

Wyoming Department of Environmental Quality
Water Quality Division
WYPDES Program

Statement of Basis

NEW

APPLICANT NAME: Nance Petroleum Corporation

MAILING ADDRESS: P. O. Box 7168
Billings, MT 59103

FACILITY LOCATION: Antelope Reservoir, which is located in the SESW, Section 30, Township 58 North, Range 79 West, Sheridan County. The produced water will be discharged into an on-channel reservoir "Antelope" (3B), located on Antelope Draw (3B), which is tributary to the West Prong, Hanging Woman Creek (3B). West Prong, Hanging Woman Creek (3B), is tributary to the Tongue River (2AB), via Hanging Woman Creek. Hanging Woman Creek does not confluence the Tongue River within the State of Wyoming. This permit establishes a maximum discharge rate of 0.576 million gallons per day (MGD), and requires that the produced water discharged at this facility originate in one or more of the following formations: the Anderson, Canyon, Cook, Dietz, Kendrick, Nance, Roberts, and/or Brewster/Arnold coal seams.

NUMBER: WY0053023

This facility is a typical coal bed methane production facility in which groundwater is pumped from a coal bearing formation resulting in the release of methane from the coal bed. The permit authorizes the discharge to the surface of groundwater produced in this way provided the effluent quality is in compliance with effluent limits that are established by this permit. In developing effluent limits, all federal and state regulations and standards have been considered and the most stringent requirements incorporated into the permit. The EPA Effluent Guidelines and Standards for Oil and Gas Extraction Point Source Category (Part 435, Subpart E) predate the development of coal bed methane extraction technology; however the technology is similar enough to conventional gas extraction that, in the professional judgement of the WDEQ, this effluent limit guideline is appropriately applied to coal bed methane gas production. The guideline limits oil and grease effluent concentrations to less than 35 mg/l and requires that discharges of produced water be used for agricultural production and/or wildlife propagation. This permit does not cover activities associated with discharges of drilling fluids, acids, stimulation waters or other fluids derived from the drilling or completion of the wells.

The permittee has chosen option 2 of the coal bed methane permitting options. Under this permitting option, the produced water is immediately discharged to a class 2 or 3 receiving stream which is eventually tributary to a class 2AB perennial water of the state. The permit establishes effluent limits for the end of pipe, which are protective of all the designated uses defined in *Chapter 1 of Wyoming Water Quality Rules and Regulations*. This may include drinking water, game and non-game fish, fish consumption, aquatic life other than fish, recreation, agriculture, wildlife, industry and scenic value. The permittee has submitted documentation verifying that there is no irrigation occurring downstream of this facility on Hanging Woman Creek prior to the Wyoming-Montana state line.

The permittee has indicated that it is their intent to periodically fill the Antelope Reservoir with CBM produced water for use at the landowner's request for livestock production. Thus, the maximum discharge rate does not reflect the ability of the reservoir to contain, on a continual basis, an amount of produced water equal to the permitted discharge rate. The maximum flow rate being established in the permit is based upon the permittee's estimated "short-term fill rate" for the reservoir. The "short term fill rate" represents the amount of flow necessary to fill the reservoir, if empty, to approximately 75% of the estimated pool volume within a short period (less than one week). While the reservoir cannot contain a sustained flow of 0.576 MGD of produced water on a continual basis, the wells being authorized for discharge under this facility have already been previously authorized for discharge under an option 1A (discharge to off-channel containment units) WYPDES permit, and are valved to allow discharge to any one of many off-channel containment units in addition to the on-channel reservoir proposed for containment under this permit. This type of permitting allows the operator maximum flexibility in water management, as well as allowing maximization of livestock range by the landowner. The permittee has committed to; and will be required to, contain all their produced water in addition to stormwater runoff up to and including runoff from a 2 year, 24 hour storm event within the reservoir. Discharges from the reservoir not related to a precipitation event greater than a 2 year, 24 hour storm event will be considered a violation of this permit. During "short term fill events" the permittee is required to closely monitor the effluent level within the reservoir to ensure that the reservoir does not overflow and discharge. In addition, the permittee is required to maintain sufficient freeboard within the reservoir to contain stormwater runoff from a 2 year, 24 hour precipitation event (1.4 inches of precipitation). Should the amount of water within the reservoir exceed the freeboard needed to contain runoff from a 2 year, 24 hour storm event, the operator is required to cease discharge into the reservoir until the level of water within the reservoir falls below the required freeboard needed to contain runoff from a 2 year, 24 hour storm. The 2 year, 24 hour freeboard may only be exceeded during storm events equal to or greater than the 2 year, 24 hour storm event. If requested, it is the permittee's responsibility to provide adequate documentation describing the circumstances surrounding any reservoir discharges.

