Conditions

EPA will include in the permit reopener clauses for Water Quality Standards adoption and hazard screening. Permit Condition 4.15.1 includes a reopener provision under which the permit may be reopened and modified, as appropriate, if Tribal Water Quality Standards are adopted and approved by EPA. Permit Condition 4.16. includes a reopener provision under which the permit may be reopened and modified, as appropriate, if constituents are present that constitute a hazard.

Response the Comments (Public Notice: August 3, 2005), Issues Raised, and Changes made to the proposed Permit:

1. Reported topographical errors were corrected.

2. The Wind River Environmental Commission has conducted a study of the effects of the discharge on the receiving stream aquatic life and is preparing a report entitled "Wind River Environmental Commission Analysis of the Impacts of Oil and Gas NPDES Permits Produced Water Discharges." WREC requested that identified problems be

addressed by the permittes. EPA agrees and has added a condition that requires the permittee to respond to the findings of the report within 90 days of receiving the report from US EPA. The permittee's response will be submitted to the US EPA. The permit may be reopened and effluent limits, monitoring requirements, and/or further studies be established for constituents and/or conditions that may present unreasonable adverse impacts.

3. The State of Wyoming Department of Environmental, Water Quality Division, requested the results of the hazard screening. EPA will provide that data to the Department of Environmental, Water Quality Division, when it is received from the permittee.

4. State of Wyoming Department of Environmental, Water Quality Division, questioned whether EPA had considered Wyoming's Water Quality Rules and Regulations when drafting this permit. EPA has not approved the State of Wyoming's water quality standards program with regard to Indian country lands, including the Wind River Indian Reservation. Nor has EPA approved the Northern Arapaho and Eastern Shoshone Tribes to implement Tribal water quality standards on the Reservation. Thus, EPA retains the role of certifying that limits protect uses and standards. EPA has evaluated the uses that are occurring at and downstream from the proposed discharge. At this time, EPA has determined that no additional limits and /or monitoring are needed and that State Water Quality Standards will be met at the State/Indian country boundary.

Michael Reed
U.S. EPA
September 29, 2005

ATTACHMENT 2 - Monitoring Data: WY-0025232 Westco Operations-Tensleep

Date	Specific Conductance umhos/cm	Total Dissolved Solids, mg/L	Sulfat2600es mg/L	Chlorides mg/L	Oil and Grease mg/L	Radium 226 pci/l	pH s.u.		Flow mgd	
	daily max. 001	daily max. 001	daily max. 001	daily max. 001	daily max. 001	daily max. 001	Min. 001	Max. 001	30- day 001	Max. 001
LIMIT	--	5000	3000	2000	10	60	6.5	8.5	--	--
Jul-Dec '96	NR	1730	376	251	7.6	9.5	8.0	8.0	NR	0.232
Jan-Jun '97	DMR	Missing	From	File						
Jul-Dec '97	2443	1710	357	370	5.0	14	8.3	8.3	DNP	DNI
Jan-Jun '98	2610	1632	451	291	9.6	11	7.9	7.9	700	925
Jul-Dec '98	2480	1732	622	325	6.9	9.8	7.9	7.9	350	425
Jan-Jun '99	2620	1370	567	305	5.8	11.6	7.9	7.9	400	625
Jul-Dec '99	2570	1790	553	324	1.2	12	7.5	7.5	714	1680
Jan-Jun '00	2590	ND	1108	ND	ND	ND	7.5	7.5	ND	ND
Jul-Dec '00	2610	1760	967	256	8.2	11	8.0	8.0	0.924	1.26
Jan-Jun '01	2600	1400	434	267	5.9	11.2	7.6	7.6	20,000	27,500
Jul-Dec '01	2660	1548	335	262	3.9	9.6	7.5	7.5	0.823	1.050
Jan-Jun '02	2500	1610	489	243	9.3	13.2	8.2	8.2	0.84	1.26
Jul-Dec '02	DMR	Missing	From	File						
Jan-Jun '03	2610	2796	270	265	7.56	10	8.7	8.7	0.97	1.18
Jul-Dec '03	2410	1860	438	269	6.67	3.8	7.9	7.9	1.09	1.26
Jan-Jun '04	2430	1570	442	265	9.13	11.4	8.4	8.4	0.76	1.13
Jul-Dec '04	DMR	Missing	From	File						
# of Violations	0	0	0	0	0	0	0	0	0	0

ND: no discharge

Permit No.: **WY-0025232**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET, SUITE 200
DENVER, COLORADO 80202-2466

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"),

the WESCO Operating, Inc. - Tensleep #1

is authorized to discharge from its wastewater treatment facility located in the Section 18, Township 2 North, Range 1 West in Fremont County (latitude 43° 08' 36" N, longitude 108° 54' 58" W) to:

an ephemeral tributary to Big Horn Draw, which is tributary to the Little Wind River

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit.

This permit shall become effective November 1, 2005.

This permit and the authorization to discharge shall expire at midnight, September 30, 2010.

Signed this 30th day of September, 2005.

Authorized Permitting Official

Stephen S. Tuber, Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

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1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. Definitions.

The *30-day (and monthly) average*, other than for fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

The *7-day (and weekly) average*, other than for fecal coliform bacteria and total coliform bacteria, is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for fecal coliform bacteria and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

Daily Maximum (*Daily Max.*) is the maximum measured value for a pollutant discharged during a calendar day or any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with daily maximum limitations expressed in units of mass (e.g., kilograms, pounds), the daily maximum is calculated as the total mass of pollutant discharged over the calendar day or representative 24-hour period. For pollutants with limitations expressed in other units of measurement (e.g., milligrams/liter, parts per billion), the daily maximum is calculated as the average of all measurements of the pollutant over the calendar day or representative 24-hour period. If only one measurement or sample is taken during a calendar day or representative 24-hour period, the single measured value for a pollutant will be considered the daily maximum measurement for that calendar day or representative 24-hour period.

Daily Minimum (*Daily Min.*) is the minimum value allowable in any single sample or instantaneous measurement collected during the course of a day.

Grab sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

Composite samples shall be flow proportioned. The composite sample shall, at a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours, nor more than twenty-four (24) hours. Acceptable methods for the preparation of composite samples are as follows:

a. Constant time interval between samples, sample volume proportional to flow rate at the time of sampling;

b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time of the first sample was collected may be used;

c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

d. Continuous collection of sample with sample collection rate proportional to flow rate.

Instantaneous measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

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

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Director means the Regional Administrator of EPA Region 8 or an authorized representative.

EPA means the United States Environmental Protection Agency.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

CWA means the Clean Water Act (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4. In this permit the CWA may be referred to as "the Act".

Sewage Sludge is any solid, semi-solid or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary or advanced wastewater treatment processes; and a material derived from sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Whole Effluent Toxicity, Acute occurs when 50 percent or more mortality is observed for either species (see Part 1.3.) at any effluent concentration. Mortality in the control must simultaneously be 10 percent or less for the effluent results to be considered valid.

1.2. Description of Discharge Point(s). The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under an NPDES permit is a violation of the Clean Water Act and could subject the person(s) responsible for such discharge to penalties under Section 309 of the Act.

Outfall Serial Number(s)	Description of Discharge Point(s)
001	outfall 001 (latitude 43° 08' 36" N, longitude 108° 54' 58" W)

1.3. Specific Limitations and Self-Monitoring Requirements

1.3.1. Effluent Limitations - Outfall 001. Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limitations as set forth below:

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
Specific Conductance, µmhos/cm			7500
Total Dissolved Solids, mg/L			5000
Chlorides, mg/L			2000
Sulfates, mg/L			3000
Total Radium 226, pCi/l			60
Oil and Grease, mg/L	N/A	N/A	10
The pH of the discharge shall not be less than 6.5 nor greater than 8.5 at any time.			
The discharge shall be free from substances in amounts which would cause a visible sheen or visible deposits in the receiving water or adjoining shoreline.			
No emulsion breaking chemicals shall be used without the permission of the EPA			
There shall be no addition of hexavalent chromium.			
There shall be no discharge of floating solids or visible foam in other than trace amounts.			
The discharge shall not present a hazard to humans, wildlife, or livestock.			

a/ See Definitions, Part 1.1., for definition of terms.

1.3.2.. Self-Monitoring Requirements - Outfall 001. As a minimum, upon the effective date of this permit, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report Form (EPA No. 3320-1) that no discharge or overflow occurred.

Effluent Characteristic	Frequency	Sample Type a/
Total Flow, mgd b/	Monthly	Instantaneous
Specific Conductance, µmhos/cm	Monthly	Grab
Total Dissolved Solids, mg/L	Quarterly	Grab
Chlorides, mg/L	Quarterly	Grab
pH, units	Monthly	Grab
Oil and grease, visual c/	Monthly	Visual c/
Sulfates, mg/L	Quarterly	Grab
Total Radium 226, pCi/l	Quarterly	Grab

a/ See Definitions, Part 1.1., for definition of terms.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in million gallons per day) during the reporting period and the maximum flow rate observed (in mgd) shall be reported.

c/ A daily visual observation is required. If a visible sheen is detected, a grab sample shall be taken and analyzed immediately. The concentration of oil and grease shall not exceed 10 mg/L in any sample.

1.3.3. Hazard Screening Requirements. Within 30 days of issuance of this permit, a sample shall be collected from each outfall and analyzed for the constituents specified below, at the required detection limits. Within 90 days of issuance of this permit, a summary report on the produced water shall be submitted to the US EPA and the Wind River Environmental Quality Commission. This summary report must include the results and detection limits for each of the constituents. Based upon the results of this screening, this permit may be reopened and effluent limits and monitoring requirements established for constituents that may present a hazard.

Parameter	Required Detection Limits and Required Units
Arsenic, Total	1 µg/l
Aluminum, Total Recoverable	50 µg/l
Cadmium, Total Recoverable	5 µg/l
Chromium, Total Recoverable	5 µg/l
Chlorides	5 mg/l
Copper, Total Recoverable	5 µg/l
Iron, Total Recoverable	50 µg/l
Lead, Total Recoverable	2 µg/l
Manganese, Total Recoverable	50 µg/l
Mercury, Total Recoverable	0.001 µg/l
Nickel, Total Recoverable	5 µg/l
Radium 226, Total Recoverable	0.2 pCi/l
Selenium, Total Recoverable	1 µg/l
Silver, Total Recoverable	5 µg/l
Sulfide/Hydrogen Sulfide (S=, HS-)	100 µg/l
Zinc, Total Recoverable	5 µg/l
Hardness, Total	10 mg/l as CaCO3
Uranium, Total Recoverable	5 µg/l
Gross Alpha and Beta Radiation	0.2 pCi/l
Dissolved Oxygen	1 mg/l
Chemical Oxygen Demand	3 mg/l

1.3.4. Special Studies. The Wind River Environmental Quality Commission has completed a study of the effects of the discharge on the receiving stream aquatic life and is preparing a report entitled "Wind River Environmental Commission Analysis of the Impacts of Oil and Gas NPDES Permits Produced Water Discharges."* Within 90 days of receipt of this report from the US EPA, the permittee shall respond to the findings of said report. This response shall be submitted to the US EPA. The permit may be reopened and effluent limits, monitoring requirements, and/or further studies be established for constituents and/or conditions that may present unreasonable adverse impacts.

* meaning WREQ Study Report.

2. MONITORING, RECORDING AND REPORTING REQUIREMENTS

2.1. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part 1. shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to use-disposal practice.

2.2. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Sludge monitoring procedures shall be those specified in 40 CFR 503, or as specified in the permit.

2.3. Penalties for Tampering. The Act provides that any person who knowingly falsifies, tampers with, or 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, or by imprisonment for not more than two years, or by both. Second conviction is punishable by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both.

2.4. Reporting of Monitoring Results. Effluent monitoring results obtained during the previous six (6) months shall be summarized and reported on one Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Until further notice, sludge monitoring results may be reported in the testing laboratory's normal format (there is no EPA standard form at this time), but should be on letter size pages. Whole effluent toxicity (biomonitoring) results must be reported on the most recent version of EPA Region 8'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 4.), and submitted to the Planning and Targeting Program, and the Wind River Environmental Commission at the following addresses:

Mike Reed

Original to: U.S. EPA, REGION 8
PLANNING AND TARGETING PROGRAM (8ENF-PT)
ATTENTION: NPDES PERMITS
999 18TH STREET, SUITE 200
DENVER, COLORADO 80202-2466

Copy to: DON ARAGON, DIRECTOR,
WIND RIVER ENVIRONMENTAL QUALITY COMMISSION
WIND RIVER INDIAN RESERVATION
P.O. BOX 217
FORT WASHAKIE, WY 82514

2.5. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136, 40 CFR 503, or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

2.6. Records Contents. Records of monitoring information shall include:

2.6.1. The date, exact place, and time of sampling or measurements;
2.6.2. The initials or name(s) of the individual(s) who performed the sampling or measurements;
2.6.3. The date(s) analyses were performed;

2.6.4. The time(s) analyses were initiated;

2.6.5. The initials or name(s) of individual(s) who performed the analyses;

2.6.6. References and written procedures, when available, for the analytical techniques or methods used; and,

2.6.7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

2.7. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. Records of monitoring required by this permit related to sludge use and disposal activities must be kept at least five years (or longer as required by 40 CFR 503). This period may be extended by request of the Director at any time. Data collected on site, data used to prepare the DMR, copies of Discharge Monitoring Reports, and a copy of this NPDES permit must be maintained on site.

2.8. Twenty-four Hour Notice of Noncompliance Reporting.

2.8.1. The permittee shall report any noncompliance which may endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the EPA, Region 8, Preparedness, Assessment and Response Program at (303) 293-1788, the Wind River Environmental Quality Commission at (307) 332-3164.

2.8.2. The following occurrences of noncompliance shall be reported by telephone to the EPA, Region 8, Te (303) 312-6720 (8:00 a.m. - 4:30 p.m. Mountain Time) or the ap nager, and the Wind River Environmental Quality Commission at (3(m. Mountain Time) by the first workday following the day the pe umstances:

This phone number is not in service. Instead, call Natasha Davis @ (303) 312-6225

2.8.2.1. exceeds any effluent limitation in the permit (See Part 3.7., ;

2.8.2.2. Any upset which exceeds any effluent limitation in the permit (See Part 3.8., Upset Conditions.); or,

2.8.2.3. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit to be reported within 24 hours.

2.8.3. A written submission shall also be provided to the USEPA, Office of Enforcement, Compliance and Environmental Justice, and to the Wind River Environmental Quality Commission within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

2.8.3.1. A description of the noncompliance and its cause;

2.8.3.2. The period of noncompliance, including exact dates and times;

2.8.3.3. The estimated time noncompliance is expected to continue if it has not been corrected; and,

2.8.3.4. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2.8.4. The Director may waive the written report on a case-by-case basis for an occurrence of noncompliance listed under Part 2.8.2. above, if the incident has been orally reported in accordance with the requirements of Part 2.8.2.

2.8.5. Reports shall be submitted to the addresses in Part 2.4., Reporting of Monitoring Results.

2.9. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part 2.4. are submitted. The reports shall contain the information listed in Part 2.8.3.

2.10. Inspection and Entry. The permittee shall allow the State or the Regional Administrator, or authorized representative (including an authorized contractor acting as a representative of the Administrator) upon presentation of credentials and other documents as may be required by law, to:

2.10.1. 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;

2.10.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

2.10.3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

2.10.4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

3. COMPLIANCE RESPONSIBILITIES

3.1. Duty to Comply. The permittee must comply with all conditions of this permit. Any failure to comply with the permit may constitute a violation of the Clean Water Act and may be grounds for enforcement action, including, but not limited to permit termination, revocation and reissuance, modification, or denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility that will change any discharge from the facility, or of any activity that may result in failure to comply with permit conditions.

3.2. Penalties for Violations of Permit Conditions. The Clean Water Act provides for specified civil and criminal monetary penalties for violations of its provisions. However, the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, requires EPA to adjust the civil monetary penalties for inflation on a periodic basis. EPA previously adjusted its civil monetary penalties on December 31, 1996 (61 Fed. Reg. 69359-69365), with technical corrections and additions published on March 20, 1997 (62 Fed. Reg. 13514-13517) and June 27, 1997 (62 Fed. Reg. 35037-35041). On February 13, 2004 (69 Fed. Reg. 7121-7127) EPA once again adjusted its civil monetary penalties. The civil and criminal penalties, as of March 15, 2004, for violations of the Act (including permit conditions) are given below:

3.2.1. Any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $32,500 per day for each violation.

3.2.2. Any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment for not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment for not more than 2 years, or both.

3.2.3. Any person who *knowingly* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment for not more than 6 years, or both.

3.2.4. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment for not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment for not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

3.2.5. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Where an administrative enforcement action is brought for a Class I civil penalty, the assessed penalty may not exceed $11,000 per violation, with a maximum amount not to exceed $32,500. Where an administrative enforcement action is brought for a Class II civil penalty, the assessed penalty may not exceed $11,000 per day for each day during which the violation continues, with the maximum amount not to exceed $157,500.

3.3. 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.

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

3.5. Proper Operation and Maintenance. 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 a 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.

3.5.1 The permittee shall, as soon as reasonable and practicable, but no later than six (6) months after the effective date of this permit, do the following as part of the operation and maintenance program for the wastewater treatment facility:

3.5.1.1. Have a current O & M Manual(s) that describes the proper operational procedures and maintenance requirements of the wastewater treatment facility;

3.5.1.2. Have the O & M Manual(s) readily available to the operator of the wastewater treatment facility and require that the operator become familiar with the manual(s) and any updates;

3.5.1.3. Have a schedule(s) for routine operation and maintenance activities at the wastewater treatment facility; and,

3.5.1.4. Require the operator to perform the routine operation and maintenance requirements in accordance with the schedule(s).

3.5.2. The permittee shall maintain a daily log in a **bound notebook(s)** containing a summary record of all operation and maintenance activities at the wastewater treatment facility. At a minimum, the notebook shall include the following information:

3.5.2.1. Date and time;
3.5.2.2 Name and title of person(s) making the log entry;
3.5.2.3. Name of the persons(s) performing the activity;
3.5.2.4. A brief description of the activity; and,
3.5.2.5. Other information, as appropriate.

The permittee shall maintain the notebook in accordance with proper record-keeping procedures and shall make the log available for inspection, upon request, by authorized representatives of the U.S. Environmental Protection Agency or the Wind River Environmental Quality Commission).

3.6. Removed Substances. Collected screenings, grit, solids, sludge, or other pollutants removed in the course of treatment shall be buried or disposed in a manner consistent with all applicable federal and tribal regulations (i.e., 40 CFR 257, 40 CFR 258, 40 CFR 503) and in a manner so as to prevent any pollutant from entering any waters of the United States or creating a health hazard. **In addition, the use and/or disposal of sewage sludge shall be done under the authorization of an NPDES permit issued for the use and/or disposal of sewage sludge by the appropriate NPDES permitting authority for sewage sludge.** Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the United States.

3.7. Bypass of Treatment Facilities.

3.7.1 . Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts 3.7.2. and 3.7.3.

3.7.2. Notice:

3.7.2.1. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass to the USEPA, Technical Enforcement Program, and the Wind River Environmental Quality Commission.

3.7.2.2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part 2.8., Twenty-four Hour Noncompliance Reporting, to the USEPA, Technical Enforcement Program, and the Wind River Environmental Quality Commission.

3.7.3. Prohibition of bypass.

3.7.3.1. Bypass is prohibited and the Director may take enforcement action against a permittee for a bypass, unless:

3.7.3.1.1. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

3.7.3.1.2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

3.7.3.1.3. The permittee submitted notices as required under Part 3.7.2.

3.7.3.2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part 3.7.3.1.

3.8. Upset Conditions

3.8.1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part 3.8.2. are met. No determination made during administrative review of claims that noncompliance was caused

by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limitations).

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

3.8.2.1. An upset occurred and that the permittee can identify the cause(s) of the upset;

3.8.2.2. The permitted facility was at the time being properly operated;

3.8.2.3. The permittee submitted notice of the upset as required under Part 2.8., Twenty-four Hour Notice of Noncompliance Reporting; and,

3.8.2.4. The permittee complied with any remedial measures required under Part 3.4., Duty to Mitigate.

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

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

3.10. Changes in Discharge of Toxic Substances. Notification shall be provided to the Director as soon as the permittee knows of, or has reason to believe:

3.10.1. 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":

3.10.1.1. One hundred micrograms per liter (100 ug/L);

3.10.1.2. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter 500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

3.10.1.3. 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,

3.10.1.4. The level established by the Director in accordance with 40 CFR 122.44(f).

3.10.2. 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":

3.10.2.1. Five hundred micrograms per liter (500 ug/L);

3.10.2.2. One milligram per liter (1 mg/L) for antimony:

3.10.2.3. 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,

3.10.2.4. The level established by the Director in accordance with 40 CFR 122.44(f).

4. GENERAL REQUIREMENTS

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

4.1.1. The alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit; or,

4.1.2. There are any planned substantial changes to the existing sewage sludge facilities, the manner of its operation, or to current sewage sludge management practices of storage and disposal. The permittee shall give the Director notice of any planned changes at least 30 days prior to their implementation.

4.1.3. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source.

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

4.3. Permit Actions. 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.

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

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

4.6. 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 Director, it shall promptly submit such facts or information.

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

4.7.1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

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

4.7.2.1. The authorization is made in writing by a person described above and submitted to the Director; and,

4.7.2.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position

of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

4.7.3. Changes to authorization. If an authorization under Part 4.7.2. 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 Part 4.7.2. must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

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

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

4.8. Penalties for Falsification of Reports. The 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 six months per violation, or by both.

4.9. Availability of Reports. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Director. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

4.10. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

4.11. Property Rights. The issuance of this permit does not convey any property rights of any sort, 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, tribal or local laws or regulations.

4.12. 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.

4.13. Transfers. This permit may be automatically transferred to a new permittee if:

4.13.1. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date;

4.13.2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

4.13.3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part 4.13.2.

4.14. Permittees in Indian Country. EPA is issuing this permit pursuant to the Agency's authority to implement the Clean Water Act NPDES program in Indian country, as defined at 18 U.S.C. 1151.

4.15. 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:

4.15.1. Water Quality Standards: The 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.

4.15.2. Wasteload Allocation: A wasteload allocation is developed and approved by the Northern Arapaho and Eastern Shoshone Tribes and/or EPA for incorporation in this permit.

4.15.3. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit.

4.16. Hazard Screening-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include additional limitations and /or monitoring if the hazard screening detects constituents in the discharge that adversely impact the use of the discharge for agricultural and wildlife purposes, as required under the Oil and Gas Extraction Point Source Category (40 CFR Part 435) Subpart E - Agricultural and Wildlife Water Use Subcategory.

4.17. Toxicity Limitation-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include whole effluent toxicity limitations if whole effluent toxicity is detected in the discharge.

Exhibit D

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

WESCO OPERATING, INC.

OIL & GAS OPERATIONS

July 25, 2013

Colleen Rathbone
United States Environmental Protection Agency
Region 8
1595 Wynkoop Street
Denver, Co 80202-1129

Re: Tensleep #1 Winkleman Dome Field, NPDES Permit Number WY-0025232

Dear Ms. Rathbone,

Wesco Operating, Inc. (Wesco) received notice that the draft NPDES permit for the Winkleman Dome oilfield was available for public comment. Wesco has reviewed the draft permit and identified several concerns regarding modifications to the current NPDES permit that Wesco has successfully operated under since 2005. The concerns are as follows:

Use of Unapproved and Unpublished Tribal Water Quality Standards

The new draft NPDES permit states:

> "The Wind River Environmental Quality Commission (WREQC) developed water quality standards (WQS) that apply to waters within the exterior boundaries of the Wind River Indian Reservation. These WQS were adopted into tribal code as Water Quality Rules and Regulations effective September 25, 2007. The water quality standards were submitted to the EPA for review. Comments were returned to WREQC, which is now in the process of reviewing the standards based on EPA's comments. The Tribes' updated standards have not been formally submitted to the EPA for approval. Although the EPA has not approved these water quality standards, the WREQC expects dischargers within the tribal reservation boundaries to comply with their adopted standards....The EPA, therefore, is considering the Tribes' water quality standards during the permit writing for Winkleman Dome facility to ensure the discharge complies with the standard."

A review of the published Tribal Water Quality Standards approved by EPA (http://water.epa.gov/scitech/swguidance/standards/wqslibrary/tribes.cfm) did not list water quality standards for the Wind River Reservation. Since the WREQC water quality standards have not been published or made available, Wesco is not able to determine the basis or justification of how the standards were developed or the applicability of the standards to the draft NPDES permit. Wesco contends that it is not reasonable for the EPA to enforce regulatory standards that have not been approved, formally adopted or finalized so that it may be reviewed by the regulated community.

... • P.O. Box 1650 • Casper, WY 82602 • 307/472-4618 • 307/265-1791 FAX

Stream Classification

Wesco contends that the drainage in Big Horn Draw has been inaccurately classified as Class 3B as identified in the draft NPDES permit. The drainage should be classified as Class 4B.

According to the draft permit:

> "In the Tribes' WQS, designated uses were established in which the Tribes classified the unnamed tributary and Big Horn Draw from the confluence with the Little Wind River, upstream to perennial flow as Class 3B. Class 3B waters are known to support, or have the potential support populations of indigenous aquatic life other than fish that the Tribes have determined deserve special water quality protection measures. This includes waters that support riparian and/or wetland areas that have plants that are culturally and/or spiritually important. Uses designated on Class 3B waters include aquatic life other than fish, primary contact recreation, wildlife, industrial, agricultural, cultural/traditional and aesthetic uses."

Without the discharge of produced water from the Winkleman Dome field, Big Horn Draw would return to a seasonal ephemeral drainage as it existed prior to the development of the Winkleman Dome field. The wetlands currently established within the Bighorn Draw drainage would dry up and surface water would be present only during times of snow melt or storm runoff. According to the Wyoming Department of Environmental Quality (WDEQ) stream classification system, Class 4B waters are defined as intermittent and ephemeral channels that have been determined to lack the hydrological potential to normally support and sustain aquatic life. In general, 4B streams are characterized by only infrequent wetland occurrence or impoundments within or adjacent to the stream channel over its entire length.

The draft NPDES permit states stream classifications were determined in the Tribal WQS. As previously indicated, the Tribal WQS are not published or available for review to determine the methods or qualifications of personnel used to determine stream classifications.

If the stream is properly classified Class 4B, the requirement for Whole Effluent Toxicity (WET) tests should be removed from the draft permit. The presence of any aquatic life is due to the year-round discharge of produced water from the Winkleman Dome field as there is insufficient natural moisture to maintain surface water within Big Horn Draw as stated in the attached letter from the US Fish and Wildlife Service. The United States Geological Survey (USGS) 1951 topographic map depicts Big Horn Draw as an ephemeral drainage shortly after oil production began at Winkleman Dome.

Individual Permit Constituents

Sulfide-Hydrogen Sulfide

The draft NPDES permit set the effluent discharge limit for total sulfide at 0.002 mg/L based on the Tribal WQS. According to an EPA approved and National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory-Energy Laboratories Inc., it is not feasible to achieve a quantitation limit of 0.002 mg/L for hydrogen sulfide. A copy of a letter from the laboratory stating sulfide reporting limits is attached.

Based on historic sampling activities, it is unlikely Wesco will be economically capable of meeting a sulfide hydrogen-sulfide limit below 100 mg/L at the outfall. The current 2005 NPDES permit that Wesco has successfully operated under did not consider sulfide-hydrogen sulfide a constituent of concern. Establishing an extremely low concentration limit for a constituent previously not considered does not appear to be warranted.

If a sulfide-hydrogen sulfide standard below 100 mg/L is going to be incorporated into the new NPDES permit, Wesco requests permission to establish an alternative compliance point. The proposed compliance point could be established in Big Horn Draw directly upstream of the confluence of the Little Wind River and the produced water discharge. The proposed compliance point would allow Wesco to demonstrate that the Winkleman Dome produced water in Big Horn Draw is not degrading surface water in the Little Wind River.

Fluoride

According to the draft NPDES permit, effluent limitations will not be established for fluoride, however, monitoring will be required as part of the yearly toxic screen. The draft NPDES permit indicated that the fluoride monitoring results would be compared to a 2 mg/L standard. According to the National Water Fluoridation Program and the EPA Drinking Water Standard (http://water.epa.gov/drink/contaminants/basicinformation/fluoride.cfm), the maximum drinking water standard for fluoride is 4 mg/L. Wesco contends that is not reasonable or practicable to have a standard for a surface water discharge below a drinking water standard.

Selenium

According to the draft NPDES permit, effluent limitations will not be established for selenium, however, monitoring will be required as part of the yearly toxic screen. The draft NPDES permit indicated that the selenium monitoring results would be compared to a 4.6 µg/L standard. According to the 2002 National Water Quality Criteria published by the EPA, the selenium drinking water standard is 170 µg/L. Wesco contends that is not reasonable or practicable to have a standard for a surface water discharge below a drinking water standard.

Beneficial Use

United States Fish and Wildlife Service

Attached is a beneficial use letter from the United States Fish and Wildlife Service (USFWS). According to the letter, the Winkleman Dome discharge under current and past permit requirements has developed more than 800 acres of wet meadow/riparian habitat and another 200 acres of shallow open water habitat. These wetlands fall within the Wyoming Wetland Strategic Plan and USFWS's focus areas in providing habitat for State and Tribal Species of Concern. At the Tribes request, the USFWS has recently finalized the planning and permitting for rehabilitating several earthen dikes and constructing a junction box on the upper end of the drainage to assist the filling of a large playa basin for a total of 185 surface acres of habitat

restoration. These projects and initiatives are contingent on Wesco's ability to continue to discharge produced water from the field.

The USFW has reviewed analytical reports for the produced water from the Winkleman Dome field. The review determined that the discharge water is considered of sufficient quality and quantity to be safely used for wetland enhancements, especially with the buffering of the water for several miles through a network of linear wetlands prior to entering restoration sites.

Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) was contacted regarding the produced water discharge at the Winkleman Dome field and the stipulations detailed in the draft NPDES permit. According to BIA personnel, a beneficial use letter has been submitted directly to the EPA in support of Wesco's continued ability to provide discharge water to Big Horn Draw for range and livestock development.

Consequences

If the draft NPDES permit is approved and implemented as it is currently written, Wesco would likely lose its ability to discharge produced water into Big Horn Draw. Without the discharge, Wesco may have to shut-in wells that produce high volumes of water once the injection capability of the field is reached. Consequences of Wesco losing the ability to discharge produced water and subsequent loss of production would result in the following:

- Lost royalties to the tribes
- Job loss
- Loss of approximately 800 acres of wet meadow/riparian habitat
- Loss of approximately 200 acres of shallow open water and wetland habitat
- Loss of habitat for State and Tribal Species of Concern
- Loss of water for livestock range
- Loss of vegetation which acts as a sink for greenhouse gases

Wesco Operating, Inc. would appreciate the opportunity to meet with the EPA, the Tribes, and WREQC to further discuss the draft permit.

Respectfully,

Brad Lane

Brad Lane
Winkleman Dome Production Engineer

Attached: Sulfide-Hydrogen Sulfide Laboratory Statement
Beneficial Use Letter-United States Fish and Wildlife Service

ENERGY LABORATORIES
www.energylab.com
Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515
Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 800-690-2218

Good Afternoon Scott,

Current technologies that exist are impossible to achieve a practical quantitation limit of the requested 2 ppb.

There are two methods that are used to analyze for sulfide-hydrogen sulfide.

The low level detection is A4500-S D methylene blue method. In this method, we are able to utilize a calibration curve based on the intensity of the reaction of methylene blue with known standards. The fine delineation of wavelengths can therefore provide corresponding intensities of sulfide-hydrogen sulfide present. The PQL on this method as indicated on the report is 0.04 mg/L or 40 ug/L which is also the reporting limit. For this method, our method detection limit even is only at 8 ppb and that is an estimation. There is not a way to provide accurate quantifiable results for sulfide-hydrogen sulfide at this time at the 2 ppb.

There is a second method, A4500-S F which is a titrimetric analysis which has a significantly higher PQL / RL of 1 mg/L and an MDL of 0.5 mg/L.

Based on this information the requested limit of 2 ppb is an unrealistic detection limit for sulfide at this current time and technology with the methods to be used.

Kate Miller

Project Manager / Client Services

Toll Free: 888-235-0515 Ext. 3222

Office: 307-235-0515

Direct: 307-995-3222

Fax: 307-234-1639

kmiller@energylab.com

Exhibit E

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

United States Department of the Interior

Fish and Wildlife Service
Lander Fish & Wildlife Management Office
Partners for Wildlife Branch
170 North First Street
Lander, WY 82520
307/332-8719 Fax:307/332-9857
Internet: R6FFA-LAN

July 19, 2013

Scott Kerr
Wesco Operating, Inc.
120 S. Durbin
Casper, WY 82602

Dear Mr. Kerr,

It's been a couple of years since we had a similar conversation and a few things have changed with the increased water flows down Big Horn Draw (BHD). Being in the 10-12 inch precipitation zone, the roughly 54,000 acre BHD watershed in itself is not large enough to provide perennial flows. Historically, the drainage would be considered a dry draw with water flowing primarily in the springtime if available from snowmelt. It hasn't been until recently that flows have been of suitable volume to provide perennial flow from Winkleman Dome Field to the confluence of the Little Wind River. The flowing water provides the hydrology for more than 800 acres of wet meadow/riparian habitat and another 200 acres of shallow open water habitat benefitting a variety of wildlife species.

The complex of wetlands has increased the available habitat for migratory birds, especially staging areas for late season mountain nesters like ring-necked ducks and lesser scaup. Concerns over continental population declines have increased attention to diving ducks; the Wind River Mountains contain the lowest latitude nesting known for both of these populations. The proposed wetlands fall within the Wyoming Wetland Strategic Plan and US Fish and Wildlife Service's focus areas and will help to meet the goals of conserving priority habitat to increase and maintain federal trust species populations. In March and April 2013, two pairs of trumpeter swans (State and Tribal Species of Concern) were found using these wetlands for staging. In addition to migratory bird importance, these wetlands help sustain local big game populations, providing forage and water for antelope and mule deer. The draw contains three know greater sage grouse lek sites with the wet meadows playing a vital role for invertebrate production for brood rearing.

At the Tribes request, the US Fish and Wildlife Service has recently finalized the planning and permitting for rehabilitating several of the failing structures along the drainage way that have met their useful life, including five low level dikes and constructing a junction box on the upper end to assist the filling of a large playa basin for a total of 185 surface acres. Construction is expected to start within the next month. The initial focus of this project was to capitalize on available water for migratory waterfowl in general but now has been tailored to meet the habitat

needs of trumpeter swans. Along with swans starting to work the valley, the Tribes, Tribal Game and Fish Department, WY Game and Fish Department, Wyoming Wetland Society, Bureau of Indian Affairs and US Fish and Wildlife Service have recently initiated efforts of re-establishing a valley population by developing release sites in restored wetlands along the Little Wind River system with the goal of releasing five swans in early August.

A suite of water quality parameters was reviewed by FWS contaminants personnel before project initiation. Typically for this area with the cretaceous shale and limestone deposits, selenium has been of primary concern with surface water storage. In this case, the proposed use of production water was reviewed and at this time considered of sufficient quality and quantity to be safely used for wetland enhancements, especially with the buffering of the water for several miles through a network of linear wetlands prior to entering restoration sites. The wetlands associated with the produced water from Winkleman Dome Field are providing valuable benefits to a host of species including designated tribal significant species, state species of concern and federal trust species. As long as the discharge water remains at a usable quality and quantity that benefits the resources of the Wind River Reservation, the US Fish and Wildlife Service supports the continued discharge of water down Big Horn Draw.

Sincerely,

Mark Hogan
Wyoming State Coordinator
Partners for Fish and Wildlife Program

Cc:
Pat Hnilikca FWS
Ray Nations BIA

Exhibit F

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

Wind River Environmental Quality Commission

P.O. Box 217
Ft Washakie WY 82514

Phone: (307) 332-3164
Fax: (307) 332-7579

Memorandum

To: Ms. Colleen Rathbone, US EPA Region 8 NPDES Permits
From: Wind River Environmental Quality Commission (WREQC)
Date: May 30, 2013
Subject: WREQC Comments on the Proposed EPA NPDES Discharge Permits

Introduction

EPA is proposing significant revisions to the NPDES permits for produced water discharge at the following five oil and gas production facilities on the Reservation:

1. Wesco- Winkleman Dome
2. Wesco- Sheldon Dome N.W.
3. Phoenix- Sheldon Dome
4. Phoenix- Rolff Lake
5. Eagle- Sheldon Dome

WREQC appreciates the opportunity to review and comment on these draft permits prior to public notice to address some of the potential issues that may arise. As you know, WREQC is the Tribal agency tasked with the regulation and protection of human health and the environment on the Reservation. With this in mind, WREQC reviewed the proposed permits to determine if there were any conflicts with the Tribal Water Quality Standards (WQS), and for potential impacts, either positive or negative, on human health and the environment.

WREQC agrees that EPA should consider the Tribal WQS in developing these permits and that the discharge of produced water should not impact the existing and designated uses of the receiving water. WREQC cannot permit the discharge of produced water on the Reservation that may be harmful to wildlife, livestock, or the established aquatic communities. At the same time, WREQC does not support permit requirements that may go beyond the Tribal WQS, unless there is adequate justification.

Tribal WQS- Classification of Receiving Waters and Designated Uses

WREQC concurs with EPA's use of Tribal WQS during development of these permit renewals. However, WREQC wants to ensure that the WQS are interpreted and applied as intended by the Tribes. In the WQS, the Tribes have classified the receiving waters (Bighorn Draw and Dry Pasup Creek), as Class 3B.

EXHIBIT
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A

According to the WQS, Class 3B waters are known to support or have the potential to support populations of indigenous aquatic life other than fish that the Tribes have determined deserve special water quality protection measures. Uses designated on Class 3B waters include aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses. The intent of the Tribes in classifying these water body segments, which in the absence of effluent discharge would normally be dry, is to protect the desirable indigenous species, other than fish, which have become established in the water body.

Whole Effluent Toxicity (WET) Testing

EPA is proposing a new permit requirement for Whole Effluent Toxicity (WET) testing, as a means to demonstrate compliance with the Tribal WQS narrative statement on toxics. Based on the definition of Class 3B, WREQC believes that it may not be justified to require WET testing using two aquatic species, daphnia magna and pinephales promelas (one a fish species and neither indigenous), that are not protected under the 3B classification. As stated previously, the intent of the Tribes in classifying these water body segments is to protect those non-fish indigenous species which are now established in the presence of the effluent discharge. WET testing seems more appropriate for a facility that discharges directly into a Class II water body that is protected for fish.

Sulfide

EPA is proposing a new effluent limit for sulfide of 2.0 µg/L. This limit is based on the aquatic life value (chronic) in EPA's National Recommended Water Quality Criteria, and referenced in the Tribal WQS. While WREQC agrees that sulfide can be toxic to aquatic life and desires reducing sulfide to the extent practical, WREQC has documented that the receiving waters support a variety of adapted indigenous aquatic life. sulfide is a naturally occurring contaminant commonly found in geothermal springs in other areas of the Reservation and surrounding region, it is not a pollutant added to the water by facility. WREQC has previously documented the rapid decrease in sulfide levels downstream of these facilities as the water cools and is oxygenated. The produced water is being discharged for the beneficial use of the established non-fish aquatic life, wildlife, and livestock. The proposed sulfide criteria may be more stringent than necessary to protect this use.

Marathon Oil Company recently demonstrated, through a study of produced water at Steamboat Butte Oil Field, that it needed to reduce the sulfide level below 1.8 mg/L in order to pass the WET test. EPA is now proposing a limit that is almost 1,000 times lower than what is needed to pass the WET Test, and which is not necessary to protect the indigenous aquatic life and beneficial use that now exists.

WREQC is concerned that the proposed sulfide limit may be difficult or impossible for the operators to achieve, given the levels now present in the effluent. The result could be reinjection of the water, possibly shut-in wells, or even shut down of entire oil fields.

This would result in the loss of this valuable water source for use by wildlife and livestock, and as well as the loss of the aquatic communities already established in the receiving waters. WREQC would like to discuss the proposed sulfide limit further with EPA.

Fluoride

The draft permits propose a discharge limit of 2.0 mg/L for fluoride. EPA based this limit on a University of Wyoming report on water quality for livestock and wildlife. However, our review of this UW report indicates that there were no studies available on safe fluoride levels for animals so the limit was instead based on the drinking water standard for human consumption. WREQC notes that the receiving waters are not protected for drinking water use and the fluoride limit may not be applicable to livestock and wildlife use and should be reviewed further.

Summary

WREQC fully supports minimizing the discharge of pollutants to the Reservation waters to the extent practical. However, WREQC is concerned that the proposed NPDES permit requirements go above and beyond the Tribal WQS and are more stringent than necessary to protect the designated uses of the receiving waters. Produced water is the only available perennial water source where these facilities are located. Implementation of these new permit requirements may result in the loss of this valuable water source and the associated riparian habitat which supports livestock, wildlife, and aquatic life use.

Exhibit G

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

United States Department of the Interior

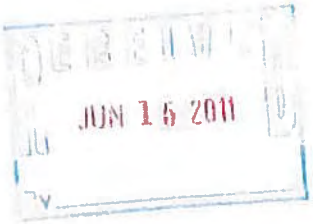
BUREAU OF INDIAN AFFAIRS
Wind River Agency
P.O. Box 158
Fort Washakie, WY 82514

Natural Resources
Range Management

13 June 2011

BENEFICIAL USE – WINKLEMAN DOME OIL FIELD

Brad Lane, Production Engineer
Wesco Operating, Inc.
120 S. Durbin
PO Box 1706
Casper, WY
82602



Dear Mr. Lane,

In review of the discharge water for the Winkleman Dome oilfield, NPDES Permit #WY-0025232 it is our conclusion that the treated water released into a perennial stream provides aesthetic beneficial ecological habitat. Almost immediately as the water drops in elevation from the last production pond abundant plants become available and when the water flows into the first settling pond a momentous amount of aquatic, non-aquatic, domestic, and wildlife benefits are identifiable. As the water continues downward to two manmade ponds, the water enhancement to the ecosystem is evident in plant species abundance, as well as providing beneficial use to minnows (species unidentified) which can be seen actively swimming in both ponds as water continues to flow downstream. After the water passes the second pond the water basically becomes a perennial stream which flows onward to the Little Wind River.

The plant species benefit list is long and distinguishable: Bulrush (*Scirpus spp.),* Nebraska sedge (*Carex nebraskensis*), Arrowgrass (*Triglochin maritimum*), Alkali sacaton (*Sporoblus airoides*), Basin wildrye (*Elymus cinereus*), Western wheatgrass (*Elymus smithii*), Bottlebrush squirreltail (*Sitanion hystrix*), Tufted hairgrass (*Deschampsia caespitosa*), Cattail (*Typha spp.*), American licorice (*Glycyrrhiza lepidota*), Swainson pea (*Sphaerophysa salsula*), Rubber rabbitbrush (*Chrysothamnus nauseosus*), Wyoming big sage (*Artemisia tridentata var wyomingensis*) and Greasewood (*Sarcobatus vermiculatus*).

The released water provides livestock water for six individuals permitted for cattle in Range Unit #19A, one permittee in Range Unit #24A, as well as providing water benefits for feral horses, antelope, mule deer, aquatic bird species, upland bird species, coyotes, small mammals, rodents, and insects. The released water has created an artificial wetland, over time, the ecosystem has adapted and the water release provides a full time benefit today. To lose the use of this water would be the decline of a now naturalized ecosystem.

If you have any further questions, comments, and/or concerns please feel free to contact the Deputy Superintendent of Trust Services at 307/332-3718 or the Rangeland Management Specialist at 307/332-4637.

Sincerely,

Edward Lone Fight

Edward Lone Fight,
Superintendent

Exhibit H

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

April 30, 2015

Ref: 8P-W-WW

Robert W. Kirkwood – President
Wesco Operating, Inc.
PO Box 1650
Casper, WY 82602

Re: Notification of Stay
Wesco Operating, Inc. – Sheldon Dome and Winkleman Dome Facilities
NPDES Permit Nos. WY-0025232 and WY-0025607

Dear Mr. Kirkwood:

The U.S. Environmental Protection Agency (EPA) Region 8 issued to the two above-referenced NDPES permits (Permits) to two oil and gas facilities owned and operated by Wesco Operating, Inc. (Wesco) on March 12, 2015. On April 14, 2015, Public Employees for Environmental Responsibility (PEER) and the Natural Resources Defense Council (NRDC) filed petitions for review of these permits (Appeal Nos. 15-04 and 15-05). On April 30, 2015, your company filed a summary petition (Appeal No. 15-02) indicating your intent to file a final petition by the deadline imposed by the Environmental Appeals Board. This letter serves as notification pursuant to 40 C.F.R. § 124.16(a)(2) of those permit conditions that are stayed as a result of the filed petitions for review.

The following contested conditions or non-severable uncontested conditions of the Permits are stayed until final agency action under 40 C.F.R. § 124.19(l)(2):

Part 1.3.1. – All requirements under this part are stayed.

Part 1.3.2. – All requirements under this part are stayed.

Part 1.3.3. – All requirements under this part are stayed.

Part 1.3.4. – All requirements under this part are stayed.

Part 1.3.6. – All requirements under this part are stayed.

Part 1.3.7. – All requirements under this part are stayed.

Part 1.3.8. – All requirements under this part are stayed.

The remaining conditions in NPDES Permits WY-0025232 and WY-0025607 are uncontested and severable from the permit conditions listed above and, in accordance with 40 C.F.R. § 124. 16(a)(2)(i), will become fully effective enforceable obligations of the permit 30 days after the date of mailing of this notification. If you have any questions about this letter, please contact Everett Volk in our Office of Regional Counsel at 303-312-7290.

Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Cc: Environmental Appeals Board

Jeff Ruch – Executive Director
Public Employees for Environmental Responsibility

Peter J. DeMarco
Natural Resources Defense Council

Sarah Tallman
Natural Resources Defense Council

Kelly Rudd
Baldwin, Crocker, & Rudd P.C.
Attorneys for Northern Arapaho Tribe

Robert S. Hitchcock
Attorney General
Eastern Shoshone Tribe

Certificate of Service

I, Everett Volk, hereby certify that true and correct copies of EPA Region 8's Notification of Stay for Wesco Operating, Inc. were served:

Via the EPA's E-Filing System to:

Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1200 Pennsylvania Avenue, NW
Mail Code 1103M
Washington, DC 20460-0001

Via U.S. Mail to:

Jeff Ruch – Executive Director
Public Employees for Environmental Responsibility
2000 P St., N.W., Suite 240
Washington, DC 20036

Peter J. DeMarco
Matthew McFeeley
Natural Resources Defense Council
1152 15th Street, N.W., Suite 300
Washington, D.C. 20005

Sarah Tallman
Natural Resources Defense Council
20 N. Wacker Drive, Suite 1600
Chicago, IL 60606

Robert W. Kirkwood – President
Wesco Operating, Inc.
PO Box 1650
Casper, WY 82602

Patrick D. Tooley
Dill Dill Carr Stonbraker & Hutchings PC
455 Sherman Street, Ste. 300
Denver, CO 80203

Kelly Rudd
Baldwin, Crocker, & Rudd P.C.
Attorneys for Northern Arapaho Tribe
P.O. Box 1229
Lander, WY 82520-1229

Robert S. Hitchcock
Attorney General
Eastern Shoshone Tribe
P.O. Box 1644
Ft. Washakie, WY 82514

4/30/15
Date

Everett Volk
Everett Volk
Associate Regional Counsel
Office of Regional Counsel, EPA Region 8

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)	
Wind River Oil & Gas Permits	)	NPDES Appeal Nos. 15-02, 15-03, 15-04, and 15-05
NPDES Permit Nos. WY-0020338, WY-0024945, WY-0024953, WY-0025232, WY-0025607	)	

ORDER STAYING PROCEEDINGS TO ALLOW FOR ADR

The parties in the above-captioned matter, along with the Northern Arapaho Tribe and the Eastern Shoshone Tribe, have agreed to participate in the Environmental Appeals Board's Alternative Dispute Resolution ("ADR") Program. In light of this agreement, the Board finds it appropriate to stay the proceedings to allow the ADR process to proceed. Judge Leslye M. Fraser will act as Settlement Judge and will be contacting the participants to schedule a conference call to discuss the ADR process. Each ADR participant shall provide a confidential issue summary, consisting of no more than 15 double-spaced pages summarizing the issues in dispute and the participant's position on those issues, directly to Judge Fraser by no later than July 24, 2015.

All proceedings in this matter are **STAYED** until August 7, 2015. Nevertheless, today's order does not change the filing deadlines established in the Board's May 18, 2015 Order Modifying Briefing Schedule. In accordance with the May 18, 2015 order, Petitioners WESCO Operating, Inc., Phoenix Production Co., Natural Resources Defense Council, and Public Employees for Environmental Responsibility must file supplements to their petitions for review (if any) by Wednesday, June 17, 2015, and EPA Region 8, Northern Arapaho Tribe, and the

Eastern Shoshone Tribe must file responses to the petitions and supplements (if any, for the Northern Arapaho Tribe and the Eastern Shoshone Tribe) by Friday, July 17, 2015.

So ordered.

ENVIRONMENTAL APPEALS BOARD

Dated: June 8, 2015

Kathie A. Stein
Environmental Appeals Judge

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **Order Staying Proceedings to Allow for ADR** in the matter of *Wind River Oil & Gas Permits*, NPDES Appeal Nos. 15-02 to -05, were sent to the following persons in the manner indicated:

By First Class U.S. Mail and Facsimile:

Peter J. DeMarco
Matthew McFeeley
Natural Resources Defense Council
1152 15th Street, N.W., Suite 300
Washington, D.C. 20005
facsimile: (202) 289-1060

Sarah Tallman
Natural Resources Defense Council
20 North Wacker Drive, Suite 1600
Chicago, Illinois 60606
facsimile: (312) 332-1908

Jeff Ruch
Executive Director
Public Employees for Environmental Responsibility
2000 P Street N.W., Suite 240
Washington, D.C. 20036
facsimile: (202) 265-4192

Kelly A. Rudd
Berthenia S. Crocker
Andrew W. Baldwin
Baldwin, Crocker & Rudd, P.C.
Post Office Box 1229
Lander, Wyoming 82520-1229
facsimile: (307) 332-2507

Lee H. Johnson
Johanna Hamburger
Carlson, Hammond & Paddock, LLC
1900 Grant Street, Suite 1200
Denver, Colorado 80203
facsimile: (303) 861-9000

Daniel H. Leff
John C. Martin
Susan M. Mathiascheck
Crowell & Moring, LLP
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
facsimile: (202) 628-5116

Robert S. Hitchcock
Attorney General
Eastern Shoshone Tribe
Post Office Box 1644
Fort Washakie, Wyoming 82514
facsimile: (307) 333-0638

By EPA Pouch Mail and Facsimile:
Everett Volk
U.S. EPA Region 8
Office of Regional Counsel
Mail Code 8RC
1595 Wynkoop Street
Denver, Colorado 80202
facsimile: (303) 312-6859

By EPA Interoffice Mail only:
Pooja Parikh
U.S. EPA Office of General Counsel
1200 Pennsylvania Avenue, N.W.
Mail Code 2355A
Washington, D.C. 20460

Dated: JUN - 8 2015

Annette Duncan
Secretary

Exhibit I

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

Surface Water Quality Standards for the Wind River Indian Reservation

Sept. 25, 2007

Wind River Environmental Quality Commission
Shoshone and Arapaho Tribes
P.O. Box 217
Ft. Washakie, WY 82514

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WIND RIVER INDIAN RESERVATION
SURFACE WATER QUALITY STANDARDS

Section 1. **Authority.** These standards are adopted by the Joint Business Council of the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation pursuant to the Tribes' inherent sovereign authority to protect the public health, safety and environment on the Wind River Reservation.