Permit effluent limits are based on federal and state regulations and are effective as of the date of issuance. The pH of the effluent must remain within 6.5 and 9.0 standard units. Effluent limits for total dissolved solids (5,000 mg/l), specific conductance (7,500 micromhos/cm), and sulfates (3,000 mg/l) are included to protect for stock and wildlife watering. These limits are based upon Wyoming Water Quality Rules and Regulations, Chapter 2 and apply to discharge from any permitted outfall. In addition, the permit establishes a dissolved iron limit of 1000 µg/l, a dissolved manganese limit of 1794 µg/l, a total barium limit of 1800 µg/l, a total arsenic limit of 150 µg/l, a chlorides limit of 230 mg/l, a total aluminum limit of 750 µg/l, and a total selenium limit of 5 µg/l. These limits are based on standards for class 3B waters which are intended to protect for the above listed designated uses and reflect the application of "tier 1" antidegradation protection. Tier 1 antidegradation protection is the basic level of protection which applies to all waters of the state, as described in the Wyoming Surface Water Quality Standards "Implementation Policies for Antidegradation." As Hanging Woman Creek does not confluence a class 2 water within the State of Wyoming, effluent limits protective of class 2 waters within the State of Wyoming are not applicable.

Results are to be reported twice-yearly and if no discharge occurs at a particular outfall for an entire sampling period, then "no discharge" is to be reported for that outfall during that period. The permit also requires that an initial monitoring of the effluent be conducted within the first 60 days of discharge and the results submitted to WDEQ and the U.S. Environmental Protection Agency within 120 days of the commencement of discharge.

In order to monitor potential accumulation of pollutants within the reservoir, this permit (Part I.A.2.c) requires routine sampling, analysis, and reporting for the following constituents within the reservoir itself: total dissolved solids, specific conductance, dissolved iron, dissolved manganese, total arsenic, chlorides, and total selenium. Sampling for these constituents within the reservoir is to occur a minimum of 50 feet from the location where the CBM effluent enters the reservoir. The reservoir monitoring location has been identified in Table 1 as "R1". This monitoring requirement is intended to aid in the protection of the uses associated with the class 3B reservoir (aquatic life other than fish, recreation, livestock watering, wildlife, industry and scenic value). If this monitoring of the effluent within the reservoir reveals an exceedence of any applicable standards for class 3A waters, then this permit may be modified in order to protect all uses of the receiving water body.

The permit requires sampling at a designated tributary water quality monitoring station located on West Prong, Hanging Woman Creek prior to the Wyoming-Montana State line. The water quality monitoring station at the Wyoming-Montana state line will be located in the main channel of West Prong, Hanging Woman Creek. Effluent samples at the designated water quality monitoring station must be collected on a monthly basis and are to be reported semiannually. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: a designated tributary water quality monitoring station identified as TRIB1 in Table 1 (located at the end of Part I) of the permit below. Monthly water quality samples are to be collected at the tributary water quality monitoring station when effluent from this CBM facility reaches the TRIB1 station on West Prong, Hanging Woman Creek. If flow occurs at the TRIB1 station during a given monthly monitoring period, but this CBM facility did not contribute to that flow, the permittee will report "did not contribute" in the discharge monitoring reports for that monthly monitoring period. Under such circumstances, sampling is not required at the tributary water quality monitoring station, and it will be the responsibility of the permittee to demonstrate that the effluent from this facility did not contribute to the flow occurring at the TRIB1 station. If no flow at all occurs at the TRIB1 station for an entire monthly monitoring period, then "no flow" is to be reported and samples need not be collected at the tributary water quality monitoring station for that monthly monitoring period.