Section 2. **Purposes and Findings.**

The JBC finds that:

A. Reservation water resources have great cultural, spiritual and economic value to the Tribes and that it is necessary to protect of Reservation water quality to ensure the health and welfare of all Reservation residents and the vitality of the Reservation economy.

B. Surface and ground water are directly interconnected by the hydrologic cycle of the region and the Reservation, and therefore water is a unitary resource, whether occurring as ground water, springs, mineral water, soil moisture, precipitation, percolating water, recharge, drainage waters, surface water or otherwise.

C. Water quality on the Reservation is threatened by uses, discharges, and other activities occurring on Tribal trust land, allotted land, and fee land.

D. There is currently a need for enforceable water quality standards applicable to Reservation water than enable the Tribes and the Federal Government to protect water quality on the Reservation.

E. The purpose of these standards is to establish narrative standards and numeric criteria to protect existing and future beneficial uses of Reservation waters, including the preservation of aquatic ecosystems, and to prevent unnecessary degradation of the quality of Reservation waters. In so doing, the Tribes intend to protect the health and welfare of Reservation residents, the Tribes' political integrity, and the Reservation economy.

F. Nothing in these standards is intended to abrogate the authority of the Water Resources Control Board and the Office of the Tribal Water Engineer to appropriate quantities of water for beneficial uses or to affect their right to appropriate water under Tribal, State or Federal law.

G. These standards are intended to be implemented in cooperation and coordination with water quality requirements adopted by local, state, and federal agencies.

Section 3. **Definitions.**

The following definitions apply to these water quality standards

(a) "Acute value" means the one-hour average concentration. The EPA has determined that this value, if not exceeded more than once every three years on average, should not result in unacceptable effects on freshwater aquatic organisms and their uses. Acute values represent a response to a stimulus severe enough to induce a rapid reaction, typically in 96 hours or less. Appendix B contains acute values for certain pollutants.

(b) "Adjacent wetlands" means wetlands that are connected by a defined channel to a surface tributary system, or are within the 100 year flood plain of a river or stream, or occupy the fringe of any still water body which is connected by a defined channel to a surface tributary system.

(c) "Aquatic life" means fish, invertebrates, amphibians, and other flora and fauna that inhabit waters of the Reservation at some stage of their life cycles.

(d) "Chronic value" means the four-day average concentration. The EPA has determined that this value, if not exceeded more than once every three years on average, should not result in unacceptable effects on freshwater aquatic organisms and their uses. Chronic values represent a response to a continuous, long-term stimulus. Appendix B contains chronic values for certain pollutants.

(e) "Cold water game fish" means burbot (Genus *Lota*), grayling (Genus *Thymallus*), trout, salmon, and char (*Genus Salmo, Oncorhynchus and Salvelinus),* and whitefish *(Genus Prosopium).*

(f) "Commission" means the Wind River Environmental Quality Commission established by JBC Resolution No. 6206 (June 7, 1988)

(g) "Designated uses" means those uses specified in these water quality standards for each water body or segment whether or not they are being attained.

(h) "Director" means the Director of the Wind River Environmental Quality Commission.

(i)(1) "Discharge" means the injection, deposit, dumping, spilling, leaking, placing, or failure to remove any pollutant so that it or any constituent of the pollutant may enter into Reservation waters.

(i)(2) "Discharge" is also the measure of how much water passes a point in a specified amount of time. It is usually measured in cubic feet per second (cfs). The context of the sentence will determine whether definition (i)(1) or definition (i)(2) is the correct definition.

(j) "Dissolved oxygen" means a measure of the amount of free oxygen in water.

(k) "Ecological Classificationn" is a classification of reservation surface waters using physical, chemical and biological parameters (See Water Body Classification).

(l) "Ecological function" means the ability of an area to support vegetation and fish and wildlife populations, recharge aquifers, stabilize base flows, attenuate flooding, trap sediment and remove or transform nutrients and othe pollutants.

(m) "Environmental Protection Agency" or "EPA" means the federal Environmental Protection Agency.

(n) "Ephemeral stream" means a stream which flows only in direct response to a single precipitation in t immediate watershed or in response to a single snow melt event, and which has a channel bottom that is always above the prevailing water table.

(o) *"Escherichia coli or E. coli* " A species of bacteria within the total coliform group characterized by possession of the enzyme B-Glucoromidase, the ability to grow at 44.5 degrees incubation and the ability to form indole from trytophan.

(p) "Eutrophic" literally means "much food" and is the condition whereby waters or environments saturated with water become nutrient enriched (especially with phosphorus or nitrogen). This condition often leads to those waters becoming oxygen depleted or anaerobic.

(q) "Existing use" means those uses actually attained in the water body on or after **June 1, 2006,** whe or not they are included in the water quality standards. In determining the existence of a use, the Commission will consider weigh all pertinent information, including permits, scientific reports, letters, etc.

(r) "Clean Water Act" means the Federal Water Pollution Control Act and amendments as of June 1 2006.

(s) "Game fish" means bass (Genus *Micropterus* and *Ambloplites*), catfish and bullheads (Genus *Ameiurus, Ictalurus, Noturus* and *Pylodictis*), crappie (Genus *Pomoxis*), freshwater drum (Genus *Aplodinotus*) grayling (G *Thymallus*), burbot (Genus *Lota*), pike (Genus *Esox*), yellow perch (Genus *Perca*), sturgeon (Genus *Scaphirhynchus*), sun

(Genus *Lepomis*), trout, salmon and char (Genus *Salmo*, *Oncorhynchus*, and *Salvelinus*), walleye and sauger (Genus *Stizostedion*), and whitefish (Genus *Prosopium*).

(t) "Hydric soil" means a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper horizons.

(u) "Hydrophytic vegetation" means a community of plants where, under normal circumstances more than 50 percent of the composition of the dominant species from all strata are obligate wetland (OBL), facultative wetland (FACW), and/or facultative (FAC) species; or a frequency analysis of all species within the community yields a prevalence index value of less than 3.0 (where OBL = 1.0, FACW = 2.0, FAC = 3.0, FACU (facultative upland) = 4.0, and UPL (upland species) = 5.0).

(v) "Intermittent stream" means a stream or part of a stream where the channel bottom is above the local water table for some part of the year, but is not a perennial stream.

(w) "Isolated water" means any surface water of the Reservation which is not connected by a defined channel to a surface tributary system and is not within the 100 year flood plain of any river or stream and does not occupy the fringe of any still water body which is connected by a defined channel to a surface tributary system.

(x) "JBC" shall mean the Joint Business Council of the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation;

(y) "Lotic" is a moving or flowing body of surface water (See Lentic)

(z) "Lentic" is a standing or non-flowing body of surface Water (See Lotic)

(aa) "Limnology" is the study of inland surface waters and includes both lentic and lotic ecologies.

(bb) "Limnological Seasons" are the predictable temporal variations within a water body (both lentic and lotic) based on the ecology of the water body and are most easily seen in the hydrograph for lotic waters. The limnological seasons for lentic water bodies follows the well known mixing classification of Hutchinson and Loffler 1956, and those for lotic water bodies in high mountain ecosystems and their associated basins are (winter(W), winter open (WO), spring (S), snow pack high water event (SHWE), summer (S), glacial high water event (GHWE), fall (F). These are further defined and explained in the Ecological Classification and Inventory of the Surface Waters of the Wind River Indian Reservation by the Wind River Environmental Quality Commission 2006.

(cc) "Main stem" means the major channel of a river or stream as shown on the latest and most detailed records of the Tribal Water Engineer.

(dd) "Man-made wetlands" means those wetlands that are created intentionally or occur incidental to human activities, and includes any enhancement made to an existing wetland which increases its function or value;

(ee) "Measurable Changes" are changes that are significantly large, and capable of being measured using routinely available technology with a reasonable number of samples.

(ff) "Micrograms per liter (µg/l)" means micrograms of solute per liter of solution equivalent to parts per billion (ppb) in liquids, assuming unit density.

(gg) "Milligrams per liter (mg/l)" means milligrams of solute per liter of solution equivalent to parts per million (ppm) in liquids, assuming unit density.

(hh) "Mitigation" means all actions to avoid, minimize, restore and compensate for ecological functions and wetland values that are, or potentially will be, lost.

(ii) "Mixing zone" means limited area or volume of a surface water body within which an effluent becomes thoroughly mixed with the water body.

(jj) "Nanograms per liter (ng/l)" means nanograms of solute per liter of solution equivalent to parts per trillion in liquids, assuming unit density.

(kk) "Natural" means that condition which would exist without the measurable effects or measurable influence of human activities.

(ll) "Natural Background Conditions" are those ecological (physical, chemical and biological) conditions existing in a water body without human sources of pollution within the watershed. See http://www.deq.state.id.us/water/data_reports/surface_water/monitoring/standards.cfm and *Concepts and Recommendations for Using the "Natural Conditions" Provisions of the Idaho Water Quality Standards* April 2003, Idaho DEQ, 44 pages for an excellent review of background conditions.

(mm) "Natural water quality" means that quality of water that would exist without the measurable effects or measurable influence of human activities.

(nn) "Nephelometric turbidity unit (NTU)" means the standard unit used to measure the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through water, as measured by a nephelometer.

(oo) "Non detect" are lab values which are below the detection limits of the instrument(s) used in the laboratory method. Either "ND" is entered into the database when the data point(s) is (are) not used in mathematical calculations and a non-numeric field is used or ½ of the instrument detection limit is used when the data point(s) is (are) used in mathematical calculations such as averages and a numeric field is required.

(pp) "Nongame fish" means all fish species except those listed in Section 2 (b)(xx) above.

(qq) "Non-priority pollutant" means any pollutant or combination of pollutants other than those listed by EPA under Section 307(a) of the Clean Water Act.

(rr) "Nonpoint source" means any source of pollution other than a point source.

(ss) "Perennial stream" means a stream or part of a stream that flows continually during all of the calendar year as the result of a groundwater outflow or surface runoff.

(tt) "Person" shall mean any individual or group or combination thereof acting as a unit, however associated; any organization of any kind, whether organized for profit or not, and regardless of the manner or form in which it does business, whether as a sole proprietorship, receiver, partnership, joint venture, trust, estate, firm, unincorporated association, corporation, or government, including, but not limited to, any part, subdivision, or agency of any of the foregoing; and any combination of individuals or organizations in whatever form, and the plural as well as the singular number.

(uu) "pH" is a term used to express the intensity of acid or alkaline conditions in a solution.. pH is a measure of the hydrogen ion activity in a water sample. It is mathematically related to hydrogen ion activity according to the expression: $pH = -\log 10 (H+)$, where (H+) is the hydrogen ion activity. A pH value of 7 at 25 degrees C is neutral, with pHs of less than 7 progressively more acid and pHs of greater than 7 progressively more basic (alkaline).

(vv) "PicoCuries per liter (pCi/l)" is a unit of measure describing radiation levels found in a media. A picocurie is equal to 10^{-12} curie; and a curie is defined as 3.7×10^{10} disintegrations per second.

(ww) "Point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

(xx) "Pollutant" means dredged spoil, solid waste, incinerator residue, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water. This term does not mean water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a

Section 4. **Designated Uses.** The Tribes' objective in promulgating these standards is to provide, wherever attainable, the highest possible water quality commensurate with the following designated uses:

(a) Agriculture. For purposes of water pollution control, agricultural uses include irrigation and stock watering.

(b) Fisheries. Fisheries use includes the spawning, rearing, migrating and foraging habitat conditions necessary to sustain populations of game and nongame fish. This use does not include the protection of undesirable aquatic life.

(c) Industry. Industrial use involves maintaining a level of water quality useful for industrial purposes of all kinds.

(d) Drinking water. Drinking water use involves maintaining a level of water quality that is suitable for potable water or intended to be suitable after receiving conventional drinking water treatment.

(e) Recreation. Recreational use protection involves maintaining a level of water quality that is safe for either primary or secondary contact recreation as defined herein. It does not guarantee the availability of water for any recreational purpose.

(f) Aesthetics. Aesthetic use involves the aesthetics of the aquatic systems themselves (odor, color, taste, settleable solids, floating solids, suspended solids, and solid waste) and is not necessarily related to general landscape appearance.

(g) Aquatic life other than fish. This use includes water quality and habitat necessary to sustain populations of organisms other than fish in proportions which make up diverse aquatic communities common to the waters of the Reservation. This use does not include protection of undesirable aquatic life as defined herein.

(h) Wildlife. The wildlife use includes protection of water quality to a level that is safe for contact and consumption by avian and terrestrial wildlife species.

(i) Fish consumption. The fish consumption use involves maintaining a level of water quality that will prevent any unnatural, unpalatable flavor and the accumulation of harmful substances in fish tissue.

(j) Cultural/traditional . Use of waters for cultural, traditional, subsistence, spiritual, medicinal, and ceremonial purposes that include any element of the environment associated with Reservation waters such as riparian flora and fauna.

Section 5. **Surface Water Classes and Uses.** The following water classes are a hierarchical categorization of waters according to existing and designated uses. Except for Class 1 and 2E waters, each classification is protected for its specified uses plus all the uses contained in each lower classification. Class 1 designations are based on value determinations rather than use support and are protected for all existing and attainable uses at the time of designation. Produced waters, class 2E, often have natural exceptions to the aquatic life use because of the unique chemistry associated with ground waters. There are four major classes of Reservation surface waters, with various subcategories within each class

(a) Class 1, Outstanding Tribal Resource Waters. Class 1 waters are those surface waters in which no additional water quality degradation will be allowed. Existing water quality and physical, chemical, biological, and radiological integrity will be maintained and protected.

(b) Class 2, Fisheries and Drinking Water. Class 2 waters are waters, other than those designated as Class 1, that are known to support fish or drinking water supplies or where those uses are attainable. Class 2 waters may be perennial, intermittent or ephemeral and are protected for the uses indicated in each sub-category listed below. There are five subcategories of Class 2 waters.

(i) Class 2AB. Class 2AB waters are those known to be capable of supporting both game fish populations and public or domestic drinking water supplies, or where both a game fishery and drinking water use is otherwise attainable. Class 2AB waters can be either "cold water" or "warm water" depending upon the predominance of cold water or warm water species present. All Class 2AB waters are designated as cold water game fisheries unless identified as a warm water game fishery by a "ww" notation in the "Reservation Surface Water Classification List:" These waters are protected for drinking water supply, for game and nongame fisheries, fish consumption, aquatic life other than fish, primary and secondary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses.

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(ii) Class 2A. Class 2A waters are those that are used for public or domestic drinking water supplies but are not known nor have the potential to support game fish. Uses designated on Class 2A waters include drinking water, aquatic life other than fish, primary and secondary contact recreation, wildlife, industry, agriculture cultural/traditional and aesthetic uses.

(iii) Class 2B. Class 2B waters are those known to support or have the potential to support game fish populations at least seasonally but where drinking water uses are not attainable. Class 2B waters include permanent and seasonal game fisheries and can be either "cold water" or "warm water" depending upon the predominance of cold water or warm water species present. All Class 2B waters are designated as cold water game fisheries unless identified as a warm water game fishery by a "ww" notation in the "Reservation Surface Water Classification List". Uses designated on Class 2B waters include game and nongame fisheries, fish consumption, aquatic life other than fish, primary and secondary contact recreation, wildlife, industry, agriculture cultural/traditional, and aesthetic uses.

(iv) Class 2C. Class 2C waters are those known to support or have the potential to support only nongame fish populations at least seasonally. . Class 2C waters include all permanent and seasonal nongame fisheries and are considered "warm water." Uses designated on Class 2C waters include nongame fisheries, fish consumption, aquatic life other than fish, primary and secondary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses .

(iv) Class 2D. Class 2D waters are known to support or have the potential to support populations of indigenous fish species that the Tribes have determined to deserve special water quality protection measures, including Yellowstone Cutthroat Trout, Ling Cod Sauger, and the associated bivalve *Lampsilis siliquoidea*. Uses designated on Class 2D waters include game and nongame fisheries, fish consumption, aquatic life other than fish, primary and secondary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses.

(v) Class 2E. Class 2E waters are those whose flows are primarily the result of authorized effluent discharges and are known to support or to have the potential to support game or nongame fish populations or spawning and nursery areas at least seasonally. Uses designated on Class 2E waters include game and nongame fisheries, aquatic life other than fish, secondary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses.

(c) Class 3, Aquatic Life Other than Fish. Class 3 waters are waters, other than those designated as Class 1, that are intermittent, ephemeral or isolated waters and because of natural habitat conditions, do not support or have the potential to support fish , or certain perennial waters which lack the natural water quality to support fish (e.g., geothermal areas). There are two categories of Class 3 waters.

(i) Class 3A. Class 3A waters are isolated waters, tributary waters and perennial waters, including wetlands, intermittent and ephemeral streams, with sufficient hydrology to normally support and sustain communities of aquatic life other than fish including, invertebrates, amphibians, or other flora and fauna that inhabit waters of the Reservation at some stage of their life cycles. Uses designated on Class 3A waters include aquatic life other than fish, recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses.

(ii) Class 3B Class 3B waters are known to support or have the potential to support populations of indigenous aquatic life other than fish that the Tribes have determined deserve special water quality protection measures. This use includes waters that support riparian and/or wetland areas that have plants that are culturally and /or spiritually important. Uses designated on Class 3D waters include aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses.

(d) Class 4, Agriculture, Industry, Recreation and Wildlife. Class 4 waters are waters, other than those designated as Class 1, where aquatic life uses are not attainable. Uses designated on Class 4 waters include secondary contact recreation, wildlife, industry, agriculture, cultural/traditional and aesthetic uses.

(e) Initial designations of specific stream segments and water bodies to particular classes have been made by the JBC and are set forth in the attached Reservation Surface Water Classification List (Appendix A). For the purposes of this section, designations of water bodies include all tributaries and associated wetlands. Class 1 waters are those waters that have been specifically designated by JBC for their outstanding natural resource characteristics. Class 2 designations have been based upon the fisheries information contained in the Director's "Stream and Lakes" inventory database. This database represents the best available information concerning the fisheries potential of Reservation waters. Class 4 designations are based upon knowledge that a water body is an artificial, man-made conveyance, or is not intended to support aquatic life. All other waters are designated as Class 3.

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(f) The initial designations made by the JBC may be amended by the Commission pursuant to Sections 33 and 34 of these standards on the basis of information indicating that an initial classification is inappropriate. The Director shall periodically revise and update the Reservation Surface Water Classification List to reflect any amendments to the designations made by the Commission.

Section 6. **Standards Enforcement.** The numerical and narrative standards contained within these regulations shall be used by the Tribes in water quality certification decisions made pursuant to Sections 35 through 39 below.

Section 7. **Recommendations Concerning New Water Diversions.** The Director shall, after review and conference with the Tribal Water Engineer, present comments and make recommendations to the Board concerning proposed new surface water diversions that could cause violations of these regulations.

Section 8. **Antidegradation.**

(a) The purpose of this antidegradation standard is to:

(1) Restore and maintain the highest possible quality of the waters of the Reservation;

(2) Describe situations under which water quality may be lowered from its current condition;

(3) Apply three levels of protection for surface waters of the Reservation, as generally described below:

(i) Tier I is used to ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution.

(ii) Tier II is used to ensure that waters of a higher quality than the criteria assigned in these standards are not degraded unless such lowering of water quality is necessary and in the best interest of the Tribes.

(iii) Tier III is used to prevent the degradation of waters formally listed herein as Class 1 or "Outstanding Resource Waters," and applies to all sources of pollution.

(b) Tier I — Protection of Existing Uses

(1) Existing and designated uses must be maintained and protected. No degradation may be allowed that would interfere with, or become injurious to, existing or designated uses, except as explicitly provided for in these standards.

(2) Whenever the natural conditions of a water body are of a lower quality than the assigned criteria, the natural conditions constitute the water quality criteria. Where water quality criteria are not met because of natural conditions, human actions are not allowed to further lower the water quality, except where explicitly allowed in these standards.

(c) Tier II — Protection of Waters of Higher Quality than the Standards.

(1) This tier is used when a water quality parameter is of a higher quality than a criterion designated for that water under these standards. Whenever new or expanded actions that are expected to cause a **measurable change** in the quality of the water from **background parameter value(s)** subsection (2) of this section and Table 1 will apply. The WREQC and JBC will determine if the lowering of water quality is necessary and in the Tribes' best interest (see subsection (3) of this section).

(a) **Background Values.** The background value $\overline{X}$ (See Table 1) will be determined as the numeric average of no less than ten scientifically defensible measurements of the parameter(s) in question, specifically from that stream reach, and during that Limnological Season (Limnological Seasons are explained in the Ecological Classification). Non-detect values are treated in the database as defined in the definitions. If the proposed action is for several or all Limnological Seasons, than the measurements shall have an equal number of readings from each Limnological Season. For the purposes of this section, scientifically defensible measurements are those taken with EPA methods and with an EPA approved Quality Assurance and Quality Control Plan or the equivalent thereof.

If ten scientifically defensible measurements are not available or the stream reach in question is already impaired, than the values of an ecologically similar and unimpaired reach may be added to or used in lieu of the stream reach in question. Ecologically similar and unimpaired reaches are found with a database query from the tribal Ecological Classification database.

(b) **Percent Measurable Change** The percent measurable change will be an analysis conducted by the applicant, as written in sec. (2) below. If modeling is used, at least ten real measurements will be incorporated in the model and have the same stipulations as the background value measurements listed above.

(2) When parameter values differ for waters with more than one designated use, the stricter criterion(a) and standard(s) will apply.

(3) Once an activity has been determined to cause a measurable lowering in water quality, the WREQC must determine whether the lowering of water quality is necessary and in the best interest of the Tribes. Information to conduct the analysis must be provided by the applicant seeking the authorization or, for a Tribal project, by the Director. Such information shall include:

(a) A statement of the benefits and costs of the social, economic, and environmental effects associated with the lowering of water quality. This information will be used by the WREQC to determine if the lowering of water quality is in the Tribes' best interest.

(b) An analysis of the best combination of site, structural, and managerial approaches that can be feasibly implemented to prevent or minimize the lowering of water quality. This information will be used by the WREQC to determine if the lowering of water quality is necessary. The WREQC retains the discretion to require that an applicant or the Director examine specific alternatives, or that additional information be provided to conduct the analysis. In addition, WREQC may require field monitoring to determine if the predicted outcomes are true.

(4) Any impairment of water quality authorized under this Section shall be restricted to the least amount of degradation that is economically and technically feasible after application of all known and available pollution control technology and best management practices.

(5) Newly produced water discharges into ephemeral drainages or intermittent reaches of drainages, where average background values can not be determined, will be evaluated according to the flow diagram and notes of Fig. 1. The new discharge water will meet all antidegradation rules set forth in this section where the new water meets existing water that has perennial flow(s) and has been classified.

(6) All authorizations under this section must still comply with the provisions of Tier I above.

(c) Tier III -- Class 1 waters. Class 1 waters will be maintained and protected from all degradation, except that temporary increases in turbidity from construction activities that do not negatively affect existing uses may be permitted subject to the limits established in Section 23 below. All water quality certifications issued relating to Class I water will include conditions requiring the use of advanced waste treatment and control techniques that reasonably represent the state of the art and will eliminate or minimize the degradation of water quality to nonmeasurable levels. For nonpoint sources, certifications will require the use all best management practices which must eliminate or reduce the degradation of water quality to nonmeasurable levels.

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Figure 1. Decision Flow Chart for Class IIE waters: New discharges into ephemeral drainages

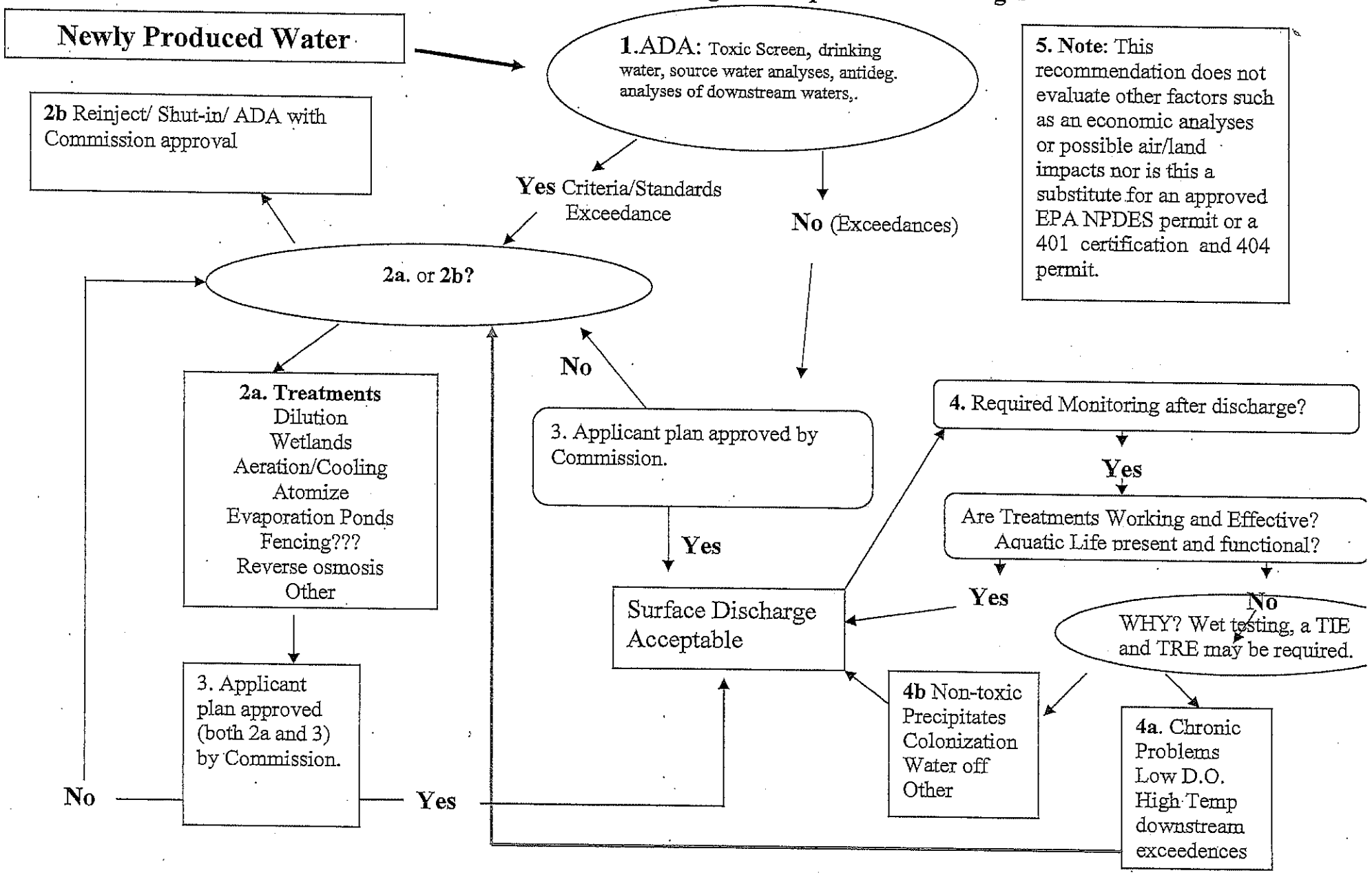

Fig. 1 Flow Chart Notes (Discussion corresponds to numbers on the chart)

The following flow chart (Figure 1) illustrates the Commission's decision making process regarding new discharges of produced water.. A summary of the process is as follows:

1. An Anti-Degradation Analysis (ADA) must be submitted to the Director. The ADA must contain at a minimum:

1a. A toxics screen and chemical analysis of the discharge water. Bioaccumulative chemicals, including mercury, arsenic, selenium, radionuclides and other heavy metals are required to be analyzed in the screening. A list of required elements in the screening will be provided to the applicant by WREQC and the list will depend on anticipated problem constituents in the produced water.

1b. An analysis of the likely effects of the discharge on drinking water sources (both surface and ground water wells) in the downstream area;

1c. An analysis of the likely effects of the discharge on ground water recharge;

1d. Estimates of flows, discharge, and distance the produced water will travel;

1e. An analysis demonstrating that the new water will not violate Tribal water quality standards, including antidegradation rules, when it meets permanent downstream water bodies.

2. If the results of the ADA toxic screening show numeric exceedances in the tribal criteria and standards, then the Director may recommend that new water , (2a.) receive treatment. or (2b.) be reinjected or shut-in, In such cases, the applicant must submit an analysis regarding the relative feasibility of the two options. If treatments are considered to be most feasible, then the applicant must prepare an additional plan for the Commission's approval setting forth the measures that will be implemented to meet the tribal criteria and standards. The applicant should be aware that many of the possible treatments listed, such as dilution, wetlands, etc., will not effectively eliminate the potential risks of bioaccumulative chemicals. This report on possible treatments will supplement and be additional to, the analyses as outlined for 1

3 A plan, either **2a**, both an ADA plan and proposed treatments plan or **1**, with just a ADA, must be approved by the Commission. Parts of the Federal water quality certification process under Sections 36 and 37 of these standards or parts of an approved EPA NPDES permit may be used here providing they address all of tribes concerns, including what happens to the water past the point of permitting and also addresses any further monitoring that may be required.

4. Monitoring. An approved plan for new discharges of produced water may require monitoring to verify that the predictions in the ADA are accurate and that the Tribes' water quality standards are actually being met. Monitoring must include analysis of physical, chemical, and biological parameters at selected downstream locations and at specified frequencies. Parameters change very quickly in these kinds of streams as ground waters cool, become exposed to air, photosynthesis, and increasing oxygen. The long term Section 106 monitoring stations will help determine if there are changes due to the discharged water especially for the hard to detect chronic and cumulative kinds of impacts.. Fish and macroinvertebrates are important indicators for long term chronic problems and cumulative impacts that may be missed in the one time toxic screen tests or in the chemical self-monitoring that is done at the NPDES discharge points and will be an important element in the downstream monitoring. The applicant must reimburse the Commission for any monitoring by the Commission that is an element in the approved plans.

If there are no macroinvertebrates or there are only a few species present, then WREQC will try to determine <u>why</u> they are not there. Additional wet testing and a Toxic Identification Evaluation (TIE)and a Toxic Reduction Evaluation (TRE) may be required of the applicant at this time. It is important in that WREQC recognizes that there are many natural reasons why a macroinvertebrate fauna may not exist or may be impoverished (low DO, water shut off for a time period to fix facilities, etc.). It does not necessarily mean that the water is degraded and the water quality may still meet its higher beneficial use of wildlife and livestock drinking water even though the aquatic life use is not present. This is an exception to the hierarchical rule that is in most state and tribal water quality standards, that higher beneficial uses will also meet all of the lower beneficial uses.

4a. . Because of precipitation and cooling of warmer discharges in the downstream direction,,there may be chronic problems in downstream segments even though the waters are meeting the chemical criteria at the NPDES point of discharge. If the monitoring determines that chronic problems exist, the applicant will be directed back to number 2 in the decision flow chart and may reinject or develop an approval plan for dealing with these chronic problems.

4b. Surface discharges will be allowed, if monitoring determines that macroinvertebrates are absent for acceptable reasons, such as: they cannot become established on the substrates because of the precipitation of calcium carbonate or other non-toxic precipitates; not enough time has elapsed for colonization to take place; or the operator(s) have had the discharge waters turned off so that the waters have to become recolonized again; or other reasons that do not compromise water quality and other higher uses such as livestock water.

5. Finally, it is important to note that this flow chart and the recommendations by WREQC are only for the water quality aspects of the discharges. Soil, air, or other potential land impacts are not considered, nor does this recommendation reflect any of the economic losses or benefits to the tribes or to the operators. Any recommendations by WREQC are not a substitute for an approved EPA NPDES permit or a 401 certification and 404 permit.

Final decisions on tribal permits are made by the JBC.

Table I. Antidegradation Policy

Section 9. **Mixing Zones.**

(a) Except for acute whole effluent toxicity (WET) values and Sections 14, 15, 16, 17, 28 and 29(b) of these regulations, compliance with water quality standards shall be determined after allowing reasonable time for mixing. Except for the zone of initial dilution, which is the initial 10% of the mixing zone, the mixing zone shall not contain pollutant concentrations that exceed the acute aquatic life values (see Appendix B). In addition, there shall be a zone of passage around the mixing zone that shall not contain pollutant concentrations that exceed the chronic aquatic life values (see Appendix B). Under no circumstance may a mixing zone be established which would allow human health criteria (see Appendix B) to be exceeded within 500 yards of a drinking water supply intake or result in acute lethality to aquatic life.

(b) No permit shall be allowed if the mixing zone (either lentic or lotic) would have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or designated uses of the water body, result in damage to the ecosystem, or adversely affect public health.

(c) The size of a mixing zone and the concentrations of pollutants present in the mixing zone shall be minimized. In rivers and streams, the maximum size of a mixing zone shall: (i) not extend in a downstream direction for a distance from the discharge port(s) greater than three hundred feet plus the depth of water over the discharge port(s), or extend upstream for a distance of over one hundred feet; (ii) not utilize greater than twenty-five percent of the flow; and (iii) not occupy greater than twenty-five percent of the width of the water body.

Section 10. **Testing Procedures.**

(a) For determination of the parameters involved in the standards, analyses will be in accordance with test procedures defined pursuant to: Title 40, Code of Federal Regulations, Part 136, or any modifications thereto. For test procedures not listed in the Code of Federal Regulations, test procedures outlined in the latest editions of: EPA Methods for Chemical Analysis of Water and Wastes; or, Standard Methods for the Examination of Water and Wastewaters; or, ASTM Standards, Part 31, Water shall be used.

(b) The analytical technique for total uranium (as U) shall be the fluorometric method as referenced in Methods for Determination of Radioactive Substances in Water and Fluvial Sediments, Techniques of Water - Resource Investigations of the U.S. Geological Survey, Book 5, Chapter A-5, pp. 83 - 92.

(c) Where standard methods of testing have not been established, the suitability of testing procedures shall be determined by the Director and the EPA using defensible scientific methods.

Section 11. **Flow Conditions.**

(a) Numeric water quality standards shall be enforced at all times except during periods below low flow. Low flow can be determined by either of the following methods. Whatever method is selected for a specific situation, application of the standards will conform to the magnitude, frequency, and duration provisions as described in these regulations.

(i) Using the 7Q10 (the minimum seven (7) consecutive day flow which has the probability of occurring once in ten (10) years); or

(ii) The EPA's biologically based flow method which determines a four (4) day, three (3) year low flow for chronic exposures and a one (1) day, three (3) year low flow for acute exposures

(ref: Technical Guidance Manual For Performing Waste Load Allocation; Book VI, Design Conditions: Chapter 1, Stream Design Flow for Steady-State Modeling, August 1986, US EPA);

(b) During periods when stream flows are less than the minimums described above, the Commission may require a discharger to institute operational modifications as necessary to insure the protection of aquatic life. This section should not be interpreted as requiring the maintenance of any particular stream flow.

(c) The narrative water quality standards in Sections 14, 15, 16, 17, 28 and 29(b) of these regulations shall be enforced at all stream-flow conditions.

Section 12. **Protection of Wetlands.** Discharges of pollutants into the waters of the Reservation shall not cause the destruction, damage, or impairment of naturally occurring wetlands except when mitigated through a plan approved by the Commission or authorized pursuant to a Section 404 permit issued by the U.S. Army Corps of Engineers. When approving mitigation, the Commission shall consider both the ecological functions and the wetland value of the disturbed wetland. This section does not apply to wetlands created by point or nonpoint sources; nor are such wetlands required to be maintained through continuation of such discharges.

Section 13. **Toxic Pollutants.** Except for those substances referenced in Sections 21 (e) and (f) of these regulations, toxic pollutants attributable to or influenced by human activities shall not be present in any Reservation surface water in concentrations or combinations which constitute pollution as defined herein.

Section 14. **Dead Animals and Solid Waste.**

(a) Dead animals or solid waste shall not be placed or allowed to remain in the waters of the Reservation. When discovered, removal shall be expeditious unless removal would likely cause more contamination than non-removal. This section should not be interpreted to place a burden on any person to remove dead wildlife from surface waters where the death of the animals occurs under natural or uncontrollable circumstances.

(b) Except as authorized through a 404 permit issued by the U.S. Army Corps of Engineers, solid waste shall not be placed or allowed to remain in the waters of the Reservation, nor shall solid wastes be placed or allowed to remain in any location that would cause or threaten contamination of the waters of the Reservation.

Section 15. **Settleable Solids.** In all Reservation waters, substances attributable to or influenced by human activities that will settle to form sludge, bank or bottom deposits shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.

Section 16. **Floating and Suspended Solids.** In all Reservation surface waters, floating and suspended solids attributable to or influenced by human activities shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life, or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.

Section 17. **Taste, Odor and Color.** No Class 1, 2, or 3 waters shall contain substances attributable to or influenced by human activities that produce taste, odor and color or that would:

(a) Of themselves or in combination, impart an unpalatable or off-flavor in fish flesh;

(b) Visibly alter the natural color of the water or impart color to skin, clothing, vessels, or structures;

(c) Produce detectable odor; or

(d) Directly or through interaction among themselves, or with chemicals used in existing water treatment processes, result in concentrations that will impart undesirable taste or odor to public water supplies.

Section 18. **Human Health.**

(a) In all Class 1, 2AB, and 2A waters, the human health values for "Fish and Drinking Water" listed in Appendix B of these standards shall not be exceeded. In all Class 2B and 2C waters, the human health values for "Fish Only" (consumption of aquatic organisms) shall not be exceeded.

(b) In certain waters, the criteria listed in Appendix B of these regulations may not be sufficiently protective of public health due to the unique physical or chemical conditions of the waters. In such cases, the Commission may adopt more stringent criteria using any of the site-specific procedures described in the references listed in Appendix E of these standards.

Section 19. **Industrial Water Supply.**

All Reservation surface waters that have the natural water quality potential for use as an industrial water supply shall be maintained at a quality that allows continued use of such waters for industrial purposes. Degradation of such waters shall not be of such an extent to cause a measurable increase in raw water treatment costs to the industrial user(s). Unless otherwise demonstrated, all Reservation surface waters have the natural water quality potential for use as an industrial water supply.

Section 20. **Agricultural Water Supply.**

All Reservation surface waters which have the natural water quality potential for use as an agricultural water supply shall be maintained at a quality that allows continued use of such waters for agricultural purposes. Degradation of such waters shall not be of such an extent to cause a measurable decrease in crop or livestock production or cause damage to soils when water is used for irrigation purposes. Unless otherwise demonstrated, all Reservation surface waters have the natural water quality potential for use as an agricultural water supply.

Section 21. **Protection of Aquatic Life.**

(a) Ammonia.

(i) The toxicity of ammonia varies with pH and temperature and the applicable limitations are included in the charts in Appendix C of these regulations. The numeric ammonia criteria in Appendix C apply to all Class 1 and 2 waters.

(ii) In all Class 3 waters, concentrations of ammonia attributable to or influenced by human activities shall not be present in concentrations which could result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

(b) Specific numeric standards for a number of toxicants are listed in the aquatic life "acute value" and "chronic value" columns in Appendix B of these regulations. These standards apply to all Class

1, 2, and 3 waters. For these pollutants, the chronic value (four (4) day average concentration) and the acute value (one (1) hour average concentration) shall not be exceeded more than once every three (3) years.

(c) Others. For those pollutants not listed in Appendix B or C of these regulations, maximum allowable concentrations on Class 1, 2 and 3 waters shall be determined through the bioassay procedures outlined in the references listed in Appendix E of these regulations.

(d) In certain waters, the criteria listed in Appendix B or C of these regulations may not be sufficiently protective to protect aquatic life due to unique physical or chemical conditions of the waters. In such cases, the Commission may adopt more stringent acute and chronic values by use of the site-specific procedures discussed in the references listed in Appendix E of these standards.

(e) Aquatic pesticides and fish toxicants specifically designed to kill, repel, or mitigate undesirable aquatic life as defined herein may be added to surface waters of the Reservation provided that:

(i) The chemical toxicant used is a product that has been registered by the EPA and approved by the Wyoming Department of Agriculture for use within the State of Wyoming;

(ii) The application is conducted by a person certified and licensed by the Wyoming Department of Agriculture to purchase and apply such toxicants within the State of Wyoming;

(iii) The application is administered in accordance with label directions;

(iv) The application is conducted in a manner that minimizes to the extent practicable the magnitude of any change in the concentration of the parameters affected by the activity and the length of time during which any change may occur; and

(v) The applicator submits a letter to the Director describing the proposed application, the areas to be treated, and the undesirable aquatic life to be targeted by the application and receives a verification letter from the Director that the proposed application is in compliance with this section. Compliance with label directions shall not exempt any person or agency from the penalty provisions of the Wind River Water Code should non-target species or non-target areas be affected.

(f) Private certified pesticide applicators for restricted use pesticides may apply fish toxicants only to waters located entirely on private property where there is no surface outlet to waters of the Reservation, provided that prior notice is made to the Director.

Section 22. **Radioactive Material.**

(a) In Class 1, 2AB and 2A waters, the radiological limits established in the most recent Federal Primary Drinking Water Standards published by EPA or its successor agency (40 CFR parts 141.15 and 141.16, published July 1, 1998) shall not be exceeded.

(b) In all Reservation surface waters, radioactive materials attributable or influenced by human activities shall not be present in the water or in the sediments in amounts which could cause harmful accumulations of radioactivity in plant, wildlife, stock, or aquatic life. Deleterious concentrations of radioactive materials for all classes shall be as determined by the lowest practicable concentration attainable.

Section 23. **Turbidity.**

(a) In all cold water fisheries and drinking water supplies (classes 1, 2AB, 2A, and 2B), the discharge of substances attributable to or influenced by human activities shall not be present in quantities which would result in a turbidity increase of more than ten (10) nephelometric turbidity units (NTUs).

(b) In all warm water or nongame fisheries (classes 1, 2AB, 2B and 2C), the discharge of substances attributable to or influenced by human activities shall not be present in quantities which would result in a turbidity increase of more than 15 NTUs.

(c) An exception to paragraphs (a) and (b) of this section shall apply to short-term increases of turbidity that have been determined by the Commission to have only a minimal effect on water uses. Such determinations shall be made on a case-by-case basis and shall be subject to whatever controls, monitoring, and best management practices are necessary to fully maintain and protect all water uses.

Section 24. **Dissolved Oxygen.**

(a) In all Class 3 waters, wastes attributable to or influenced by human activities shall not deplete dissolved oxygen amounts to a level which will result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

(b) In all Class 1, 2AB, 2B and 2C waters, wastes attributable to or influenced by human activities shall not be present in amounts which will result in a dissolved oxygen content of less than that presented on the chart in Appendix D of these standards.

Section 25. **Temperature.**

(a) For Class 2 and 3 waters, effluent attributable to or influenced by human activities shall not be discharged in amounts which change ambient water temperatures to levels which result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

(b) Except on Class 3 and Class 4 waters, the maximum allowable stream temperature will be the maximum natural daily stream temperature plus any allowable change, provided that this temperature is not lethal to existing fish life and under no circumstance shall this maximum temperature exceed 68 degrees F (20 degrees C) in the case of cold water fisheries and 86 degrees F (30 degrees C) in the case of warm water fisheries.

(c) With the exception of the provisions of Sections 9 and 11 of these regulations, temperature standards shall apply at all times and at all depths of the receiving water and may not be violated at any time or at any depth.

Section 26. **pH.**

(a) For all Reservation surface waters, wastes attributable to or influenced by human activities shall not be present in amounts which will cause the pH to be less than 6.5 or greater than 9.0 standard units.

(b) For all Class 2 and 3 waters, effluent attributable or influenced by human activities shall not be discharged in amounts which change the pH to levels which result in harmful acute or chronic effects to aquatic life, directly or in conjunction with other chemical constituents, or which would not fully support existing and designated uses.

Section 27. **Bacteria. (*Escherichia coli*)**

(a) Waters of the Reservation designated for primary recreation use may not contain more than 126 *E. coli* Colony Forming Units (CFU's) per 100 milliliters, as a 30-day geometric mean. Compliance shall be based on the geometric mean of all individual samples taken during 5 or more sampling events representatively spread over a 30-day period. Each sampling event shall consist of 3 or more field replicates taken at representative locations within a defined sampling area.

(b) At no time shall the waters of the Reservation designated for primary recreation use, such as designated beach areas, contain a single sample of more than a maximum of 235 *E. coli* per 100 milliliters. Compliance shall be based on the geometric mean of 3 or more field replicates taken during the same sampling event at representative locations within a defined sampling area. This standard will be used when best professional judgment (BPJ) indicates a serious potential health risk that can not and should not wait for a 30 day geometric mean to be done.

(c) At no time shall the waters of the reservation designated for secondary recreation use contain a single sample of more than a maximum of 409 *E. coli* CFU's per 100 milliliters. Compliance shall be based on the geometric mean of 3 or more field replicates taken during the same sampling event at representative locations within a defined sampling area

(d) Existing drinking water sources, such as Washakie Reservoir, shall not exceed 10 *E. coli* CFU's per 100 milliliters as an annual average and shall be tested at least once a month from April through September of each year.

Section 28. **Undesirable Aquatic Life.** All Reservation surface waters shall be free from substances and conditions or combinations thereof which are attributable to or influenced by human activities in concentrations which produce undesirable aquatic life.

Section 29. **Oil and Grease.** In all Reservation surface waters, substances attributable to or influenced by human activities shall not be present in amounts which would cause:

(a) The oil and grease content to exceed 10 mg/l; or

(b) The formation of a visible sheen or visible deposits on the bottom or shoreline, or damage or impairment of the normal growth, function or reproduction of human, animal, plant or aquatic life.

Section 30. **Total Dissolved Gases.** In all Class 1, 2AB, 2B and 2C waters, the total dissolved gas concentration below man-made dams shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures.

Section 32. **Biological Criteria.** Class 1, 2 and 3 waters of the Reservation must be free from substance attributable to or influenced by human activities which will adversely alter the structure and function of indigenous or intentionally introduced aquatic communities.

Section 33. **Amendments, Reclassifications and Site Specific Criteria.**

(a) Upon a petition by an interested party, a recommendation of the Director or the EPA, or its own motion, the Commission may propose to the JBC an amendment of any of the standards set forth herein, including changes to water body classifications, addition or removal of designated uses,

establishment of use sub-categories, establishment of site-specific criteria, or alteration of narrative or numerical criteria. Prior to taking action on a proposal to amend these standards, the Commission shall provide public notice posted at usual locations in Tribal offices and through the internet and a newspaper of general circulation on the Reservation, seek the comments and recommendation of the Director and the EPA on the proposal's technical merits, and provide a reasonable opportunity for the public to submit written comments on the proposal. The Commission may also hold a public hearing on the proposal.

(b) Subject to Section 34 below, the Commission may act on a proposal to amend these standards no less than 30 days after it provides public notice of the proposal under subsection (a) above. Prior to approving a proposed change to these standards, the Commission will consider the recommendations of the Director and the EPA and any comments or testimony from the public. Any proposed changes to these standards will be supported by written findings.

(c) Any proposed changes to these standards will be submitted by the Commission to the JBC for ratification. Such submittal shall include the Commission's written findings, any recommendations made by the Director or the EPA, and any comments and testimony from the public. The JBC will act upon the Commission's proposal within 60 days of its submittal to the JBC Secretary. The JBC may approve, reject or modify such proposal or may remand the proposal to the Commission for further fact finding or other proceedings. If the JBC fails to act within 60 days of the submittal of the proposal, the proposal shall be deemed adopted.

(d) Any changes to these standards adopted under this Section shall be submitted by the Commission to EPA for EPA approval under the Clean Water Act within 30 days of adoption by the JBC and shall become effective either upon EPA approval or 90 days after submittal, whichever comes first. If within 90 days of submittal, the EPA determines that any such revised or new standard is not consistent with the applicable requirements of the Clean Water Act and specifies the changes needed to meet such requirements, the Commission shall propose to the JBC a new standard incorporating EPA's specifications.

(e) The JBC retains the authority to amend these standards at any time.

Section 34. **Use Attainability Analysis.**

(a) The Commission may propose an amendment involving the removal of a designated use or the lowering of a use classification only if such amendment does not impair an existing use and it can be demonstrated through a Use Attainability Analysis (UAA) that the attainment of the original classification, designated use or water quality criteria is not feasible because:

(i) Naturally occurring pollutant concentrations prevent the attainment of the classification or use; or

(ii) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent without violating Reservation water conservation requirements to enable uses to be met; or

(iii) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(iv) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the classification or use, and it is not feasible to restore the water body to its original condition or to operate such modification in such a way that would result in the attainment of the classification or use; or

(v) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of the classification or use; or

(vi) Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact. This subsection shall not apply to the derivation of site-specific criteria.

(b) The Commission may propose an amendment involving the raising of a classification, or the addition of a designated use, if it can be demonstrated through a Use Attainability Analysis (UAA) that such uses are existing uses or may be feasibly attained with the imposition of more stringent controls or management practices.

Section 35 **Designated Agency for Water Quality Certification Applications.**

The Commission, shall be the tribal agency responsible for collecting, reviewing, evaluating, processing all applications to the Tribes for water quality certification pursuant to Section 401 of the Clean Water Act, 33 U.S.C. § 1341. All applications, correspondence and notifications with regard to water quality certification applications are to be directed to the Director of WREQC, Box 237, Fort Washakie, Wyoming, 82514.

Section 36 **Procedure for Receiving and Processing Water Quality Certification Applications.**

(a) Any applicant for a federal license or permit to conduct any activity which may result in a discharge into the waters of the Reservation must apply for a certification that such activity will not cause or contribute to a violation of these Tribal water quality standards or any other appropriate requirement of Tribal law relating to water quality.

(b) A complete water quality certification application shall contain the following information:

(i) Name and address of project owner and project operator;

(ii) Name and address of the designated legal representative of the project owner and project operator;

(iii) Legal description of the project location;

(iv) Names and addresses of immediately adjacent property owners or lessees;

(v) Complete description of the project proposal, including plans, maps, and other appropriate materials;

(vi) Name or description of water bodies which may be affected by a discharge from the proposed project;

(vii) Copies of any environmental assessments, environmental impact statements or other environmental review documents prepared pursuant to the National Environmental Policy Act;

(viii) Other environmental documents required by the federal licensing or permitting agency relating to water quality;

(ix) Copies of any public notice or supporting information issued by the federal licensing or permitting agency for the proposed project;

(x) An exhibit complying with 40 C.F.R. § 121.22 which contains:

(A) A description of the proposed facility or activity, and of any discharge into Reservation waters which may result from the proposal, including the biological, chemical, physical and radiological characteristics of the discharge and the locations at which such discharge may enter Reservation waters;

(B) A description of the function and operation of equipment or facilities to treat waste or other effluents which may be discharged, including specification of the degree of treatment expected to be attained;

(C) The date or dates on which the proposed activity will commence and terminate, and the date or dates during which the discharge will occur;

(D) A description of the methods and means proposed to monitor the quality and characteristics of the discharge and the operation of equipment or facilities employed in the treatment or control of wastes or other effluents;

(xi) A declaration signed by an authorized representative of the owner and operator of the proposed project attesting under penalty of perjury that to the best of his or her knowledge the proposed project will not cause or contribute to a violation Tribal water quality standards or any other requirement of Tribal law relating to water quality.

(c) Each application submitted must be accompanied by an application fee to be determined by the Director. Such application fee shall fully compensate the Tribes for all costs, fees and expenses reasonably incurred in processing the water quality certification application. If the initial fee proves to be inadequate to compensate the Tribes for its reasonably incurred costs, fees and expenses, the Director shall require payment of a supplemental application fee as a condition for continued processing of the application. Any application fees collected that are in excess of the amount reasonably expended by the Director in processing the application shall be returned to the applicant at the conclusion of the certification process.

(d) The Director may require an applicant to submit any additional information deemed necessary by the Director to adequately evaluate the project's impacts on Reservation water quality.

(e) Failure to complete an application, provide additional information reasonably requested by the Director, or pay an application fee reasonably required by the Director shall be grounds for denial of certification under Section 37(g) of these standards..