At the designated water quality monitoring stations, monitoring will be required for calcium, magnesium, sodium, sodium absorption ratio and specific conductance. Information gathered from the water quality monitoring stations may result in modification of the permit to protect existing uses on the tributary and mainstem.

There shall be no discharge of floating solids or visible foam in other than trace amounts, nor shall the discharge cause formation of visible deposits of iron, hydrocarbons or any other constituent on the bottom or shoreline of the receiving water. In addition, erosion control measures will be implemented to prevent significant damage to or erosion of the receiving water channel at the point of discharge.

The discharge of wastewater and the effluent limits that are established in this permit have been reviewed to ensure that the levels of water quality necessary to protect the designated uses of the receiving waters are maintained and protected. An antidegradation review has been conducted and verifies that the permit conditions, including the effluent limitations established, provide a level of protection to the receiving water consistent with the antidegradation provisions of Wyoming surface water quality standards.

Self monitoring of effluent quality and quantity is required on a regular basis with reporting of results semiannually. The permit is scheduled to expire on June 30, 2009. This expiration date was determined through review of the watershed permitting schedule which the WDEQ is implementing in order to synchronize the permitting and expiration of facilities within the same watershed. This holistic approach will provide for more efficient permitting of point-source discharges.

Kathy Shreve
Water Quality Division
Department of Environmental Quality
Drafted: May 16, 2005

AUTHORIZATION TO DISCHARGE UNDER THE
WYOMING POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

Nance Petroleum Corporation

is authorized to discharge from the wastewater treatment facilities serving the

Antelope Reservoir

located in

SESW, Section 30, Township 58 North, Range 79 West, Sheridan County,


to receiving waters named

an on-channel reservoir "Antelope" (3B), located on Antelope Draw (3B), which is tributary to the West Prong, Hanging Woman Creek (3B). West Prong, Hanging Woman Creek (3B), is tributary to the Tongue River (2AB), via Hanging Woman Creek, (Hanging Woman Creek does not confluence the Tongue River within the State of Wyoming)

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


This permit shall become effective on the date of signature by the Director of the Department of Environmental Quality.

This permit and the authorization to discharge shall expire at midnight, June 30, 2009.



John F. Wagner
Administrator - Water Quality Division

7/19/05
Date



John V. Corra
Director - Department of Environmental Quality

7/19/05
Date

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effective immediately and lasting through June 30, 2009, the quality of effluent discharged by the permittee shall, at a minimum, meet the limitations set forth below. The permittee is authorized to discharge from outfalls serial number 001.

1. Such discharges shall be limited as specified below:

Effluent Limits

<u>Effluent Characteristic</u>	<u>Daily Maximum</u>
Chlorides, mg/l	230
Dissolved Iron, µg/l	1000
Dissolved Manganese, µg/l	1794
pH, standard units	6.5 – 9.0
Specific Conductance, micromhos/cm	7500
Sulfates, mg/l	3000
Total Arsenic, µg/l	150
Total Selenium, µg/l	5
Total Barium, µg/l	1800
Total Dissolved Solids, mg/l	5000
Total Flow, MGD*	0.576
Total Aluminum, µg/l	750

*Total flow is to be calculated as the sum of all discharge from all permitted outfalls.

Note: 1) 'Dissolved' value for metals refers to the amount that will pass through a 0.45 µm membrane filter prior to acidification to 1.5-2.0 with Nitric Acid.

2) 'Total' value for metals refers to the total recoverable amount of that metal in the water column.

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units in any single grab sample.

The produced water will originate from one or more of the following formations: the Anderson, Canyon, Cook, Dietz, Kendrick, Nance, Roberts, and/or Brewster/Arnold coal seams.