(f) Upon receipt of a complete application, the Director shall prepare a public notice. Such notice shall be mailed to all adjacent property owners or lessees listed in the application, posted on the internet, and published in a newspaper of general circulation on the Reservation. The Director shall provide a period of not less than 30 days following the date of the public notice for submission of written comments.

(g) The Director may, in his discretion, hold a public hearing with respect to the certification application prior to recommending to the Commission whether to grant or deny the application.

(h) The requirements of this section shall become effective upon approval by EPA of a Treatment as a State application submitted by the Tribes for the purposes of Section 401 of the Clean Water Act.

Section 37 **Water Quality Certification Decisions.**

(a) Within 120 days after an application is deemed complete by the Director, the Director shall either notify the applicant of his or her recommended decision on the application or notify the applicant that additional time (not to exceed a total 1 year from the time the application is deemed complete) is required to process the application.

(b) If, after considering a complete application and such other information the Director deems relevant, the Director finds that the project will not cause or contribute to a violation of Tribal water quality standards or any other appropriate requirement of Tribal law relating to water quality, the Director shall recommend that the Commission approve the application. If, however, the Director finds that the project is likely to cause or contribute to a violation of Tribal water quality standards or any other appropriate requirement of Tribal law relating to water quality, notwithstanding the implementation of all feasible measures designed to mitigate the impact of the facility, the Director shall recommend that the Commission deny the application.

(c) Upon receiving a recommendation from the Director, the Commission may issue a certification that a proposed project will not cause or contribute to a violation of Tribal water quality standards or any other appropriate requirement of Tribal law relating to water quality. The certification shall include any conditions recommended by the Director that the Commission deems necessary to ensure compliance with these standards and any other appropriate requirement of Tribal law relating to water quality. The certification shall be mailed to the applicant and the federal licensing or permitting agency.

(d) Any water quality certification approved by the Commission shall be made in writing and include:

(i) The name and address of the project owner or operator;

(ii) The name and location of the project;

(iii) A description of the project as approved;

(iv) Findings that the project will not cause or contribute to a violation of Tribal water quality standards or any other appropriate requirements of Tribal law relating to water quality;

(v) Conditions that the Commission deems necessary to ensure that the proposed project will not cause or contribute to a violation of Tribal water quality standards or other appropriate Tribal requirements relating to water quality. Such conditions may include but are not limited, to restrictions on effluent discharge, effluent monitoring and reporting, minimum flow requirements, consent to tribal inspections, and requirements for decommissioning or closure of the facility.

(e) A water quality certification shall require the project owner and operator to notify the Director of all changes in the project subsequent to certification.

(f) A water quality certification shall not be transferable without the written approval of the Commission.

(g) A denial of an application for water certification shall be made in writing and shall set forth the reasons for the denial. The notice shall be mailed to the applicant and to the federal licensing or

permitting agency. The notice shall advise the applicant of the appeal rights and procedures provided for in this ordinance.

(h) If the Commission fails to act on an application for water quality certification within one year of receiving a complete application, the certification requirement in Section 36(a) shall be waived with respect to the application for a federal license or permit.

Section 38 **Modification, Revocation or Suspension of Certifications.**

(a) Upon recommendation of the Director, the Commission may modify, suspend or revoke a water qualify certification issued under this Ordinance:

(i) to conform to a modification, suspension or revocation of the pertinent federal permit or license for the project;

(ii) if the project is modified in a manner inconsistent with the certification;

(iii) if the application contained material misrepresentations or omissions;

(iv) if the conditions included in the certification have been violated; or

(v) if the project causes or contributes to a violation of Tribal water quality standards or other appropriate requirement of Tribal law relating to water quality.

(b) The Commission may not modify, suspend or revoke the certification without providing the certificate holder with 20 days written notice of the proposed modification, suspension or revocation and the reasons therefor and affording the certificate holder an opportunity to contest the proposed action.

(c) A modification, suspension or revocation of a water quality certification must be in writing and set forth the reasons for and findings in support of such action.

Section 39 **Judicial Review of Commission Decisions.**

Within 30 days of the Commission's decision to issue, condition or deny a water quality certification, or to modify, suspend or revoke a water quality certification or assess civil penalties for violation of a water quality certification or other approval, any person adversely affected by the decision may seek judicial review of that decision in the Shoshone and Arapaho Tribal Court. The Shoshone and Arapaho Tribal Court shall, upon the petition of the adversely affected party, conduct a review of the record of the proceedings of the Commission any may modify or reverse a decision or action of the Commission only where such action or decision is not supported by substantial evidence, is arbitrary and capricious, or is contrary to applicable law. The Commission, upon request of the Court, shall provide to the Court a certified copy of all documents, records, transcripts, or other information which formed the basis for any decision for which an adversely affected parties seeks judicial review.

Section 40 **Prohibited Acts**

(a) Any Indian who violates a water quality certification or other permit or approval issued under these standards shall , upon conviction thereof in Tribal Court, be subject to a term of imprisonment not to exceed one year, or be ordered to pay a criminal penalty not to exceed ($5,000) or both, in accordance with the provisions of the Shoshone and Arapaho Law and Order Code. For the purposes of this section, each day in which a person is out of compliance shall be deemed to be a separate violation.

(b) Any person who violates a water quality certification or other permit or approval issued under these standards may be ordered by the Commission to pay a civil penalty not to exceed ($5,000). Failure to pay such penalty may result initiation of proceedings for exclusion from the Reservation or suspension or termination of rights and privileges to engage in activities on the Reservation. For the purposes of this section, each day in which a person is out of compliance shall be deemed to be a separate violation.

Appendix A

Reservation Surface Water Classifications

All surface waters within the Reservation are classified as follows:

(a) Class 1 Waters. The following waters are designated Class 1:

(i) All surface waters located within the boundaries of the Tribal Wilderness Area;

(ii) The main stem of the Wind River from the Wedding of the Waters upstream to Boysen Dam;

(iii) Lower and Upper Dinwoody Lakes;

(iv) The main stem of the Wind River from its confluence with the East Fork of the Wind River at the Reservation western boundary, downstream to its confluence with Dinwoody Creek;

(v) Wetlands adjacent to the above listed Class 1 waters.

(b) Individual water classifications for major water bodies are listed in the most current version of the "Wind River Reservation Surface Water Classification List" published and periodically updated by the Director.

(i) Unlisted Waters. The waters contained in the "Wind River Reservation Surface Water Classification List" are all waters that are named on the USGS 1:500,000 hydrologic map of Wyoming and those otherwise classified by the Director. The Classification List does not contain an exhaustive listing of all the surface waters within the Reservation. Waters that are not listed are classified as follows:

(1) All waters shown as having any species of game fish present in the WREQC Water Quality Program's database or the Fish and Wildlife Service database, are classified as 2AB;

(2) All waters shown as having only nongame fish species present in the Wyoming Game and Fish Department's Streams and Lakes Database as submitted to the Department of Environmental Quality in June, 2000 are classified as 2C;

(3) All other waters shall be classified as follows:

(A) Those waters supported by an approved UAA containing defensible reasons for not protecting aquatic life uses shall be 4A, 4B, or 4C;

(B) The remaining waters shall be 3A, 3B, or 3C.

(ii) Wetlands. All adjacent wetlands shall have the same classification as the water to which they are adjacent.

Wind River Reservation Waterbody Classification List

BIG HORN RIVER DRAINAGE

Big Horn River **2AB**					
	Owl Creek 2AB				
		Mud Cr 2AB			
			N Fk Mud Cr 2AB		
			M Fk Mud Cr 2AB		
			S Fk Mud Cr 2AB		
		Red Cr 3B			
			Dry Cottonwood Cr 2AB		
		Anchor Res 2AB			
		S Fk Owl Cr (from confluence with North Fork Owl Creek upstream to just above Anchor Res) **2AB**			
		S Fk Owl Cr (from just above Anchor Res, upstream to headwaters) **1**			
	Red Canyon Cr 3B				

WIND RIVER DRAINAGE

Wind River Canyon (from Reservation Boundary upstream to Boysen Dam) 1					
	Johnson Draw 3B				
	Teeter Draw 3B				
	Woods Basin 3B				

	Gold Creek 3A				
	Morrison Canyon 3B				
	Jewell Canyon 3B				
	Cottonwood Cr 3B				
		Stagner Cr 3B			
			Smooth Canyon 3B		

Boysen Res 2AB					
	Cottonwood Cr 3B				
		Wood Road Draw 3B			
		Mexican Draw 3B			
		Blue Res 2AB			
	Muddy Cr 2C				
		Bass Lake (Lake Cameahwait) 2AB			
		Middle Depression Res 2AB			
		Blue Dr 3B			
		Wyoming Canal 4A			
		Sheep Cr 3B			
			E Fk Sheep Ck 2AB		
		Arapahoe Res 2AB			
		Shotgun Cr 2AB			
		Holland Cr 2AB			
		Bargee Res 2AB			
		Barquin Res 2AB			
	Birdseye Cr 3B				
	Tough Cr 3B				
	Badwater Cr 3B				
		Reservoir Cr 3B			

	Poison Cr **2C**				
	Fivemile Cr (from Boysen Res, upstream to Wyoming Canal) **2C**				
		Ocean Lake **2ABww**			
			Ocean Lake Drain No. 6 **4A**		
		Water Rocks Dr **3B**			
		Hurley Dr **3B**			
		Teapot Wash **3B**			
	Fivemile Cr (from Wy Canal, upstream to confluence of Maverick Springs Draw and Coal Draw) **2C**				
		Maverick Springs Draw **3E**			
		Coal Draw **3E**			
Wind River (Boysen Res upstream to Dinwoody Cr) **2AB**					
	Pilot Canal 4A				
		Pilot Butte Res 2AB			
	Muskrat Cr 2C				
	Horsethief Gulch 3B				
	LeClair Canal 4A				
	Kirby Draw 3A				
		Alkali Cr 3B			
	Haymaker Cr 2C				

	Little Wind R **(from confluence with Wind River upstream to Ethete Bridge – Blue Sky Hiway)** 2D				
		West Side Cr **(from conf. with Little Wind R, upstream to Peak Sulphur discharge)** 2E			
		West Side Cr **(from Peak Sulphur discharge, upstream)** 2C			
		Beaver Cr 3B			
			Preachers Draw 3B		
		Popo Agie R **(from confluence with Little Wind River, upstream to Little Popo Agie River** 2D			
			Little Popo Agie R 2AB		
		North Fk Popo Agie R 2AB			
			Surrell Cr 2AB		
		Sharp Nose Dr 3B			
			Plunkett Draw 3B		
	Little Wind R **(from bridge at Blue Sky Highway,**				

	upstream to confluence of North and South Forks of Little Wind R) 2AB				
		Mill Cr 2AB			
			Ray Lake 2AB		
		Bighorn Draw 3B			
			Winkelman Dome Draw 3E		
		Sage Cr 2AB			
			Norkok Cr 2C		
			N F Sage Cr 2AB		
			S F Sage Cr 2AB		
				Pevah Cr 2AB	
		Trout Cr 2AB			
			Crooked Cr 2AB		
			Spring Cr 2AB		
		Washakie Hot Springs Creek Class 1			
		South Fork Little Wind R **(from confluence with N F Little Wind R, upstream to Tribal Wilderness Boundary** 2AB			
			Timmoco Cr 2AB		
			Moccasin Lake 1		
		South Fork Little Wind R **(from Tribal Wilderness Boundary**			

		upstream) 1			
		North Fork Little Wind R (from Blue Sky Hiway/Ethete Bridge to Tribal Wilderness Boundary) 2AB			

		North Fork Little Wind R (upstream of Tribal Wilderness Boundary) 1			
Wind River (above Boysen Res upstream to Red Creek) 2AB					
	Mission Cr (from confluence with Wind R upstream to Wyoming Canal) 2C				
	Mission Cr (upstream from Wyoming Canal) 2E				

	Dry (Pasup) Cr (from confluence with Wind River, upstream to perenuial flow) 3B				
	Dry (Pasup) Cr (from perennial flow, upstream) 2C				
		Rolff Lake 3A			
	Bull Lake Cr (from confluence with Wind River, upstream to Tribal Wilderness Boundary) **2AB**				
	Bull Lake 2AB				
	Bull Lake Cr (from Tribal Wilderness Boundary, upstream) 1				

	Little Sand Dr 2C				
	Willow Cr 2AB				
		Meadow Cr 2AB			
		N Fk Willow Cr 2AB			
		S Fk Willow Cr 2AB			
		Bob Cr 2AB			
	Crow Cr (from confluence with Wind River, upstream to mouth of Canyon) 2AB				
	Crow Cr (from mouth of Canyon, upstream) 1				
	Cottonwood Dr 3B				
	Dry Cr 2AB				

	Sand Draw 3B				
	Dinwoody Cr 1				
	Red Cr 2AB				
	Little Red Cr 2A				
Wind River (from confluence with Dinwoody Cr, upstream to Reservation Boundary) 1					
	East Fk Wind R 1				

Appendix B
Water Quality Criteria [1]

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Acenaphthene			20.0 [7]	2,700.0
Acrolein			320.0	780.0
Acrylonitrile[3]			0.059	0.66
Benzene[3]			1.2	71.0
Benzidine[3]			0.00012	0.00054
Carbon tetrachloride[3] (Tetrachloromethane)			0.25	4.4
Chlorobenzene (Monochlorobenzene)			20.0 [7]	21,000.0
1,2,4 Trichlorobenzene			70.0 [9]	940.0
Hexachlorobenzene [3]			0.00075.	0.00077
1,2-Dichloroethane[3]			0.38	99.0
1,1,1-Trichloroethane			200.0[9]	
Hexachloroethane[3]			1.9	8.9
1,1,2-Trichloroethane[3]			0.60	42.0
1,1,2,2,-Tetrachloroethane[3]			0.17	11.0
Bis(2-chloroethyl) ether [3]			0.031	1.4
2-Chloronaphthalene			1,700.0	4,300.0
2,4,6-Trichlorophenol [3]			2.1	6.5
p-Chloro-m-cresol (4-Chloro-3-methylphenol)			3,000.0[7]	
Chloroform (HM) [3] (Trichloromethane)			5.7	470.00
2-Chlorophenol			0.1 [7]	400.0
1,2-dichlorobenzene			600.0 [9]	17,000.0
1,3-Dichlorobenzene			400.0	2,600.0
1,4-Dichlorobenzene			75.0 [9]	2,600.0
3,3-Dichlorobenzidine[3]			0.04	0.077

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
1,1-Dichloroethylene[3]			0.057	3.2
1,2-trans-Dichloroethylene			100.0[9]	140,000.0
2,4-Dichlorophenol			0.3 [7]	790.0
1,2-Dichloropropane			0.52	39.0
1,3-Dichloropropylene (1,3-Dichloropropene) (cis and trans isomers)			10.0	1,700.0
2,4-Dimethylphenol			400.0[7]	2,300.0
2,4-Dinitrotoluene [3]			0.11	9.1
1,2-Diphenylhydrazine [3]			0.040	0.54
Ethylbenzene			700.0[9]	29,000.0
Fluoranthene			300.0	370.0
Bis(2-chloroisopropyl) ether			1,400.0	170,000.0
Methylene chloride (HM)[3] (Dichloromethane)			4.7	1,600.0
Methyl bromide (HM) (Bromomethane)			48.0	4,000.0
Bromoform (HM) [6] (Tribromomethane)			4.3	360.0
Dichlorobromomethane (HM) [6]			0.56	46.0
Chlorodibromomethane (HM) [6]			0.41	34.0
Hexachlorobutadiene [3]			0.44	50.0
Hexachlorocyclopentadine			1.0[7]	17,000.0
Isophorone [3]			36.0	2,600.0
Nitrobenzene			17.0	1,900.0
2,4-Dinitrophenol			70.0	14,000.0
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)			13.0	765.0
N-Nitrosodimethylamine [3]			0.00069	8.1
N-Nitrosodiphenylamine [3]			5.0	16.0
N-Nitrosodi-n-propylamine[3]			0.005	1.4

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Pentachlorophenol	19[5]	15[5]	0.28	8.2
Phenol			300[7]	4,600,000.0
Bis(2-ethylhexyl)phthalate[3]			1.8	5.9
Butyl benzyl phthalate			3,000.0	5,200.0
Di-n-butyl phthlate			2,700.0	12,000.0
Diethyl phthalate			23,000.0	120,000.0
Benzo(a)anthracene (PAH)[3] (1,2-Benzanthracene)			0.0044	0.049
Benzo(a)pyrene (PAH)[3] (3, 4-Benzopyrene)			0.0044	0.049
Benzo(b)fluoranthene (PAH)[3] (3,4-Benzofluoranthene)			0.0044	0.049
Benzo(k)fluoranthene (PAH)[3] (11,12-Benzofluoranthene)			0.0044	0.049
Chrysene (PAH)[3]			0.0044	0.049
Anthracene (PAH)[6]			9,600.0	110,000.0
Fluorene (PAH)[6]			1,300.0	14,000.0
Dibenzo(a,h)anthracene (PAH)[3] (1,2,5,6-Dibenzanthracene)			0.0044	0.049
Indeno(1,2,3-cd)pyrene (PAH)[3]			0.0044	0.049
Pyrene (PAH)[6]			960.0	11,000.0
Tetrachloroethylene[3]			0.8	8.85
Toluene			1,000.0[9]	200,000.0
Trichloroethylene[3]			2.7	81.0
Vinyl chloride[3] (Chloroethylene)			2.0	525.0
Aldrin[3]	1.5		0.00013	0.00014
Dieldrin[3]	0.24	0.056	0.00014	0.00014
Chlordane[3]	1.2	0.0043	0.0021	0.0022
4,4'-DDT[3]	0.55	0.001	0.00059	0.00059

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
4,4'-DDE[3]			0.00059	0.00059
4,4'-DDD[3]			0.00083	0.00084
alpha-Endosulfan	0.11	0.056	110.0	240.0
beta-Endosulfan	0.11	0.056	110.0	240.0
Endosulfan sulfate			110.0	240.0
Endrin	0.086	0.036	0.76	0.81
Endrin aldehyde			0.76	0.81
Heptachlor[3]	0.26	0.0038	0.00021	0.00021
Heptachlor epoxide[3]	0.26	0.0038	0.0001	0.00011
alpha-BHC[3] (Hexachlorocyclohexane-alpha)			0.0039	0.013
beta-BHC[3] (Hexachlorocyclohexane-beta)			0.014	0.046
gamma-BHC (Lindane) [3] (Hexachlorocyclohexane-gamma)	0.95		0.019	0.063
PCB-1242 (Arochlor 1242)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1254 (Arochlor 1254)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1221 (Arochlor 1221)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1232 (Arochlor 1232)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1248 (Arochlor 1248)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1260 (Arochlor 1260)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1016 (Arochlor 1016)[3]		0.014	0.00017[13]	0.00017[13]
Toxaphene[3]	0.73	0.0002	0.00073	0.00075
Antimony			14.0	4,300.0
Arsenic[3]	340.0	150.0	7.0	7.0
Asbestos[3]			7,000,000 fibers/l[9]	
Beryllium[3]			4[9]	
Cadmium	4.3[4]	2.2[4]	5[9]	
Chromium (III)	569.8[4]	74.1[4]	100[9] (total)	

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Chromium (VI)	16	11	100[9] (total)	
Copper	13.4[4]	9.0[4]	1,000.0[7]	
Cyanide (free)	22	5.2	200.0[9]	220,000.0
Lead	64.6[4]	2.5[4]	15.0[9]	
Mercury	1.4	0.77	0.050	0.051
Nickel	468.2[4]	52.0[4]	100.0[9]	4,600.0
Selenium	20.0	5.0[10]	50.0[9]	9,000.0
Silver	3.4[4]			
Thallium			1.7	6.3
Zinc	117.2 [4]	118.1[4]	5,000.0[7]	69,000.0
Dioxin (2,3,7,8-TCDD)[3]			0.000000013	0.000000014

NON-PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Alachlor [3]			2.0[9]	
Aluminum (pH 6.5-9.0 only)	750.0[10]	87.0[10][14]		
Ammonia	See Appendix C			
Atrazine			3.0[9]	
Barium			2000.0[9]	
Bis(chloromethyl) Ether [3]			0.00013	0.00078
Carbofuran			40 [9]	
Chloride	860,000.0	230,000.0		
Chlorine (total residual)	19.0	11.0		
Chlorophenoxy Herbicide 2,4,5,TP			10.0	
Chlorpyrifos	0.083	0.041		
Chlorophenoxy Herbicide 2,4,-D			70.0[9]	
Dalapon			200.0[9]	
Demeton		0.1		
Di(2-ethylhexyl)adipate			400.0[9]	
Dibromochloropropane (DBCP)[3]			0.2[9]	
Dichloroethylene (cis-1,2-)			70.0 [9]	
Dinoseb			7.0 [9]	
Dinitrophenols			70.0	14,000.0
Dissolved Gases		100% Sat.		
Dissolved Oxygen		See Appendix D		
Fecal Coliform			See Section 27	
Diquat			20.0[9]	
Endothall			100.0[9]	
Ether, Bis Chloromethyl			0.00013	0.00078
Ethylene dibromide (EDB) [3]			0.05[9]	
Fluoride			4,000.0[9]	

NON-PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Glyphosate			700.0[9]	
Guthion		0.01		
Iron		1,000.0[12]	300.0[11]	
Malathion		0.1		
Manganese	3,110.0[4][12]	1,462.0[4][12]	50.0[11]	
Methoxychlor		0.03	40.0[9]	
Mirex		0.001		
Nitrite (as N)			1,000.0[9]	
Nitrates (as N)			10,000.0[9]	
Nitrite+Nitrate (both as N)			10,000.0[9]	
Nitrosamines			0.0008	1.24
Nitrosodidibutylamine,N			0.0064	0.587
Nitrosodiethylamine,N			0.0008	1.24
N-nitrosopyrrolidene[3]			0.016	91.9
Oxamyl (Vydate)			200.0[9]	
Parathion	0.065	0.013		
Pentachlorobenzene			3.5	4.1
pH		6.5-9.0		
Picloram			500.0[9]	
Simazine			4.0[9]	
Styrene			100.0[9]	
Sulfide-Hydrogen Sulfide (S 2-, HS -)		2.0		
1,2,4,5-tetrachlorobenzene			2.3	2.9
Tributyltin	0.46	0.063		
Trichlorfluoromethane			10,000.0	860,000.0
2,4,5-trichlorophenol			1.0[7]	9,800.0
2,4,5-TP (2,4,5-trichlorophenoxy) propionic acid			50.0[9]	
Xylenes			10,000.0[9]	

(1) Except for the aquatic life values for metals and where otherwise indicated, the values given in this Appendix refer to the total recoverable (dissolved plus suspended) amount of each substance. For the aquatic life values for metals, the values refer to dissolved amount.

(2) Except where otherwise indicated, these values are based on EPA Section 304(a) criteria recommendations assuming consumption of 2 liters of water and 6.5 grams of aquatic organisms per day.

(3) Substance classified as a carcinogen with the value based on an incremental risk of one additional instance of cancer in one million persons.

(4) Hardness dependent criteria. Value given is an example only and is based on a CaC0 3 hardness of 100 mg/l. Criteria for each case must be calculated using the formula in Appendix F.

(5) pH dependent criteria. Value given is an example only and is based on a pH of 7.8. Criteria for each case must be calculated using the formula in Appendix G.

(6) Chemicals which are not individually classified as carcinogens but which are contained within a class of chemicals with carcinogenicity as the basis for the criteria derivation for that class of chemicals; an individual carcinogenicity assessment for these chemicals is pending.

(7) Value is based on organoleptic (taste and odor) effects and is more stringent than if based solely on toxic or carcinogenic effects.

(8) EPA Section 304(a) human health criteria recommendation assuming consumption of contaminated aquatic organisms at a rate of 6.5 grams per day.

(9) The criterion is based on an EPA drinking water standard (Maximum Contaminant Level or MCL).

(10) This value is expressed in terms of total recoverable metal in the water column.

(11) The iron and manganese criteria are based on Safe Drinking Water Act secondary standards and are intended to prevent undesirable aesthetic effects. These values represent the dissolved amount of each substance rather than the total amount.

(12) Value is based on the dissolved amount, which is the amount that will pass through a 0.45 um membrane filter prior to acidification to pH 1.5-2.0 with nitric acid.

(13) This criterion applies to total PCBs, i.e., the sum of all congener or all isomer analyses.

(14) The aluminum criteria are expressed as total recoverable metal in the water column. The 87 µg/l chronic criterion for aluminum is based on information showing chronic effects on brook trout and striped bass. The studies underlying the 87 µg/l chronic value, however, were conducted at low pH (6.5 - 6.6) and low hardness (< 10 ppm CaCO3), conditions uncommon in Wyoming surface waters. A water effect ratio toxicity study in West Virginia indicated that aluminum is substantially less toxic at higher pH and hardness (although the relationship is not well quantified at this time). Further, EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 µg/l aluminum when either the total recoverable or dissolved aluminum is measured. Based on this information and considering the available toxicological information in Tables 1 and 2 of EPA's Aluminum Criteria Document (EPA 440/5-86-008), the Department of Environmental Quality will implement the 87 µg/l chronic criterion for aluminum as follows: where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as CaCO3 in the receiving water after mixing, the 87 µg/l chronic criterion will not apply, and aluminum will be regulated based on compliance with the 750 µg/l acute aluminum criterion. In

situations where the 87 µg/l chronic criterion applies, a discharger may request development of and provide the basis for a site-specific chronic criterion based on a water-effect ratio. Or, a discharger may request development of and provide the basis for a permitting procedure (a translator) that would take into account less toxic forms of particulate aluminum.

SITE-SPECIFIC CRITERIA

Site-specific criteria are applicable only to the waters and/or locations specified, and replace similar criteria expressed elsewhere in these regulations. At present, there are no Reservation waterbodies or segments with site-specific criteria.

Appendix C

Ammonia Toxicity Criteria

(a) The ammonia values in the tables below are expressed in milligrams ammonia nitrogen per liter (mg N/L) and vary with temperature and/or pH, and fish species or fish life stage. The ammonia criteria for pH values not represented in the tables can be calculated using the formulas in section (b) of this appendix.

pH-Dependent Values of the Acute Criterion (CMC)[1] for Ammonia

	Acute Values, mg N/L	
pH	**Salmonids Present**	**Salmonids Absent**
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

Appendix C

Ammonia Toxicity Criteria

Temperature and pH Dependent Values of the Chronic Criterion (CCC)[2] for Fish Early Life Stages Present

	Temperature, °C									
pH	**0**	**14**	**16**	**18**	**20**	**22**	**24**	**26**	**28**	**30**
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	5.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	.0315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Appendix C

Ammonia Toxicity Criteria

Temperature and pH Dependent Values of the Chronic Criterion (CCC)[2] for Fish Early Life Stages Absent

	Temperature, °C									
pH	**0-7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15***	**16***
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46	6.06
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36	5.97
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25	5.86
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10	5.72
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93	5.56
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73	5.37
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49	5.15
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22	4.90
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92	4.61
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59	4.30
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23	3.97
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85	3.61
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47	3.25
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71	2.54
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36	2.21
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03	1.91
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74	1.63
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48	1.39
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06	0.990
8.6	1.49	1.49	1.31	1.23	1.15	1.08	1.01	0.951	0.892	0.836
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754	0.707
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641	0.601
8.9	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548	0.513
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471	0.442

* At 15°C and above, the criterion for fish early life stages absent is the same as the criterion for fish early life stages present.

(b) For pH values not expressed in the preceding tables, ammonia toxicity criteria can be calculated as follows:

(i) Salmonids or other sensitive cold water species present:

$$CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

(ii) Salmonids or other sensitive cold water species absent:

$$CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

(iii) Criterion Continuous Concentration (CCC) when fish early life stages are present:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{7.688-pH}}\right) \bullet MIN\left(2.85, 1.45 \bullet 10^{0.028 \cdot (25-T)}\right)$$

(iv) Criterion Continuous Concentration (CCC) when fish early life stages are absent:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{7.688-pH}}\right) \bullet 1.45 \bullet 10^{0.028 \cdot (25-\max(T,7))}$$

---

1 Criterion Maximum Concentration (CMC) refers to the one-hour average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three (3) years. The CMC can also be referred to as the acute value.

2 Criterion Continuous Concentration (CCC) refers to the 30-day average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three (3) years. In addition, the highest 4-day average within the 30-day period should not exceed 2.5 times the CCC. The CCC can also be referred to as the chronic value.

Appendix D

Minimum Dissolved Oxygen Criteria* (mg/l)

	Cold water Criteria		Class 2C and Warm water Criteria	
	Early Life Stages[1],[2]	Other Life Stages	Early Life Stages[2]	Other Life Stages
30 Day Mean	NA[3]	6.5	NA	5.5
7 Day Mean	9.5[6.5]	NA[3]	6.0	NA[3]
7 Day Mean Minimum[4]	NA[3]	5.0	NA[3]	4.0
1 Day Minimum[4]	8.0 (5.0)	4.0	5.0	3.0

(1) These are water column concentrations recommended to achieve the required inter-gravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column, the figures in parentheses apply.

(2) Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching.

(3) NA (not applicable).

(4) All minima should be considered as instantaneous concentrations to be achieved at all times.

* These limitations apply to Class 1, 2A, 2B and 2C waters only and in no case shall be interpreted to require dissolved oxygen concentrations greater than 100 percent saturation at ambient temperature and elevation.

Appendix E

References for Use in Making Bioassays of Surface Waters

U.S. Environmental Protection Agency: Quality Criteria for Water. EPA-440/5-86/001. U.S. EPA, 1986.

U.S. Environmental Protection Agency: Ambient Water Quality Criteria Documents, 1980, and subsequent revisions. U.S. EPA, 1980.

U.S. Environmental Protection Agency: Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses. U.S. EPA, 1985.

U.S. Environmental Protection Agency: Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use Attainability Analyses. U.S. EPA, 1983.

U.S. Environmental Protection Agency: Technical Guidance Manual for Performing Waste Load Allocation, Book VI, Chapter 1: Stream Design Flow for Steady-State Modeling. U.S. EPA, 1986.

U.S. Environmental Protection Agency: Technical Support Document for Water Quality Based Toxics Control. U.S. EPA, 1985.

U.S. Environmental Protection Agency: Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. EPA-600/4-85/013. U.S. EPA, 1985.

U.S. Environmental Protection Agency: Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Second Edition. EPA-600/4-89/001. U.S. EPA, 1989.

U.S. Environmental Protection Agency: Water Quality Standards Handbook, Second Edition, EPA 823-B-94-005a, August 1994, with Appendices.

Appendix F

Conversion Factors: Total Recoverable Values
Dissolved Values for Metals
Equations For Parameters With Hardness[1] Dependence

Conversion Factors: Aquatic life values for the following metals are based on dissolved amounts of each substance. Because the National Toxics Criteria (EPA's Section 304(a) criteria) are expressed as "total recoverable" values, the application of a conversion factor is necessary to convert from "total recoverable" to "dissolved".

Furthermore, the toxicity of the associated metals varies with hardness and the total recoverable value must be calculated based on the CaCO3 hardness prior to multiplying by the conversion factor (CF).

The conversion factors for the following metals are constants:

Metal	Acute Value	Chronic Value
Chromium (III)	0.316	0.860
Copper	0.960	0.960
Nickel	0.998	0.997
Silver	0.85	N/A
Zinc	0.978	0.986

The conversion factors (CF) for Cadmium and Lead are not constant but vary with hardness (CaCO3) and can be calculated using the following equations:

Cadmium Acute: $CF = 1.136672 - [(\ln \text{hardness})(0.041838)]$
Cadmium Chronic: $CF = 1.101672 - [(\ln \text{hardness})(0.041838)]$

Lead Acute and Chronic: $CF = 1.46203 - [(\ln \text{hardness})(0.145712)$

Footnote:
(1) Hardness as mg/l $CaC0_{(3)}$

Appendix F
(continued)

Equations For Parameters With Hardness[1] Dependence

The following equations include the conversion factors to derive the dissolved metals values:

Parameter	Acute *1-Hour Average Concentration (µg/l)*	Chronic *4-Day Average Concentration (µg/l)*
Cadmium	$e^{(1.128\ [\ln(\text{hardness})]-3.6867)(CF)}$	$e^{(0.7852\ [\ln(\text{hardness})]-2.715)(CF)}$
Chromium (III)	$e^{(0.8190\ [\ln(\text{hardnbess})]+3.7256)(0.316)}$	$e^{(0.8190\ [\ln(\text{hardness})]+0.6848)(0.860)}$
Copper	$e^{(0.9422\ [\ln(\text{hardness})]-1.700)(0.960)}$	$e^{(0.8545\ [\ln(\text{hardness})]-1.702)(0.960)}$
Lead	$e^{(1.273\ [\ln(\text{hardness})]-1.460)(CF)}$	$e^{(1.273\ [\ln(\text{hardness})]-4.705)(CF)}$
Manganese	$e^{(0.7693[\ln(\text{hardness})]+4.4995)}$	$e^{(0.5434[\ln(\text{hardness})]+4.7850)}$
Nickel	$e^{(0.8460\ [\ln(\text{hardness})]+2.255)(0.998)}$	$e^{(0.8460\ [\ln(\text{hardness})]+0.0584)(0.997)}$
Silver	$e^{(1.72\ [\ln(\text{hardness})]-6.52)(0.85)}$	N/A
Zinc	$e^{(0.8473\ [\ln(\text{hardness})]+0.884)(0.978)}$	$e^{(0.8473\ [\ln(\text{hardness})]+0.884)(0.986)}$

[1] Hardness as mg/l CaCO3. Hardness values used in these equations must be between 25 mg/l and 400 mg/l. For hardness values less than 25 mg/l, use 25. For hardness values greater than 400 mg/l use 400.

G-1

Appendix G

Equations For Parameters With pH Dependence

Parameter	4-Day Average Concentration (µg/l)	1-Hour Average Concentration (µg/l)
Pentachloro-Phenol	$e^{[1.005\ (pH)-5.290]}$	$e^{[1.005\ (pH)-4.830]}$

Appendix H

Invasive Aquatic Organisms
This Appendix is still being developed.

Exhibit J

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

WATER QUALITY RULES AND REGULATIONS

WIND RIVER RESERVATION
SURFACE WATER QUALITY STANDARDS

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WIND RIVER RESERVATION
SURFACE WATER QUALITY STANDARDS

Section 1. **Authority.** These regulations are promulgated pursuant to the Wind River Water Code, Chapter I, specifically Section(s) A, C, E, and F, and Chapter II, specifically Section A, and no person shall cause, threaten or allow violation of a surface water quality standard contained herein. Nothing in this definition is intended to expand the scope of the Wind River Water Code, nor do these regulations supersede or abrogate the authority of the Water Control Board and the Office of the Tribal Water Engineer to appropriate quantities of water for beneficial uses.

Section 2. **Definitions.**

(a) The definitions in Chapter 1, Section B of the Wind River Water Code apply to these rules. For example:

(i) "Board" shall mean the Water Resources Control Board of the Wind River Reservation;

(ii) "JBC" shall mean the Joint Business Council of the (Eastern) Shoshone and Northern Arapaho Tribes of the Wind River Reservation;

(iii) "Person" shall mean any individual or group or combination thereof acting as a unit, however associated; any organization of any kind, whether organized for profit or not, and regardless of the manner or form in which it does business, whether as a sole proprietorship, receiver, partnership, joint venture, trust, estate, firm, unincorporated association, corporation, or government, including, but not limited to, any part, subdivision, or agency of any of the foregoing; and any combination of individuals or organizations in whatever form, and the plural as well as the singular number.

(iv) "Reservation lands" shall mean all lands within the Wind River Reservation, which Reservation is defined to include:

A. All land within the limits or exterior bounds of the Reservation as delimited in the Treaty of July 3, 1868, 15 Stat. 673, less the portions ceded under the Acts of December 15, 1874, 18 Stat. 291, and June 7, 1897, 30 Stat. 93, notwithstanding the issuance of any patent, and including rights-of-way running through the Reservation.

B. All lands which may hereafter be added to or made a part of the Reservation.

(v) "Tribal Court" shall mean the Eastern Shoshone and Northern Arapaho Tribal Court of the Wind River Reservation.

(vi) "Tribes" shall mean the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation.

(vii) "Tribal water rights" shall mean those rights to divert or affect Reservation water which are granted pursuant to the provisions of this Code.

(viii) "Reservation water" shall mean any and all waters underlying, flowing through or otherwise occurring or contained within the Reservation.

(ix) "General Adjudication" shall mean the proceeding entitled In re: The General Adjudication of All Rights to Use water in the Big Horn River System, 753 P. 2d 76 (Wyo. 1988), **affirmed** _____ **U.S.** _____ (1989).

(x) "1868 tribal water" shall mean that water reserved by treaty and adjudicated in the General Adjudication and bearing a priority date of 1868.

(xi) "1868 allottee derivative water" shall mean that water adjudicated to the use of a successor in interest to an Indian allottee, the right to appropriate and the amount thereof which was determined by the General Adjudication and bearing a priority date of 1868, popularly referred to as "Walton rights."

(xii) "General Councils" shall mean the General Council of the Eastern Shoshone Tribe and the General Council of the Northern Arapaho Tribe of the Wind River Reservation.

(xiii) "Mean annual flow" shall mean that flow which is calculated using historical average annual flow data for the period 1940-1989.

(xiv) "Treaty-based water" shall mean 1868 tribal water and 1868 allottee derivative water.

(xv) "Reservation-held water right" shall mean a water right held pursuant to Reservation water law.

(b) The following definitions supplement those definitions contained in Chapter I, Section B of the Wind River Water Code:

(i) "Acute value" means the one-hour average concentration. The EPA has determined that this value, if not exceeded more than once every three years on average, should not result in unacceptable effects on freshwater aquatic organisms and their uses. Acnte values represent a response to a stimulus severe enough to induce a rapid reaction, typically in 96 hours or less. Appendix B contains acute values for certain pollutants.

(ii) "Adjacent wetlands" means wetlands that are connected by a defined channel to a surface tributary system, or are within the 100 year flood plain of a river or stream, or occupy the fringe of any still water body which is connected by a defined channel to a surface tributary system.

(iii) "Aquatic life" means fish, invertebrates, amphibians, and other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles. Aquatic life does not include insect pests or exotic species which may be considered undesirable by the Reservation Fish and Game Water Quality Program or the U.S. Fish and Wildlife Service within their appropriate jurisdictions and identified human pathogens.

(iv) "Assimilative capacity" means the increment of water quality in terms of concentration, during the appropriate critical condition(s), that is better than the applicable numeric criterion. The concept of assimilative capacity has no meaning in relation to pollutants that are limited only by narrative criteria.

(v) "Best management practices (BMPs)" means a practice or combination of practices that after problem assessment, examination of alternative practices, and in some cases public participation, are determined to be the most technologically and economically feasible means of managing, preventing or reducing nonpoint source pollution.

(vi) "Chronic value" means the four day average concentration. The EPA has determined that this value, if not exceeded more than once every three years on average, should not result in unacceptable effects on freshwater aquatic organisms and their uses. Chronic values represent a response to a continuous, long-term stimulus. Appendix B contains chronic values for certain pollutants.

(vii) "Cold water game fish " means burbot (Genus Lota), grayling (Genus Thymallus), trout, salmon and char (Genus Salmo, Oncorhynchus and Salvelinus), and whitefish (Genus Prosopium).

(viii) "Construction-related discharge" means discharges of sediment or turbidity related to construction activities in or along waters of the Reservation. Generally, these discharges include but are not limited to construction site dewatering, temporary diversions, runoff from construction sites, excavation or equipment operation beneath the water's surface, the discharge of dredged or fill material and placement of structural members such as bridge abutments, culverts, pipelines, etc. into or across any water of the Reservation.

(ix) "Designated uses" means those uses specified in water quality standards for each water body or segment whether or not they are being attained.

(x) "Dissolved oxygen" means a measure of the amount of free oxygen in water.

(xi) "Effluent limitations" means any restriction established by the Reservation or by the administrator of the Environmental Protection Agency on quautities, rates and concentrations of chemical, physical, biological and other constituents which are discharged from point sources into waters of the Reservation, including schedules of compliance.

(xii) "Environmental Protection Agency" means the federal Environmental Protection Agency (EPA).

(xiii) "Ephemeral stream" means a stream which flows only in direct response to a single precipitation in the immediate watershed or in response to a single snow melt event, and which has a channel bottom that is always above the prevailing water table.

(xiv) "Eutrophic" means the condition whereby waters or environments saturated with water become nutrient enriched (especially with phosphorus or nitrogen). This action leads to those waters becoming oxygen depleted or anaerobic.

(xv) "Existing quality" as used in these regulations refers only to Class 1 waters and means the established chemical, physical, and biological water quality as of the date the specific water segment was designated Class 1 with recognition of the fact that water quality will tend to fluctuate on a seasonal and year-to-year basis depending upon natural fluctuations in water quantity.

(xvi) "Existing use" means those uses actually attained in the water body on or after **November 28, 1975**, whether or not they are included in the water quality standards.

(xvii) "Fecal coliform" means those species within the coliform bacteria group which are present in the gut or feces of warm-blooded animals. The group includes organisms which are capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5 degrees C + .2 degrees C.

(xviii) "Federal Act" means the Federal Water Pollution Control Act (Clean Water Act) and amendments as of June 21, 2001.

(xix) "Full body contact water recreation" means any recreational or other surface water use in which there is contact with the water sufficient to pose a significant health hazard (i.e., water skiing, swimming).

(xx) "Game fish" means bass (Genus Micropterus and Ambloplites), catfish and bullheads (Genus Ameiurus, Ictalurus Noturus and Pylodictis), crappie (Genus Pomoxis), freshwater drum (Genus Aplodinotus) grayling (Genus Thymallus), burbot (Genus Lota), pike (Genus Esox), yellow perch (Genus Perca), sturgeon (Genus Scaphirhynchus), sunfish (Genus Lepomis), trout, salmon and char (Genus Salmo, Oncorhynchus, and Salvelinus), walleye and sauger (Genus Stizostedion), and whitefish (Genus Prosopium).

(xxi) "Historic data" means scientifically valid data that is more than five years

old, or qualitative information that adds some factual information on the historic conditions of a water body. This historic qualitative information may include photographs, journals and factual testimony of persons who have lived near or relied upon the water body, and old records on water use and water conditions.

(xxii) "Hydric soil" means a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

(xxiii) "Hydrophytic vegetation" means a community of plants where, under normal circumstances more than 50 percent of the composition of the dominant species from all strata are obligate wetland (OBL), facultative wetland (FACW), and/or facultative (FAC) species; or a frequency analysis of all species within the community yields a prevalence index value of less than 3.0 (where OBL = 1.0, FACW = 2.0, FAC = 3.0, FACU (facultative upland) = 4.0, and UPL (upland species) = 5.0).

(xxiv) "Intermittent stream" means a stream or part of a stream where the channel bottom is above the local water table for some part of the year, but is not a perennial stream.

(xxv) "Isolated water" means any surface water of the state which is not connected by a defined channel to a surface tributary system and is not within tbe 100 year flood plain of any river or stream and does not occupy the fringe of any still water body which is connected by a defined channel to a surface tributary system.

(xxvi) "Main stem" means the major channel of a river or stream as shown on the latest and most detailed records of the Wyoming State Engineer.

(xxvii) "Micrograms per liter (µg/l)" means micrograms of solute per liter of solution equivalent to parts per billion (ppb) in liquids, assuming unit density.

(xxviii) "Milligrams per liter (mg/l)" means milligrams of solute per liter of solution equivalent to parts per million (ppm) in liquids, assuming unit density.

(xxix) "Mixing zone" means limited area or volume of a surface water body within which an effluent becomes thoroughly mixed with the water body.

(xxx) "Nanograms per liter (ng/l)" means nanograms of solute per liter of solution equivalent to parts per trillion in liquids, assuming unit density.

(xxxi) "Natural" means that condition which would exist without the measurable effects or measurable influence of man's activities.

(xxxii) "Natural biotic community" means the population structures which were historically or normally present under a given set of chemical and physical conditions or which would potentially exist without the measurable effects or measurable influence of man's activities had not the habitat been altered.

(xxxiii) "Natural water quality" means that quality of water which would exist without the measurable effects or measurable influence of man's activities.

(xxxiv) "Nephelometric turbidity unit (NTU)" means the standard unit used to measure the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through water, as measured by a nephelometer.

(xxxv) "Nongame fish" means all fish species except those listed in Section 2 (b)(xx) above.

(xxxvi) "Non-priority pollutant" means any substance or combination of substances other than those listed by EPA under Section 307(a) of the Federal Clean Water Act.

(xxxvii) "Perennial stream" means a stream or part of a stream that flows continually during all of the calendar year as the result of a groundwater discharge or surface runoff.

(xxxviii) "pH" means a term used to express the intensity of acid or alkaline conditions. pH is a measure of the hydrogen ion activity in a water sample. It is mathematically related to hydrogen ion activity according to the expression: pH = -log 10 (H +), where (H+) is the hydrogen ion activity. A pH value of 7 at 25 degrees C is neutral, with pHs of less than 7 progressively more acid and pHs of greater than 7 progressively more basic (alkaline).

(xxxix) "PicoCuries per liter (pCi/l)" means a term describing the radiation level of water or solutions. A picocurie is equal to 10 -12 curie; a curie is defined as 3.7 x 1010 disintegrations per second.

(xl) "Priority pollutants" means those substances or combination of substances that are listed by EPA under Section 307(a) of the Federal Clean Water Act.

(xli) "Salinity" means the total mineral dissolved constituents, after carbonates have been converted to oxides, organics have been oxidized and bromine and iodine have been replaced by chloride. This term is often used interchangeably with the term total dissolved solids.

(xlii) "Seasonal fishery" means a water body, or portion thereof, which supports game and/or nongame fish or spawning for only a portion of the year, but does not have the natural physical conditions necessary to support those uses on a year round basis. Seasonal fisheries may include intermittent and ephemeral streams, shallow reservoirs, lakes, or ponds, which either naturally recruit fish from adjacent perennial water bodies or are managed as put-and-take fisheries.

(xliii) "Secondary body contact recreation" means any recreational or other surface water use in which contact with water is either incidental or accidental and in which the probability of ingesting appreciable quantities of water is minimal, such as fishing, hunting and commercial and recreational boating.

(xliv) "Storm water" for the purposes of Section 7 of this chapter, means surface runoff from construction sites or industrial activities which are regulated under Section 402 (p) of the federal Clean Water Act. Excluded from this definition are those storm water discharges associated with industrial activities which are subject to an existing federal effluent limitation guideline addressing storm water and where the constituents listed in the federal effluent limitations have a reasonable potential to affect the receiving waters.

(xlv) "Surface waters of the Reservation" means all perennial, intermittent and ephemeral defined drainages, lakes, reservoirs, and wetlands which are not man-made retention ponds used for the treatment of municipal, agricultural or industrial waste; and all other bodies of surface water, either public or private which are wholly or partially within the boundaries of the Reservation. Nothing in this definition is intended to expand the scope of the Wind River Water Code.

(xlvi) "Toxic materials" means those materials or combinations of materials including disease causing agents, which, after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Director of the Wind River Environmental Quality Commission, cause death, disease, behavioral abnormalities, cancer, genetic malfunctions, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring.

(xlvii) "Tributary" means those streams or stream segments which flow into or contribute water to another stream, stream segment, downstream reach of the same stream, or other water body.

(xlviii) "Undesirable aquatic life" means organisms generally associated with degraded or eutrophic conditions. These may include the following organisms where they have replaced members of the natural biotic community: exotic fish, or species which are designated "undesirable" by the Wind River Fish and Game, Water Quality Program, or the U.S. Fish and Wildlife Service within their appropriate jurisdictions.

(xlix) "Use attainability analysis (UAA)" means a structured scientific assessment of the factors affecting the attainment of the use. The factors may include physical, chemical, biological, and economic factors as described in Section 33 of these regulations.

(l) "Warm water game fish" means bass (Genus Micropterus and Ambloplites), catfish and bullheads (Genus Ameiurus, Ictalurus, Noturus and Pylodictus), crappie (Genus Pomoxis), yellow perch (Genus Perca), sunfish (Genus Lepomis), walleye and sauger (Genus Stizostedion and Sander), pike (Genus Esox), sturgeon (Genus Scaphirhynchus) and freshwater drum (Genus Aplodinotus).

(li) "Wetland hydrology" means the presence of water on or near the land surface at a frequency and duration to cause the formation of hydric soils and support a prevalence of vegetation typically adapted to saturated and/or inundated conditions.

(lii) "WREQC" shall mean the Wind River Environmental Quality Commission.

(liii) "Zone of passage" means a continuous water route which joins segments of a surface water body above and below a mixing zone.

(liv) "404 permit" means a permit issued pursuant to Section 404 of the Federal Act to regulate the discharge of dredged or fill materials into surface waters of the United States.

Section 3. **Designated Uses.** The objectives of the water pollution control program are described in the Wind River Water Code. These objectives are designed to serve the interests of the Reservation and achieve the related goals, objectives, and policies of the Federal Act. The objectives of the Reservation water quality protection program are to provide, wherever attainable, the highest possible water quality commensurate with the following designated uses:

(a) Agriculture. For purposes of water pollution control, agricultural uses include irrigation or stock watering.

(b) Fisheries. The fisheries use includes water quality, habitat conditions, spawning and nursery areas, and food sources necessary to sustain populations of game and nongame fish. This use does not include the protection of exotic species which are designated "undesirable" by the Reservation Fish and Game, Water Quality Program, or the U.S. Fish and Wildlife Service within their appropriate jurisdictions.

(c) Industry. Industrial use protection involves maintaining a level of water quality useful for industrial purposes.

(d) Drinking water. The drinking water use involves maintaining a level of water quality that is suitable for potable water or intended to be suitable after receiving conventional drinking water treatment.

(e) Recreation. Recreational use protection involves maintaining a level of water quality which is safe for human contact. It does not guarantee the availability of water for any recreational purpose.

(i) Primary Contact Recreation. These surface waters are suitable or are intended to

become suitable for recreational activities in or on the water when the ingestion of small quantities of water is likely to occur. Such waters include, but are not limited to, those used for swimming, ceremonial uses, and wading.

(ii) Secondary Contact Recreation. These surface waters are suitable, or intended to become suitable for recreational activities on or about the water which are not included in the primary contact category, including, but not limited to, fishing, hunting, and other streamside or lakeside recreation.

(f) Scenic value. Scenic value use involves the aesthetics of the aquatic systems themselves (odor, color, taste, settleable solids, floating solids, suspended solids, and solid waste) and is not necessarily related to general landscape appearance.

(g) Aquatic life other than fish. This use includes water quality and habitat necessary to sustain populations of organisms other than fish in proportions which make up diverse aquatic communities common to the waters of the Reservation. This use does not include the protection of human pathogens, or the protection of insect pests or exotic species which may be considered "undesirable" by the WREQC Water Quality Program, the Reservation Fish and Game Department, or the U.S. Fish and Wildlife Service, within their appropriate jurisdictions. human pathogens.

(h) Wildlife. The wildlife use includes protection of water quality to a level which is safe for contact and consumption by avian and terrestrial wildlife species.

(i) Fish consumption. The fish consumption use involves maintaining a level of water quality that will prevent any unpalatable flavor and/or accumulation of harmful substances in fish tissue.

Section 4. **Snrface Water Classes and Uses.** The following water classes are a hierarchical categorization of waters according to existing and designated uses. Except for Class 1 waters, each classification is protected for its specified uses plus all the uses contained in each lower classification. Class 1 designations are based on value determinations rather than use support and are protected for all uses in existence at the time or after designation. There are four major classes of Reservation surface waters, with various subcategories within each class (see "Reservation Surface Water Classification List" for current listing).