The maximum flow rate being established in the permit is based upon the permittee's estimated "short-term fill rate" for the reservoir. The "short term fill rate" represents the amount of flow necessary to fill the reservoir, if empty, to approximately 75% of the estimated pool volume within a short period (approximately one week). While the reservoir cannot contain a sustained flow of 0.576 MGD of produced water on a continual basis, the wells being authorized for discharge under this facility have already been previously authorized for discharge under an option 1A (discharge to off-channel containment units) WYPDES permit, and are valved to allow discharge to any one of more than 30 off-channel containment units in addition to the on-channel reservoir proposed for containment under this permit. The permittee has committed to; and will be required to, contain all their produced water in addition to stormwater runoff up to and including runoff from a 2 year, 24 hour storm event within the reservoir. Discharges from the reservoir not related to a precipitation event greater than a 2 year, 24 hour storm event will be considered a

violation of this permit. During "short term fill events" the permittee is required to closely monitor the effluent level within the reservoir to ensure that the reservoir does not overflow and discharge. In addition, the permittee is required to maintain sufficient freeboard within the reservoir to contain stormwater runoff from a 2 year, 24 hour precipitation event (1.4 inches of precipitation). Should the amount of water within the reservoir exceed the freeboard needed to contain runoff from a 2 year, 24 hour storm event, the operator is required to cease discharge into the reservoir until the level of water within the reservoir falls below the required freeboard needed to contain runoff from a 2 year, 24 hour storm. The 2 year, 24 hour freeboard may only be exceeded during storm events equal to or greater than the 2 year, 24 hour storm event. If requested, it is the permittee's responsibility to provide adequate documentation describing the circumstances surrounding any reservoir discharges. This permit does not establish effluent limits that are protective of all designated uses associated with Hanging Woman Creek or the Tongue River.

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

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

2. Discharges shall be monitored by the permittee as specified below:

a. Monitoring of the initial discharge

Within 60 days of commencement of discharge, a sample shall be collected from each outfall and analyzed for the 24 constituents specified below, at the required detection limits. Within 120 days of commencement of discharge, a summary report on the produced water must be submitted to the Wyoming Department of Environmental Quality and the U.S. EPA Region 8 at the addresses listed below. This summary report must include the results and detection limits for each of the 24 constituents. In addition, the report must include written notification of the established location of the discharge point (refer to Part I.B.11). This notification must include a confirmation that the location of the established discharge point(s) is within 1,510 feet of the location of the identified discharge point(s), is within the same drainage, and discharges to the same landowner's property as identified on the original application form. The legal description and location in decimal degrees of the established discharge point(s) must also be provided. After receiving the monitoring results for the initial discharge, the routine monitoring requirements described in Part I.A.2.b. may be modified to require more stringent monitoring.

<u>Parameter</u>	<u>Required Detection Limit</u>	<u>Sample Type</u>
Total Aluminum	50 µg/l	Grab
Dissolved Cadmium	0.1 µg/l	Grab
Dissolved Calcium	as mg/l	Grab
Dissolved Calcium	as meq/l	Grab
Chlorides	5 mg/l	Grab
Dissolved Copper	1 µg/l	Grab
Dissolved Iron	30 µg/l	Grab

<u>Parameter</u>	<u>Required Detection Limit</u>	<u>Sample Type</u>
Dissolved Manganese	10 µg/l	Grab
Total Hardness	10 mg/l as CaCO ₃	Grab
Dissolved Lead	2 µg/l	Grab
Dissolved Magnesium	as mg/l	Grab
Dissolved Magnesium	as meq/l	Grab
Dissolved Mercury	0.06 µg/l	Grab
pH	to 0.1 pH unit	Grab
Total Radium 226	0.2 pCi/l	Grab
Total Selenium	5 µg/l	Grab
Dissolved Sodium	as mg/l	Grab
Dissolved Sodium	as meq/l	Grab
Sodium Adsorption Ratio	not applicable	Calculated
Specific Conductance	5 micromhos/cm	Grab
Sulfates	10 mg/l	Grab
Total Alkalinity	1 mg/l as CaCO ₃	Grab
Total Arsenic	1 µg/l	Grab
Total Barium	100 µg/l	Grab
Dissolved Zinc	10 µg/l	Grab
Bicarbonate	1 mg/l	Grab
Total Dissolved Solids	5 mg/l	Grab