(a) Class 1, Outstanding Tribal Resource Waters. Class 1 waters are those surface waters in which no further water quality degradation by point source discharges other than from dams will be allowed. Nonpoint sources of pollution shall be controlled through implementation of appropriate best management practices. Pursuant to Section 7 of these regulations, the water quality and physical and biological integrity, which existed on the water at the time of designation, will be maintained and protected. In designating Class 1 waters, the Board, the WREQC, and the WREQC Water Quality Program shall consider water quality, aesthetic, scenic, recreational, ecological, agricultural, botanical, zoological, municipal, industrial, historical, geological, cultural, archaeological, fish and wildlife, the presence of significant quantities of developable water and other values of present and future benefit to the people.

(b) Class 2, Fisheries and Drinking Water. Class 2 waters are waters, other than those designated as Class 1, that are known to support fish or drinking water supplies or where those uses are attainable. Class 2 waters may be perennial, intermittent or ephemeral and are protected for the uses indicated in each sub category listed below. There are six subcategories of Class 2 waters.

(i) Class 2AB. Class 2AB waters are those known to support game fish populations or spawning and nursery areas at least seasonally and all their perennial tributaries and adjacent wetlands and where a game fishery and drinking water use is otherwise attainable. Class 2AB waters include all permanent and seasonal game fisheries and can be either "cold water" or "warm water" depending upon the predominance of cold water or warm water species present. All Class 2AB waters are

designated as cold water game fisheries unless identified as a warm water game fishery by a "ww" notation in the "Reservation Surface Water Classification List". Unless it is shown otherwise, these waters are presumed to have sufficient water quality and quantity to support drinking water supplies and are protected for that use. Class 2AB waters are also protected for nongame fisheries, fish consumption, aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture and scenic value uses.

(ii) Class 2A. Class 2A waters are those that are not known nor have the potential to support game fish but are used for public or domestic drinking water supplies, including their perennial tributaries and adjacent wetlands. Uses designated on Class 2A waters include drinking water, aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture and scenic value.

(iii) Class 2B. Class 2B waters are those known to support or have the potential to support game fish populations or spawning and nursery areas at least seasonally and all their perennial tributaries and adjacent wetlands and where it has been shown that drinking water uses are not attainable pursuant to the provisions of Section 33. Class 2B waters include permanent and seasonal game fisheries and can be either "cold water" or "warm water" depending upon the predominance of cold water or warm water species present. All Class 2B waters are designated as cold water game fisheries unless identified as a warm water game fishery by a "ww" notation in the "Reservation Surface Water Classification List". Uses designated on Class 2B waters include game and nongame fisheries, fish consumption, aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture and scenic value.

(iv) Class 2C. Class 2C waters are those known to support or have the potential to support only nongame fish populations or spawning and nursery areas at least seasonally including their perennial tributaries and adjacent wetlands. Class 2C waters include all permanent and seasonal nongame fisheries and are considered "warm water". Uses designated on Class 2C waters include nongame fisheries, fish consumption, aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture, and scenic value.

(iv) Class 2D. Class 2D waters are known to support or have the potential to support populations of indigenous fish species which the Tribes have determined to deserve special water quality protection measures. Any special water quality protection measures necessary to protect these populations will be determined on a case-by-case basis. Uses designated on Class 2D waters include game and nongame fisheries, fish consumption, aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture and scenic value.

(v) Class 2E. Class 2E waters are those whose flows are exclusively the result of permitted effluent discharges and are known to support or have the potential to support game or nongame fish populations or spawning and nursery areas at least seasonally. The determination of these waterbodies to support fish populations will be determined on a case by case basis. Uses designated on Class 2E waters include game and nongame fisheries, aquatic life other than fish, secondary contact recreation, wildlife, industry, agriculture, and scenic value.

(c) Class 3, Aquatic Life Other than Fish. Class 3 waters are waters, other than those designated as Class 1, that are intermittent, ephemeral or isolated waters and because of natural habitat conditions, do not support nor have the potential to support fish populations or spawning, or certain perennial waters which lack the natural water quality to support fish (e.g., geothermal areas). Class 3 waters provide support for invertebrates, amphibians, or other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles. Uses designated on Class 3 waters include aquatic life other than fish, recreation, wildlife, industry, agriculture and scenic value. Generally, waters suitable for this classification have wetland characteristics, and such characteristics will be a primary indicator used in identifying Class 3 waters. There are three subcategories of Class 3 waters.

(i) Class 3A. Class 3A waters are isolated waters including wetlands that are not known to support fish populations or drinking water supplies and where those uses are not attainable.

(ii) Class 3B. Class 3B waters are tributary waters including adjacent wetlands that are not known to support fish populations or drinking water supplies and where those uses are not attainable. Class 3B waters are intermittent and ephemeral streams with sufficient hydrology to normally support and sustain communities of aquatic life including invertebrates, amphibians, or other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles. In general, 3B waters are characterized by frequent linear wetland occurrences or impoundments within or adjacent to the stream channel over its entire length. Such characteristics will be a primary indicator used in identifying Class 3B waters.

(iii) Class 3C. Class 3C waters are perennial streams without the natural water quality potential to support fish or drinking water supplies but do support wetland characteristics. These may include geothermal waters and waters with naturally high concentrations of dissolved salts or metals or pH extremes.

(iv) Class 3D. Class 2D waters are known to support or have the potential to support populations of indigenous aquatic life other than fish which the Tribes have determined to deserve special water quality protection measures. Any special water quality protection measures necessary to protect these populations will be determined on a case-by-case basis. Uses designated on Class 3D waters include aquatic life other than fish, primary contact recreation, wildlife, industry, agriculture and scenic value.

(v) Class 3E. Class 3D waters are perennial, intermittent or ephemeral streams whose flows are exclusively the result of permitted effluent discharges and are known to support or have the potential to support aquatic life other than fish. Class 3D waters possess sufficient hydrology to normally support and sustain communities of aquatic life including invertebrates, amphibians, or other flora and fauna which inhabit waters of the Reservation at some stage of their life cycles. The determination of these waterbodies to support aquatic life will be determined on a case by case basis. Uses designated on Class 3E waters include aquatic life other than fish, secondary contact recreation, wildlife, industry, agriculture, and scenic value.

(d) Class 4, Agriculture, Industry, Recreation and Wildlife. Class 4 waters are waters, other than those designated as Class 1, where it has been determined that aquatic life uses are not attainable pursuant to the provisions of Section 33 of these regulations. Uses designated on Class 4 waters include secondary contact recreation, wildlife, industry, agriculture, and scenic value.

(i) Class 4A. Class 4A waters are artificial canals and ditches that are not known to support fish populations.

(ii) Class 4B. Class 4B waters are intermittent and ephemeral stream channels that have been determined to lack the hydrologic potential to normally support and sustain aquatic life pursuant to the provisions of Section 33(b) of these regulations. In general, 4B streams are characterized by only infrequent wetland occurrences or impoundments within or adjacent to the stream channel over its entire length. Such characteristics will be a primary indicator used in identifying Class 4B waters.

(e) Specific stream segment classifications are contained in a separate document entitled "Reservation Surface Water Classification List," which is published by the WREQC Water Quality Program, and periodically revised and updated according to the provisions of sections 4, 33, 34, 35 and Appendix A of this chapter. Class 1 waters are those waters that have been specifically designated by the Wind River Environmental Quality Commission. Class 2 designations are based upon the fisheries information contained in the WREQC Water Quality Program's "Stream and Lakes" inventory database as submitted to the Board and the Wind River Environmental Quality Commission by the WREQC Water Quality Program. This database represents the best available information and is considered conclusive.

Class 4 designations are based upon knowledge that a water body is an artificial, man made conveyance, or has been determined not to support aquatic life uses through an approved Use Attainability Analysis. All other waters are designated as Class 3A or 3B. New information made available to the Board and the WREQC Water Quality Program may be cause to amend the classifications.

Section 5. **Standards Enforcement.** The numerical and narrative standards contained within these regulations shall be used to establish effluent limitations for those discharges requiring control via permits to discharge in the case of point sources and best management practices in the case of nonpoint sources. If no permit or best management practice has been issued or implemented for a pollution source the Board may, in addition to other appropriate legal action, take direct action to enforce these standards.

The processes used to implement the standards are described in various implementation documents adopted by the Board and the WREQC Water Quality Program. Such documents are adopted with full public participation and include, but are not limited to, the implementation policies for antidegradation, mixing zones, turbidity, and use attainability analysis, and best management practices.

These regulations shall not be interpreted to preclude the establishment of appropriate compliance schedules for permitting purposes nor shall compliance with the conditions of these regulations exempt any discharger from the penalty provisions of Wind River Water Code.

Section 6. **Compacts, Court Decrees and Water Rights.** The Wind River Environmental Quality Commission shall, after review and conference with the Tribal Water Engineer, make recommendations to the Tribal Water Engineer concerning proposed new diversions which could cause violations of these regulations.

Section 7. **Class 1 Waters.**

(a) Except as authorized in paragraph (b), no new point sources other than dams, may discharge, and no existing point sources, other than dams, may increase their quantity of pollution discharge, to any water designated as Class 1.

(b) Storm water and construction-related discharges of pollution to Class 1 waters may be authorized and shall be controlled through applicable water quality permits, Section 401 certifications and/or by the application of best management practices. Such discharges shall not degrade the quality of any Class 1 water below its existing quality or adversely affect any existing use of the water. Temporary increases in turbidity that are within the limits established in Section 23 of these regulations and that do not negatively affect existing uses can be permitted. For purposes of this section, temporary increases in turbidity shall not exceed the actual construction period. The Wind River Environmental Quality Commission shall impose whatever controls and monitoring are necessary on point source discharges to Class 1 waters and their tributaries to ensure that the existing quality and uses of the Class 1 water are protected and maintained. (c) Nonpoint source discharges of pollution to Class 1 waters or tributaries of Class 1 waters shall be controlled by application of best management practices adopted by the Board and the WREQC Water Quality Program. For Class 1 waters, best management practices will maintain existing quality and water uses.

Section 8. **Antidegradation.**

(a) Water uses in existence on or after the date of approval of the Wind River Reservation's water quality standards, and the level of water quality necessary to protect those uses, shall be maintained and protected. Those surface waters not designated as Class 1, but whose quality is better than the standards contained in these regulations, shall be maintained at that higher quality. However, after full intergovernmental coordination and public participation, the EPA, the Board, and the WREQC Water

Quality Program may issue a permit for or allow any project or development which would constitute a new source of pollution, or an increased source of pollution, to these waters as long as the following conditions are met:

(i) The quality is not lowered below these standards;

(ii) All existing water uses are fully maintained and protected;

(iii) The highest statutory and regulatory requirements for all new and existing point sources and all cost effective and reasonable best management practices for nonpoint sources have been achieved; and

(iv) The lowered water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

(b) The administrator may require an applicant to submit additional information, including but not limited to an analysis of alternatives to any proposed discharge and relevant economic information before making a determination under this section.

(c) The procedures used to implement this section are described in the "Antidegradation Implementation Policy."

Section 9. **Mixing Zones.** Except for acute whole effluent toxicity (WET) values and Sections 14, 15, 16, 17, 28 and 29 (b) of these regulations, compliance with water quality standards shall be determined after allowing reasonable time for mixing. Except for the zone of initial dilution, which is the initial 10% of the mixing zone, the mixing zone shall not contain pollutant concentrations that exceed the acute aquatic life values (see Appendix B). In addition, there shall be a zone of passage around the mixing zone which shall not contain pollutant concentrations that exceed the chronic aquatic life values (see Appendix B). Under no circumstance may a mixing zone be established which would allow human health criteria (see Appendix B) to be exceeded within 500 yards of a drinking water supply intake or result in acute lethality to aquatic life. The procedures used to implement this section are described in the "Mixing Zone and Dilution Allowances Policy."

Section 10. **Testing Procedures.** For determination of the parameters involved in the standards, analyses will be in accordance with test procedures defined pursuant to: Title 40, Code of Federal Regulations, Part 136, or any modifications thereto. For test procedures not listed in the Code of Federal Regulations, test procedures outlined in the latest editions of: EPA Methods for Chemical Analysis of Water and Wastes; or, Standard Methods for the Examination of Water and Wastewaters; or, ASTM Standards, Part 31, Water shall be used.

The analytical technique for total uranium (as U) shall be the fluorometric method as referenced in Methods for Determination of Radioactive Substances in Water and Fluvial Sediments, Techniques of Water - Resource Investigations of the U.S. Geological Survey, Book 5, Chapter A-5, pp. 83 - 92.

Where standard methods of testing have not been established, the suitability of testing procedures shall be determined by the WREQC Water Quality Program and the EPA using defensible scientific methods.

Section 11. **Flow Conditions.**

(a) Numeric water quality standards shall be enforced at all times except during periods below low flow. Low flow can be determined by the following methods. Whatever method is selected for a

specific situation, application of the standards will conform to the magnitude, frequency, and duration provisions as described in these regulations.

(i) Using the 7Q10 (the minimum seven (7) consecutive day flow which has the probability of occurring once in ten (10) years) for acute exposures;

(ii) The EPA's biologically based flow method which determines a four (4) day, three (3) year low flow for chronic exposures and a one (1) day, three (3) year low flow for acute exposures (ref: Technical Guidance Manual For Performing Waste Load Allocation; Book VI, Design Conditions: Chapter 1, Stream Design Flow for Steady-State Modeling, August 1986, US EPA);

(iii) Other defensible scientific methods.

(b) During periods when stream flows are less than the minimums described above, the Board and the WREQC Water Quality Program may, in consultation with the Reservation Fish and Game Department, the U.S. Fish and Wildlife Service, and the affected discharger(s), require permittees to institute operational modifications as necessary to insure the protection of aquatic life. This section should not be interpreted as requiring the maintenance of any particular stream flow.

(c) The narrative water quality standards in Sections 14, 15, 16, 17, 28 and 29(b) of these regulations shall be enforced at all stream-flow conditions.

Section 12. **Protection of Wetlands.** Point or nonpoint sources of pollution shall not cause the destruction, damage, or impairment of naturally occurring wetlands except when mitigated through an authorized wetlands mitigation process. When approving mitigation, the department may consider both the ecological functions and the wetland value of the disturbed wetland.

This section does not apply to wetlands created by point or nonpoint sources; nor are such wetlands required to be maintained through continuation of such discharges. Similarly, any manmade wetlands or enhancements which have been credited in the state wetland banking program are not required to be maintained until the credit is used for mitigation purposes. These areas will, however, be protected from discharges of wastes, toxic substances or chemical pollutants as are any other waters of the Reservation.

Section 13. **Toxic Materials.** Except for those substances referenced in Sections 21 (e) and (f) of these regulations, toxic materials attributable to or influenced by the activities of man shall not be present in any Reservation surface water in concentrations or combinations which constitute "pollution".

Section 14. **Dead Animals and Solid Waste.** Dead animals or solid waste shall not be placed or allowed to remain in Reservation surface waters. When discovered, removal shall be expeditious unless removal would likely cause more contamination than non-removal. This section should not be interpreted to place a burden on any person to remove dead wildlife from surface waters where the death of the animals occurs under natural or uncontrollable circumstances. Except as authorized through a 404 permit, solid waste shall not be placed or allowed to remain in surface waters of the state, nor shall solid wastes be placed or allowed to remain in any location which would cause or threaten contamination of Reservation surface waters.

Section 15. **Settleable Solids.** In all Reservation surface waters, substances attributable to or influenced by the activities of man that will settle to form sludge, bank or bottom deposits shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life or adversely affect pnblic water supplies, agricultural or industrial water use, plant life or wildlife.

Section 16. **Floating and Suspended Solids.** In all Reservation surface waters, floating and suspended solids attributable to or influenced by the activities of man shall not be present in quantities which could result in significant aesthetic degradation, significant degradation of habitat for aquatic life, or adversely affect public water supplies, agricultural or industrial water use, plant life or wildlife.

Section 17. **Taste, Odor and Color.** No Class 1, 2, or 3 waters shall contain substances attributable to or influenced by the activities of man that produce taste, odor and color or that would:

(a) Of themselves or in combination, impart an unpalatable or off-flavor in fish flesh;

(b) Visibly alter the natural color of the water or impart color to skin, clothing, vessels, or structures;

(c) Produce detectable odor; or

(d) Directly or through interaction among themselves, or with chemicals used in existing water treatment processes, result in concentrations that will impart undesirable taste or odor to public water supplies.

Section 18. **Human Health.** In all Class 1, 2AB, and 2A waters, the human health values for "Fish and Drinking Water" listed in Appendix B of these regulations shall not be exceeded. In all Class 2B and 2C waters, the human health values for "Fish Only" (consumption of aquatic organisms) shall not be exceeded. In certain waters, the criteria listed in Appendix B of these regulations may not be appropriate due to unique physical or chemical conditions. In such cases, human health values may be determined by use of the site-specific procedures outlined in the references listed in Appendix E of these regulations.

Section 19. **Industrial Water Supply.** All Reservation surface waters which have the natural water quality potential for use as an industrial water supply shall be maintained at a quality which allows continued use of such waters for industrial purposes. Degradation of such waters shall not be of such an extent to cause a measurable increase in raw water treatment costs to the industrial user(s). Unless otherwise demonstrated, all Reservation surface waters have the natural water quality potential for use as an industrial water supply.

Section 20. **Agricultural Water Supply.** All Reservation surface waters which have the natural water quality potential for use as an agricultural water supply shall be maintained at a quality which allows continued use of such waters for agricultural purposes.

Degradation of such waters shall not be of such an extent to cause a measurable decrease in crop or livestock production.

Unless otherwise demonstrated, all Reservation surface waters have the natural water quality potential for use as an agricultural water supply.

Section 21. **Protection of Aquatic Life.**

(a) Ammonia.

(i) The toxicity of ammonia varies with pH and temperature and the applicable limitations are included in the charts in Appendix C of these regulations. The numeric ammonia criteria in Appendix C apply to all Class 1 and 2 waters.

(ii) In all Class 3 waters, concentrations of ammonia attributable to or influenced by human activities shall not be present in concentrations which could result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

(b) Specific numeric standards for a number of toxicants are listed in the aquatic life "acute value" and "chronic value" columns in Appendix B of these regulations. These standards apply to all Class 1, 2, and 3 waters. For these pollutants, the chronic value (four (4) day average concentration) and the acute value (one (1) hour average concentration) shall not be exceeded more than once every three (3) years.

(c) Others. For those pollutants not listed in Appendix B or C of these regulations, maximum allowable concentrations on Class 1, 2 and 3 waters shall be determined through the bioassay procedures outlined in the references listed in Appendix E of these regulations.

(d) In certain waters, the criteria listed in Appendix B or C of these regulations may not be appropriate due to unique physical or chemical conditions. In such cases, acute and chronic values may be determined by use of the site-specific procedures outlined in the references listed in Appendix E of these regulations.

(e) Aquatic pesticides specifically designed to kill, repel, or mitigate aquatic pest problems (such as mosquito larvae or heavy plant growth in irrigatiou ditches) may be added to surface waters of the state if the use and application is in compliance with the following:

(i) The chemical toxicant used is a product which has been registered by the EPA and approved by the Board and the WREQC for use within the Reservation;

(ii) The application is conducted by a person licensed to purchase and apply such toxicants within the Reservation;

(iii) All applications of aquatic pesticides must be administered in accordance with label directions. However, compliance with label directions shall not exempt any person or agency from the penalty provisions of the Wind River Water Code should non-target species or non-target areas be affected.

(f) This section shall not apply to the use of fish toxicants if the use and application is in compliance with the following:

(i) The chemical toxicant used is a product which has been registered by the EPA and approved by the Board and the WREQC for use within the Reservation;

(ii) The application is conducted by a person certified and licensed by the Board and the WREQC to purchase and apply such toxicants within the Reservation;

(iii) All applications of fish toxicants must be administered in accordance with label directions. However, compliance with label directions shall not exempt any person or agency from the penalty provisions of the Wind River Water Code should non-target species or non-target areas be affected.

(iv) The Reservation Fish and Game Department and the U.S. Fish and Wildlife Service may apply fish toxicants to any surface water of the state provided that prior notice is made to the WREQC Water Quality Program and after receipt of a verification from the Program that the proposed application is in compliance with this section.

(v) Private certified pesticide applicators for restricted use pesticides may apply fish toxicants only to waters located entirely on private property where there is no surface outlet to waters of the Reservation, provided that prior notice is made to the Board and the WREQC Water Quality Program, and after receipt of a verification from the Program that the proposed application is in compliance with this

section. Approval, including any necessary permits, from the Reservation Fish and Game Department or the U.S. Fish and Wildlife Service is also required prior to application of fish toxicants to insure protection of fish and wildlife resources.

(vi) Pesticide applications must be conducted in a manner that minimizes to the extent practicable, the magnitude of any change in the concentration of the parameters affected by the activity and the length of time during which any change may occur. The application must include measures that prevent significant risk to public health and ensure that existing and designated uses of the water are protected and maintained upon the completion of the activity.

(vii) Except for the circumstances described in (i) through (vi) above, no other agency or person may apply fish toxicants in any water of the state.

Section 22. **Radioactive Material.**

(a) In Class 1, 2AB and 2A waters, the radiological limits established in the most recent Federal Primary Drinking Water Standards published by EPA or its successor agency (40 CFR parts 141.15 and 141.16, published July 1, 1998) shall not be exceeded.

(b) In Class 2C, 3, and 4 waters, the total radium 226 concentration shall not exceed 60 pCi/l.

(c) In all Reservation surface waters, radioactive materials attributable or influenced by the activities of man shall not be present in the water or in the sediments in amounts which could cause harmful accumulations of radioactivity in plant, wildlife, stock, or aquatic life.

Section 23. **Turbidity.**

(a) In all cold water fisheries and drinking water supplies (classes 1, 2AB, 2A, and 2B), the discharge of substances attributable to or influenced by the activities of man shall not be present in quantities which would result in a turbidity increase of more than ten (10) nephelometric turbidity units (NTUs).

(b) In all warm water or nongame fisheries (classes 1, 2AB, 2B and 2C), the discharge of substances attributable to or influenced by the activities of man shall not be present in quantities which would result in a turbidity increase of more than 15 NTUs.

(c) An exception to paragraphs (a) and (b) of this section shall apply to:

(i) Short-term increases of turbidity that have been determined by the administrator to have only a minimal effect on water uses. Such determinations shall be made on a case-by-case basis and shall be subject to whatever controls, monitoring, and best management practices are necessary to fully maintain and protect all water uses. The procedures used to implement this section are described in the "Turbidity Implementation Policy."

Section 24. **Dissolved Oxygen.** In all Class 3 waters, wastes attributable to or influenced by the activities of man shall not deplete dissolved oxygen amounts to a level which will result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

In all Class 1, 2AB, 2B and 2C waters, wastes attributable to or influenced by the activities of man shall not be present in amounts which will result in a dissolved oxygen content of less than that presented on the chart in Appendix D of these regulations.

Section 25. **Temperature.**

(a) For Class 1, 2 and 3 waters, effluent attributable to or influenced by the activities of man shall not be discharged in amounts which change ambient water temperatures to levels which result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses.

(b) When ambient temperatures are above 60 degrees F in all Class 1, 2AB, and 2B waters which are cold water fisheries, effluent attributable to or influenced by the activities of man shall not be discharged in amounts which will result in an increase of more than 2 degrees F (1.1 degree C) in existing temperatures.

(c) When ambient temperatures are above 60 degrees F in all Class 1, 2AB, 2B and 2C waters, which are warm water fisheries, effluent attributable to or influenced by the activities of man shall not be discharged in amounts which will result in an increase of more than 4 degrees F (2.2 degrees C) in existing temperatures.

(d) Except on Class 3 and Class 4 waters, the maximum allowable stream temperature will be the maximum natural daily stream temperature plus the allowable change, provided that this temperature is not lethal to existing fish life and under no circumstance shall this maximum temperature exceed 68 degrees F (20 degrees C) in the case of cold water fisheries and 86 degrees F (30 degrees C) in the case of warm water fisheries.

(e) With the exception of the provisions of Sections 9 and 11 of these regulations, temperature standards shall apply at all times and at all depths of the receiving water and may not be violated at any time or at any depth.

(f) The various requirements of this section may be waived only under the provisions of Section 316 (a) of the Federal Act.

Section 26. **pH.**

(a) For all Reservation surface waters, wastes attributable to or influenced by the activities of man shall not be present in amounts which will cause the pH to be less than 6.5 or greater than 9.0 standard units.

(b) For all Class 1, 2 and 3 waters, effluent attributable or influenced by human activities shall not be discharged in amounts which change the pH to levels which result in harmful acute or chronic effects to aquatic life, directly or in conjunction with other chemical constituents, or which would not fully support existing and designated uses.

Section 27. **Fecal Coliform Bacteria.** During the entire year, fecal coliform concentrations shall not exceed a geometric mean of 200 organisms per 100 milliliters (based on a minimum of not less than 5 samples obtained during separate 24 hour periods for any 30 day period), nor shall the geometric mean of 3 separate samples collected within a 24 hour period exceed 400 organisms per 100 milliliters in any Reservation surface water.

Section 28. **Undesirable Aquatic Life.** All Reservation surface waters shall be free from substances and conditions or combinations thereof which are attributable to or influenced by the activities of man, in concentrations which produce undesirable aquatic life.

Section 29. **Oil and Grease.** In all Reservation surface waters, substances attributable to or influenced by the activities of man shall not be present in amounts which would cause: (a)

The oil and grease content to exceed 10 mg/l; or (b) The formation of a visible sheen or visible deposits on the bottom or shoreline, or damage or impairment of the normal growth, function or reproduction of human, animal, plant or aquatic life.

Section 30. **Total Dissolved Gases.** In all Class 1, 2AB, 2B and 2C waters, the total dissolved gas concentration below man-made dams shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures.

Section 31. **Biological Criteria.** Class 1, 2 and 3 waters of the state must be free from substances, whether attributable to human-induced point source discharges or nonpoint source activities, in concentrations or combinations which will adversely alter the structure and function of indigenous or intentionally introduced aquatic communities.

Section 32. **Reclassifications and Site Specific Criteria.**

(a) Any person at any time may petition the WREQC Water Quality Program or the Water Resources Control Board (Board) to change the classification, add or remove a designated use or establish site-specific criteria on any surface water.