Initial monitoring reports are to be sent to the following addresses:

Planning and Targeting Program, 8ENF-PT
Office of Enforcement, Compliance, and Environmental Justice
U.S. EPA Region 8
999 18th St., Suite 300
Denver, CO 80202-2466

and

Wyoming Department of Environmental Quality
Water Quality Division
Herschler Building, 4 West
122 West 25th Street
Cheyenne, WY 82002

b. Routine monitoring End of Pipe (001)

For the duration of the permit, at a minimum, samples for the constituents described below shall be collected at the indicated frequencies. The first routine monitoring for the time frame during which the monitoring of initial discharge occurs will, at a minimum, consist of flow measurements for the duration of the six-month monitoring time frame. Monitoring will be based on semi-annual time frames, from January through June, and from July through December.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Chloride (mg/l)	Annually	Grab
Dissolved Iron ($\mu\text{g/l}$)	Annually	Grab
Dissolved Manganese ($\mu\text{g/l}$)	Annually	Grab
pH (standard units)	Once Every Six Months	Grab
Specific Conductance (micromohs/cm)	Annually	Grab
Sulfate (mg/l)	Annually	Grab
Total Arsenic ($\mu\text{g/l}$)	Annually	Grab
Total Selenium ($\mu\text{g/l}$)	Annually	Grab
Total Barium ($\mu\text{g/l}$)	Annually	Grab
Total Flow - (MGD)	Monthly	Continuous
Dissolved Calcium (mg/l)	Once Every Three Months	Grab
Dissolved Magnesium (mg/l)	Once Every Three Months	Grab
Dissolved Sodium (mg/l)	Once Every Three Months	Grab
Sodium Adsorption Ratio (calculated as unadjusted ratio)	Once Every Three Months	Grab
Total Aluminum ($\mu\text{g/l}$)	Annually	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At the outfall of the final treatment unit which is located out of the natural drainage and prior to admixture with diluent waters.

c. Routine Monitoring Within Reservoir (R1)

For the duration of the permit, at a minimum, samples for the constituents described below shall be collected at the indicated frequencies. Monitoring and reporting will be based on an annual time frame.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Total Dissolved Solids	Annually	Grab
Specific Conductance	Annually	Grab
Dissolved Iron	Annually	Grab
Dissolved Manganese	Annually	Grab
Total Arsenic	Annually	Grab
Chlorides	Annually	Grab
Total Selenium	Annually	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): designated play monitoring station located within Bulkley Reservoir as described in Table 1 (location P1). Monitoring location is to be located a minimum of 50 feet away from the point where CBM effluent enters the reservoir. Results are to be reported annually.

d. Water Quality Monitoring Stations (TRIB1)

For the duration of the permit, at a minimum, samples for the constituents described below shall be collected at the indicated frequencies. Monitoring will be based on monthly time frames, and reported semiannually.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Dissolved Calcium (mg/l)	Monthly	Grab
Dissolved Calcium (me/l)	Monthly	Grab
Dissolved Magnesium (mg/l)	Monthly	Grab
Dissolved Magnesium (me/l)	Monthly	Grab
Dissolved Sodium (mg/l)	Monthly	Grab
Dissolved Sodium (me/l)	Monthly	Grab
Sodium Adsorption Ratio (calculated as unadjusted ratio)	Monthly	Calculated
Specific Conductance (micromohs/cm)	Monthly	Grab
Flow (MGD)	Monthly	Instantaneous

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: a designated water quality monitoring station identified as TRIB1, located as described in Table 1, Part I.B.12 of the permit below. Established water quality monitoring stations on the mainstem are to be located outside the mixing zone of the tributary with the mainstem. Monthly water quality samples are to be collected at the tributary water quality monitoring station when effluent from this CBM facility reaches the TRIB1 station on West Prong, Hanging Woman Creek. If flow occurs at the TRIB1 station during a given monthly monitoring period, but this CBM facility did not contribute to that flow, the permittee will report "did not contribute" in the discharge monitoring reports for that monthly monitoring period. Under such circumstances, sampling is not required at the tributary water quality monitoring stations, and it will be the responsibility of the permittee to demonstrate that the effluent from this facility did not contribute to the flow occurring at the TRIB1 station. If no flow at all occurs at the TRIB1 station for an entire monthly monitoring period, then "no flow" is to be reported and samples need not be collected at the tributary water quality monitoring stations for that monthly monitoring period. Results are to be reported semiannually.

At the designated water quality monitoring stations, monitoring will be required for calcium, magnesium, sodium, sodium absorption ratio and specific conductance. Information gathered from the water quality monitoring stations may result in modification of the permit to protect existing uses on the tributary and mainstem.

B. MONITORING AND REPORTING

1. Representative Sampling

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

2. Reporting

Results of initial monitoring, including the date the discharge began, shall be summarized on a Monitoring Report Form for Monitoring of Initial Discharge and submitted to the state water pollution control agency at the address below postmarked no later than 120 days after the commencement of discharge.

Results of routine end of pipe and water quality station monitoring during the previous six (6) months shall be summarized and reported semiannually on a Discharge Monitoring Report Form (DMR). If the discharge is intermittent, the date the discharge began and ended must be included. The information submitted on the first semiannual DMR shall contain a summary of flow measurements and any additional monitoring conducted subsequent to the submittal of the initial monitoring report. If required, whole effluent toxicity testing (biomonitoring) results must be reported on the most recent version of EPA Region VIII's Guidance for Whole Effluent Reporting. Monitoring reports must be submitted to the state water pollution control agency at the following address postmarked no later than the 15th day of the second month following the completed reporting period. The first report is due on February 15, 2006.

Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements contained in Part II.A.11.

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

If no discharge occurs during the reporting period, "no discharge" shall be reported. If discharge is intermittent during the reporting period, sampling shall be done while the facility is discharging.

3. **Definitions**

- a. The "monthly average" shall be determined by calculating the arithmetic mean (geometric mean in the case of fecal coliform) of all composite and/or grab samples collected during a calendar month.
- b. The "weekly average" shall be determined by calculating the arithmetic mean (geometric mean in the case of fecal coliform) of all composite and/or grab samples collected during any week.
- c. The "daily maximum" shall be determined by the analysis of a single grab or composite sample.
- d. "MGD", for monitoring requirements, is defined as million gallons per day.
- e. "Net" value, if noted under Effluent Characteristics, is calculated on the basis of the net increase of the individual parameter over the quantity of that same parameter present in the intake water measured prior to any contamination or use in the process of this facility. Any contaminants contained in any intake water obtained from underground wells shall not be adjusted for as described above and, therefore, shall be considered as process input to the final effluent. Limitations in which "net" is not noted are calculated on the basis of gross measurements of each parameter in the discharge, irrespective of the quantity of those parameters in the intake waters.
- f. A "composite" sample, for monitoring requirements, is defined as a minimum of four grab samples collected at equally spaced two hour intervals and proportioned according to flow.
- g. An "instantaneous" measurement for monitoring requirements is defined as a single reading, measurement, or observation.
- h. A "pollutant" is any substance or substances which, if allowed to enter surface waters of the state, causes or threatens to cause pollution as defined in the Wyoming Environmental Quality Act, Section 35-11-103.
- i. "Total Flow" is the total volume of water discharged, measured on a continuous basis and reported as a total volume for each month during a reporting period. The accuracy of flow measurement must comply with Part III.A.1.