(b) The WREQC Water Quality Program may lower a classification, remove a designated use which is not an existing use or an attainable use, or make a recommendation to the Board and the Wind River Environmental Quality Commission to establish sub-categories of a use, or establish site-specific criteria if it can be demonstrated through a Use Attainability Analysis (UAA) that the original classification and/or designated use or water quality criteria are not feasible because:

(i) Naturally occurring pollutant concentrations prevent the attainment of the classification or use; or

(ii) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable uses to be met; or

(iii) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(iv) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the classification or use, and it is not feasible to restore the water body to its original condition or to operate such modification in such a way that would result in the attainment of the classification or use; or

(v) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of the classification or use; or

(vi) Controls more stringent than those required by Sections 301(b) and 306 of the Federal Act would result in substantial and widespread economic and social impact. This subsection shall not apply to the derivation of site-specific criteria.

(c) The Water Quality Program may raise a classification, add a designated use, or

make a recommendation to the Board and the WREQC to establish sub-categories of a use, if it can be demonstrated through a Use Attainability Analysis (UAA) that such uses are existing uses or may be attained with the imposition of more stringent controls or management practices.

(d) The procedures used to implement this section are described in the "Use Attainability Analysis Implementation Policy."

Section 33. **Use Attainability Analysis.** The Water Quality Program shall review all petitions submitted under Section 33 of these regulations and make a determination based upon the technical merits of the Use Attainability Analysis. Public notice and opportunity for comment shall be provided prior to making this determination.

(a) Any changes in water classifications or use designations resulting from the Program's determination shall be submitted to the Board, the WREQC, and the EPA for approval as revised water quality standards for Clean Water Act purposes and shall become effective either upon EPA approval or 90 days after submittal, whichever comes first. If within 90 days of submittal, the EPA determines that any such revised or new standard is not consistent with the applicable requirements of the Federal Act and specifies the changes needed to meet such requirements, the administrator may consider EPA's recommendations and publish a revised final determination. All determinations made under this subsection are considered final actions of the Board and the WREQC and may be appealed pursuant to Chapter VI of the Wind River Water Code.

(b) Any proposed changes in water quality criteria that result from the WREQC Water Quality Program's findings shall be recommended to the Board and the WREQC for adoption as revised rules. If adopted by the Board, the revised rules shall be filed with the JBC Secretary and shall become effective 90 days after filing. The revised rules shall also be concurrently submitted to EPA for approval as revised water quality standards for Clean Water Act purposes. If within 90 days of submittal, the EPA determines that any such revised or new standard is not consistent with the applicable requirements of the Federal Act and specifies the changes needed to meet such requirements, the WREQC Water Quality Program may recommend a new standard incorporating EPA's specifications to the Board and the WREQC for adoption.

Appendix A

Reservation Surface Water Classifications

All surface waters within the Reservation are classified as follows:

(a) Class 1 Waters. The following waters are designated Class 1:

(i) All surface waters located within the boundaries of the Tribal Wilderness Area;

(ii) The main stem of the Wind River from the Wedding of the Waters upstream to Boysen Dam;

(iii) Lower and Upper Dinwoody Lakes;

(iv) The main stem of the Wind River from its confluence with the East Fork of the Wind River at the Reservation western boundary, downstream to its confluence with Dinwoody Creek;

(v) Wetlands adjacent to the above listed Class 1 waters.

(b) Individual water classifications for major water bodies are listed in the most current version of the "Wind River Reservation Surface Water Classification List" published and periodically updated by the WREQC Water Quality Program.

(i) Unlisted Waters. The waters contained in the "Wind River Reservation Surface Water Classification List" are all waters which are named on the USGS 1:500,000 hydrologic map of Wyoming and those otherwise classified by the WREQC Water Quality Program. The Classification List does not contain an exhaustive listing of all the surface waters within the Reservation. Waters which are not listed are classified as follows:

(1) All waters shown as having any species of game fish present in the WREQC Water Quality Program's database or the Fish and Wildlife Service database, are classified as 2AB;

(2) All waters shown as having only nongame fish species present in the Wyoming Game and Fish Department's Streams and Lakes Database as submitted to the Department of Environmental Quality in June, 2000 are classified as 2C;

(3) All other waters shall be classified as follows:

(A) Those waters supported by an approved UAA containing defensible reasons for not protecting aquatic life uses shall be 4A, 4B, or 4C;

(B) The remaining waters shall be 3A, 3B, or 3C.

(ii) Wetlands. All adjacent wetlands shall have the same classification as the water to which they are adjacent.

Appendix B
Water Quality Criteria [1]

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Acenaphthene			20.0 [7]	2,700.0
Acrolein			320.0	780.0
Acrylonitrile[3]			0.059	0.66
Benzene[3]			1.2	71.0
Benzidine[3]			0.00012	0.00054
Carbon tetrachloride[3] (Tetrachloromethane)			0.25	4.4
Chlorobenzene (Monochlorobenzene)			20.0 [7]	21,000.0
1,2,4 Trichlorobenzene			70.0 [9]	940.0
Hexachlorobenzene [3]			0.00075	0.00077
1,2-Dichloroethane[3]			0.38	99.0
1,1,1-Trichloroethane			200.0[9]	
Hexachloroethane[3]			1.9	8.9
1,1,2-Trichloroethane[3]			0.60	42.0
1,1,2,2,-Tetrachloroethane[3]			0.17	11.0
Bis(2-chloroethyl) ether [3]			0.031	1.4
2-Chloronaphthalene			1,700.0	4,300.0
2,4,6-Trichlorophenol [3]			2.1	6.5
p-Chloro-m-cresol (4-Chloro-3-methylphenol)			3,000.0[7]	
Chloroform (HM) [3] (Trichloromethane)			5.7	470.00
2-Chlorophenol			0.1 [7]	400.0

1,2-dichlorobenzene			600.0 [9]	17,000.0
1,3-Dichlorobenzene			400.0	2,600.0
1,4-Dichlorobenzene			75.0 [9]	2,600.0
3,3-Dichlorobenzidine[3]			0.04	0.077

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
1,1-Dichloroethylene[3]			0.057	3.2
1,2-trans-Dichloroethylene			100.0[9]	140,000.0
2,4-Dichlorophenol			0.3 [7]	790.0
1,2-Dichloropropane			0.52	39.0
1,3-Dichloropropylene (1,3-Dichloropropene) (cis and trans isomers)			10.0	1,700.0
2,4-Dimethylphenol			400.0[7]	2,300.0
2,4-Dinitrotoluene [3]			0.11	9.1
1,2-Diphenylhydrazine [3]			0.040	0.54
Ethylbenzene			700.0[9]	29,000.0
Fluoranthene			300.0	370.0
Bis(2-chloroisopropyl) ether			1,400.0	170,000.0
Methylene chloride (HM)[3] (Dichloromethane)			4.7	1,600.0
Methyl bromide (HM) (Bromomethane)			48.0	4,000.0
Bromoform (HM) [6] (Tribromomethane)			4.3	360.0
Dichlorobromomethane (HM) [6]			0.56	46.0
Chlorodibromomethane (HM) [6]			0.41	34.0
Hexachlorobutadiene [3]			0.44	50.0
Hexachlorocyclopentadine			1.0[7]	17,000.0
Isophorone [3]			36.0	2,600.0
Nitrobenzene			17.0	1,900.0

2,4-Dinitrophenol			70.0	14,000.0
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)			13.0	765.0
N-Nitrosodimethylamine [3]			0.00069	8.1
N-Nitrosodiphenylamine [3]			5.0	16.0
N-Nitrosodi-n-propylamine[3]			0.005	1.4

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Pentachlorophenol	19[5]	15[5]	0.28	8.2
Phenol			300[7]	4,600,000.0
Bis(2-ethylhexyl)phthalate[3]			1.8	5.9
Butyl benzyl phthalate			3,000.0	5,200.0
Di-n-butyl phthlate			2,700.0	12,000.0
Diethyl phthalate			23,000.0	120,000.0
Benzo(a)anthracene (PAH)[3] (1,2-Benzanthracene)			0.0044	0.049
Benzo(a)pyrene (PAH)[3] (3, 4-Benzopyrene)			0.0044	0.049
Benzo(b)fluoranthene (PAH)[3] (3,4-Benzofluoranthene)			0.0044	0.049
Benzo(k)fluoranthene (PAH)[3] (11,12-Benzofluoranthene)			0.0044	0.049
Chrysene (PAH)[3]			0.0044	0.049
Anthracene (PAH)[6]			9,600.0	110,000.0
Fluorene (PAH)[6]			1,300.0	14,000.0
Dibenzo(a,h)anthracene (PAH)[3] (1,2,5,6-Dibenzanthracene)			0.0044	0.049
Indeno(1,2,3-cd)pyrene (PAH)[3]			0.0044	0.049
Pyrene (PAH)[6]			960.0	11,000.0
Tetrachloroethylene[3]			0.8	8.85
Toluene			1,000.0[9]	200,000.0
Trichloroethylene[3]			2.7	81.0
Vinyl chloride[3]			2.0	525.0

(Chloroethylene)			0.00013	0.00014
Aldrin[3]	1.5		0.00014	0.00014
Dieldrin[3]	0.24	0.056	0.0021	0.0022
Chlordane[3]	1.2	0.0043	0.00059	0.00059
4,4'-DDT[3]	0.55	0.001		

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
4,4'-DDE[3]			0.00059	0.00059
4,4'-DDD[3]			0.00083	0.00084
alpha-Endosulfan	0.11	0.056	110.0	240.0
beta-Endosulfan	0.11	0.056	110.0	240.0
Endosulfan sulfate			110.0	240.0
Endrin	0.086	0.036	0.76	0.81
Endrin aldehyde			0.76	0.81
Heptachlor[3]	0.26	0.0038	0.00021	0.00021
Heptachlor epoxide[3]	0.26	0.0038	0.0001	0.00011
alpha-BHC[3] (Hexachlorocyclohexane-alpha)			0.0039	0.013
beta-BHC[3] (Hexachlorocyclohexane-beta)			0.014	0.046
gamma-BHC (Lindane) [3] (Hexachlorocyclohexane-gamma)	0.95		0.019	0.063
PCB-1242 (Arochlor 1242)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1254 (Arochlor 1254)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1221 (Arochlor 1221)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1232 (Arochlor 1232)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1248 (Arochlor 1248)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1260 (Arochlor 1260)[3]		0.014	0.00017[13]	0.00017[13]
PBC-1016 (Arochlor 1016)[3]		0.014	0.00017[13]	0.00017[13]
Toxaphene[3]	0.73	0.0002	0.00073	0.00075
Antimony			14.0	4,300.0
Arsenic[3]	340.0	150.0	7.0	7.0
Asbestos[3]			7,000,000 fibers/l[9]	

Beryllium[3]			4[9]	
Cadmium	4.3[4]	2.2[4]	5[9]	
Chromium (III)	569.8[4]	74.1[4]	100[9] (total)	

PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Chromium (VI)	16	11	100[9] (total)	
Copper	13.4[4]	9.0[4]	1,000.0[7]	
Cyanide (free)	22	5.2	200.0[9]	220,000.0
Lead	64.6[4]	2.5[4]	15.0[9]	
Mercury	1.4	0.77	0.050	0.051
Nickel	468.2[4]	52.0[4]	100.0[9]	4,600.0
Selenium	20.0	5.0[10]	50.0[9]	9,000.0
Silver	3.4[4]			
Thallium			1.7	6.3
Zinc	117.2 [4]	118.1[4]	5,000.0[7]	69,000.0
Dioxin (2,3,7,8-TCDD)[3]			0.000000013	0.000000014

NON-PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Alachlor [3]			2.0[9]	
Aluminum (pH 6.5-9.0 only)	750.0[10]	87.0[10][14]		
Ammonia	See Appendix C			
Atrazine			3.0[9]	
Barium			2000.0[9]	
Bis(chloromethyl) Ether [3]			0.00013	0.00078
Carbofuran			40 [9]	
Chloride	860,000.0	230,000.0		
Chlorine (total residual)	19.0	11.0		
Chlorophenoxy Herbicide 2,4,5,TP			10.0	
Chlorpyrifos	0.083	0.041		
Chlorophenoxy Herbicide 2,4,-D			70.0[9]	
Dalapon			200.0[9]	
Demeton		0.1		
Di(2-ethylhexyl)adipate			400.0[9]	
Dibromochloropropane (DBCP)[3]			0.2[9]	
Dichloroethylene (cis-1,2-)			70.0 [9]	
Dinoseb			7.0 [9]	
Dinitrophenols			70.0	14,000.0
Dissolved Gases		100% Sat.		
Dissolved Oxygen		See Appendix D		
Fecal Coliform			See Section 27	
Diquat			20.0[9]	
Endothall			100.0[9]	
Ether, Bis Chloromethyl			0.00013	0.00078
Ethylene dibromide (EDB) [3]			0.05[9]	
Fluoride			4,000.0[9]	

NON-PRIORITY POLLUTANTS

Pollutant	Aquatic Life Acute Value Micrograms/l	Aquatic Life Chronic Value Micrograms/l	Human Health Value Fish & Drinking Water [2] Micrograms/l	Human Health Value Fish Only[8] Micrograms/l
Glyphosate			700.0[9]	
Guthion		0.01		
Iron		1,000.0[12]	300.0[11]	
Malathion		0.1		
Manganese	3,110.0[4][12]	1,462.0[4][12]	50.0[11]	
Methoxychlor		0.03	40.0[9]	
Mirex		0.001		
Nitrite (as N)			1,000.0[9]	
Nitrates (as N)			10,000.0[9]	
Nitrite+Nitrate (both as N)			10,000.0[9]	
Nitrosamines			0.0008	1.24
Nitrosodidibutylamine,N			0.0064	0.587
Nitrosodiethylamine,N			0.0008	1.24
N-nitrosopyrrolidene[3]			0.016	91.9
Oxamyl (Vydate)			200.0[9]	
Parathion	0.065	0.013		
Pentachlorobenzene			3.5	4.1
pH		6.5-9.0		
Picloram			500.0[9]	
Simazine			4.0[9]	
Styrene			100.0[9]	
Sulfide-Hydrogen Sulfide (S 2-, HS -)		2.0		
1,2,4,5-tetrachlorobenzene			2.3	2.9
Tributyltin	0.46	0.063		
Trichlorfluoromethane			10,000.0	860,000.0
2,4,5-trichlorophenol			1.0[7]	9,800.0
2,4,5-TP (2,4,5-trichlorophenoxy) propionic acid			50.0[9]	
Xylenes			10,000.0[9]	

1. Except for the aquatic life values for metals and where otherwise indicated, the values given in this Appendix refer to the total recoverable (dissolved plus suspended) amount of each substance. For the aquatic life values for metals, the values refer to dissolved amount.

2. Except where otherwise indicated, these values are based on EPA Section 304(a) criteria recommendations assuming consumption of 2 liters of water and 6.5 grams of aquatic organisms per day.

3. Substance classified as a carcinogen with the value based on an incremental risk of one additional instance of cancer in one million persons.

4. Hardness dependent criteria. Value given is an example only and is based on a CaC0 3 hardness of 100 mg/l. Criteria for each case must be calculated using the formula in Appendix F.

5. pH dependent criteria. Value given is an example only and is based on a pH of 7.8. Criteria for each case must be calculated using the formula in Appendix G.

6. Chemicals which are not individually classified as carcinogens but which are contained within a class of chemicals with carcinogenicity as the basis for the criteria derivation for that class of chemicals; an individual carcinogenicity assessment for these chemicals is pending.

7. Value is based on organoleptic (taste and odor) effects and is more stringent than if based solely on toxic or carcinogenic effects.

8. EPA Section 304(a) human health criteria recommendation assuming consumption of contaminated aquatic organisms at a rate of 6.5 grams per day.

9. The criterion is based on an EPA drinking water standard (Maximum Contaminant Level or MCL).

10. This value is expressed in terms of total recoverable metal in the water column.

11. The iron and manganese criteria are based on Safe Drinking Water Act secondary standards and are intended to prevent undesirable aesthetic effects. These values represent the dissolved amount of each substance rather than the total amount.

12. Value is based on the dissolved amount which is the amount that will pass through a 0.45 um membrane filter prior to acidification to pH 1.5-2.0 with nitric acid.

13. This criterion applies to total PCBs, i.e., the sum of all congener or all isomer analyses.

14. The aluminum criteria are expressed as total recoverable metal in the water column.

The 87 µg/l chronic criterion for aluminum is based on information showing chronic effects on brook trout and striped bass. The studies underlying the 87 µg/l chronic value, however, were conducted at low pH (6.5 - 6.6) and low hardness (< 10 ppm $CaCO_3$), conditions uncommon in Wyoming surface waters. A water effect ratio toxicity study in West Virginia indicated that aluminum is substantially less toxic at higher pH and hardness (although the relationship is not well quantified at this time). Further, EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 µg/l aluminum when either the total recoverable or dissolved aluminum is measured. Based on this information and considering the available toxicological information in Tables 1 and 2 of EPA's Aluminum Criteria Document (EPA 440/5-86-008), the Department of Environmental Quality will implement the 87 µg/l chronic criterion for aluminum as follows: where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as $CaCO_3$ in the receiving water after mixing, the 87 µg/l chronic criterion will not apply, and aluminum will be regulated based on compliance with the 750 µg/l acute aluminum criterion. In situations where the 87 µg/l chronic criterion applies, a discharger may request development of and provide the basis for a site-specific chronic criterion based on a water-effect ratio. Or, a discharger may request development of and provide the basis for a permitting procedure (a translator) that would take into account less toxic forms of particulate aluminum.

SITE-SPECIFIC CRITERIA

Site-specific criteria are applicable only to the waters and/or locations specified and replaces similar criteria expressed elsewhere in these regulations. At present, there are no Reservation waterbodies or segments with site-specific criteria.

Appendix C

Ammonia Toxicity Criteria

(a) The ammonia values in the tables below are expressed in milligrams ammonia nitrogen per liter (mg N/L) and vary with temperature and/or pH, and fish species or fish life stage. The ammonia criteria for pH values not represented in the tables can he calculated using the formulas in section (b) of this appendix.

pH-Dependent Values of the Acute Criterion (CMC)[1] for Ammonia

	Acute Values, mg N/L	
pH	**Salmonids Present**	**Salmonids Absent**
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

Appendix C

Ammonia Toxicity Criteria

Temperature and pH Dependent Values of the Chronic Criterion (CCC)[2] for Fish Early Life Stages Present

	Temperature, °C									
pH	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	5.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	.0315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Appendix C

Ammonia Toxicity Criteria

Temperature and pH Dependent Values of the Chronic Criterion (CCC)[2] for Fish Early Life Stages Absent

	Temperature, °C									
pH	**0-7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15***	**16***
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46	6.06
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36	5.97
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25	5.86
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10	5.72
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93	5.56
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73	5.37
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49	5.15
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22	4.90
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92	4.61
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59	4.30
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23	3.97
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85	3.61
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47	3.25
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71	2.54
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36	2.21
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03	1.91
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74	1.63
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48	1.39
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06	0.990
8.6	1.49	1.49	1.31	1.23	1.15	1.08	1.01	0.951	0.892	0.836
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754	0.707
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641	0.601
8.9	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548	0.513
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471	0.442

* At 15°C and above, the criterion for fish early life stages absent is the same as the criterion for fish early life stages present.

(b) For pH values not expressed in the preceding tables, ammonia toxicity criteria can be calculated as follows:

(i) Salmonids or other sensitive cold water species present:

$$CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

(ii) Salmonids or other sensitive cold water species absent:

$$CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

(iii) Criterion Continuous Concentration (CCC) when fish early life stages are present:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{7.688-pH}} \right) \bullet MIN\,(2.85, 1.45 \bullet 10^{0.028^{*}(25-T)})$$

(iv) Criterion Continuous Concentration (CCC) when fish early life stages are absent:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{7.688-pH}} \right) \bullet 1.45 \bullet 10^{0.028^{*}(25-\max(T,7))}$$

---

1 Criterion Maximum Concentration (CMC) refers to the one-hour average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three (3) years. The CMC can also be referred to as the acute value.

2 Criterion Continuous Concentration (CCC) refers to the 30-day average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three (3) years. In addition, the highest 4-day average within the 30-day period should not exceed 2.5 times the CCC. The CCC can also be referred to as the chronic value.

Appendix D

Minimum Dissolved Oxygen Criteria* (mg/l)

	Cold water Criteria		Class 2C and Warm water Criteria	
	Early Life Stages[1],[2]	Other Life Stages	Early Life Stages[2]	Other Life Stages
30 Day Mean	NA[3]	6.5	NA	5.5
7 Day Mean	9.5[6.5]	NA[3]	6.0	NA[3]
7 Day Mean Minimum[4]	NA[3]	5.0	NA[3]	4.0
1 Day Minimum[4]	8.0 (5.0)	4.0	5.0	3.0

(1) These are water column concentrations recommended to achieve the required inter-gravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column, the figures in parentheses apply.

(2) Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching.

(3) NA (not applicable).

(4) All minima should be considered as instantaneous concentrations to be achieved at all times.

* These limitations apply to Class 1, 2A, 2B and 2C waters only and in no case shall be interpreted to require dissolved oxygen concentrations greater than 100 percent saturation at ambient temperature and elevation.

Appendix E

References for Use in Making Bioassays of Surface Waters

U.S. Environmental Protection Agency: Quality Criteria for Water. EPA-440/5-86/001. U.S. EPA, 1986.

U.S. Environmental Protection Agency: Ambient Water Quality Criteria Documents, 1980, and subsequent revisions. U.S. EPA, 1980.

U.S. Environmental Protection Agency: Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses. U.S. EPA, 1985.

U.S. Environmental Protection Agency: Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use Attainability Analyses. U.S. EPA, 1983.

U.S. Environmental Protection Agency: Technical Guidance Manual for Performing Waste Load Allocation, Book VI, Chapter 1: Stream Design Flow for Steady-State Modeling. U.S. EPA, 1986.

U.S. Environmental Protection Agency: Technical Support Document for Water Quality Based Toxics Control. U.S. EPA, 1985.

U.S. Environmental Protection Agency: Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. EPA-600/4-85/013. U.S. EPA, 1985.

U.S. Environmental Protection Agency: Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Second Edition. EPA-600/4-89/001. U.S. EPA, 1989.

U.S. Environmental Protection Agency: Water Quality Standards Handbook, Second Edition, EPA 823-B-94-005a, August 1994, with Appendices.

Appendix F

Conversion Factors: Total Recoverable Values
Dissolved Values for Metals
Equations For Parameters With Hardness[1] Dependence

Conversion Factors: Aquatic life values for the following metals are based on dissolved amounts of each substance. Because the National Toxics Criteria (EPA's Section 304(a) criteria) are expressed as "total recoverable" values, the application of a conversion factor is necessary to convert from "total recoverable" to "dissolved".

Furthermore, the toxicity of the associated metals varies with hardness and the total recoverable value must be calculated based on the CaCO3 hardness prior to multiplying by the conversion factor (CF).

The conversion factors for the following metals are constants:

Metal	Acute Value	Chronic Value
Chromium (III)	0.316	0.860
Copper	0.960	0.960
Nickel	0.998	0.997
Silver	0.85	N/A
Zinc	0.978	0.986

The conversion factors (CF) for Cadmium and Lead are not constant but vary with hardness (CaCO3) and can be calculated using the following equations:

Cadmium Acute: $CF = 1.136672 - [(\ln \text{hardness})(0.041838)]$
Cadmium Chronic: $CF = 1.101672 - [(\ln \text{hardness})(0.041838)]$

Lead Acute and Chronic: $CF = 1.46203 - [(\ln \text{hardness})(0.145712)]$

Footnote:
(1) Hardness as mg/l $CaC0_{(3)}$

Appendix F
(continued)
Equations For Parameters With Hardness(1) Dependence
The following equations include the conversion factors to derive the dissolved metals values:

Parameter	**Acute** *1-Hour Average* *Concentration (µg/l)*	**Chronic** *4-Day Average* *Concentration (µg/l)*
Cadmium	$e^{(1.128\ [\ln(\text{hardness})]-3.6867)}$(CF)	$e^{(0.7852\ [\ln(\text{hardness})]-2.715)}$(CF)
Chromium (III)	$e^{(0.8190\ [\ln(\text{hardness})]\ +3.7256)}$(0.316)	$e^{(0.8190\ [\ln(\text{hardness})]+0.6848)}$(0.860)
Copper	$e^{(0.9422\ [\ln(\text{hardness})]-1.700)}$(0.960)	$e^{(0.8545\ [\ln(\text{hardness})]-1.702)}$(0.960)
Lead	$e^{(1.273\ [\ln(\text{hardness})]-1.460)}$(CF)	$e^{(1.273\ [\ln(\text{hardness})]-4.705)}$(CF)
Manganese	$e^{(0.7693[\ln(\text{hardness})]+4.4995)}$	$e^{(0.5434[\ln(\text{hardness})]+4.7850)}$
Nickel	$e^{(0.8460\ [\ln(\text{hardness})]+2.255)}$(0.998)	$e^{(0.8460\ [\ln(\text{hardness})]+0.0584)}$(0.997)
Silver	$e^{(1.72\ [\ln(\text{hardness})]-6.52)}$(0.85)	N/A
Zinc	$e^{(0.8473\ [\ln(\text{hardness})]+0.884)}$(0.978)	$e^{(0.8473\ [\ln(\text{hardness})]+0.884)}$(0.986)

(1) Hardness as mg/l $CaCO_3$. Hardness values used in these equations must be between 25 mg/l and
400 mg/l. For hardness values less than 25 mg/l, use 25. For hardness values greater than 400 mg/l
use 400.
G-1

Appendix G
Equations For Parameters With pH Dependence

Parameter	4-Day Average Concentration (µg/l)	1-Hour Average Concentration (µg/l)
Pentachloro-Phenol	$e^{[1.005\ (pH)-5.290]}$	$e^{[1.005\ (pH)-4.830]}$

Exhibit K

Wesco Operating, Inc.
Permit No. WY-0025232
June 17, 2015 Petition for Review

Rate/Time Graph

Project: N:\Power Tools Projects vs 9.3\Steamboat Butte.mdb

Date: 6/17/2015
Time: 10:31 AM

Summary Lease Report