4. **Test Procedures**

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

5. **Recording of Results**

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

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

6. **Additional Monitoring by Permittee**

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

7. **Records Retention**

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

8. **Penalties for Tampering**

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

9. **Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

10. **Facility Identification**

All facilities discharging produced water shall be clearly identified with an all-weather sign posted at each outfall and flow monitoring locations (points of compliance). This sign shall, as a minimum, convey the following information:

- a. The name of the company, corporation, person(s) who holds the discharge permit, and the WYPDES permit number;
- b. The contact name and phone number of the person responsible for the records associated with the permit;
- c. The name of the facility (lease, well number, etc.) and the outfall number as identified by the discharge permit.

11. Identification and Establishment of Discharge Points

According to 40 CFR 122.21(k)(1), the permittee shall identify the expected location of each discharge point on the appropriate WYPDES permit application form. The location of the discharge point must be identified to within an accuracy of 15 seconds. This equates to a distance of 1,510 feet.

In order for the permit not to be subjected to additional public notice, the location of the established discharge point must be within 1,510 feet of the location of the discharge point originally identified on the permit application. In addition, the discharge must be within the same drainage and must discharge to the same landowner's property as identified on the original application form. If the three previously stated requirements are not satisfied, modification of the discharge point location(s) constitutes a major modification of the permit as defined in Part I.B.12. The permittee shall provide written notification of the establishment of each discharge point in accordance with Part I.A.2.a above.

12. Location of Discharge Points and Water Quality Monitoring Stations

As of the date of permit issuance, authorized points of discharge were as follows:

SEE TABLE 1 FOR A LIST OF OUTFALLS, RESERVOIR WATER QUALITY MONITORING, AND TRIBUTARY WATER QUALITY MONITORING STATION LOCATIONS.

TABLE 1: OUTFALL AND WATER QUALITY MONITORING STATION LOCATION INFORMATION, WY0053023

Outfall #	Immediate Receiving Stream	Distance from outfall to mainstem	Quarter/Quarter	Section	Township	Range	Latitude	Longitude	Reservoir
001	Antelope Draw	25 linear miles	SESW	30	T58N	R79	44.96459	-106.43211	Antelope
WATER QUALITY MONITORING STATION LOCATION									
Monitoring Point	Stream Name	Distance from outfall to mainstem	Quarter/Quarter	Section	Township	Range	Latitude	Longitude	
TRIB1	West Prong, Hanging Woman Creek	2/3 mi.	NWNE	19	T58	R79	44.93556	-106.4304169	
R1	Antelope Reservoir	25 linear miles	SESW	30	T58N	R79	44.96459	-106.43211	

The outfalls listed in the above table may be moved from the established location without submittal of a permit modification application provided all of the following conditions are satisfied:

1. The new outfall location is within 2640 feet of the established outfall location.
2. The new outfall location is within the same drainage or immediate permitted receiving waterbody.
3. There is no change in the affected landowners.
4. Notification of the change in outfall location must be provided to the WYPDES Permits Section on a form provided by the WQD Administrator within 10 days of the outfall location change. The form must be provided in duplicate and legible maps showing the previous and new outfall location must be attached to the form.

Moving an outfall location without satisfying the four above listed conditions will be considered a violation of this permit and subject to full enforcement authority of the WQD.

An outfall relocation as described above will not be allowed if the new outfall location is less than one mile from the confluence of a Class 2 waterbody and the dissolved iron limits established in the permit for the outfall are based upon Class 3 standards.

Requests for modification of the above list will be processed as follows. If the requested modification satisfies the definition of a minor permit modification as defined in 40 CFR 122.63 modifications will not be required to be advertised in a public notice. A minor modification constitutes a correction of a typographical error, increase in monitoring and/or reporting, revision to an interim compliance schedule date, change in ownership, revision of a construction schedule for a new source discharger, deletion of permitted outfalls, and/or the incorporation of an approved local pretreatment program.

A request for a minor modification must be initiated by the permittee by completing the form titled Wyoming Pollutant Discharge Elimination System Permit Modification Application For Coal Bed Methane. Incomplete application forms will be returned to the applicant.

PART II

A. MANAGEMENT REQUIREMENTS

1. Changes

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

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

2. Noncompliance Notification

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

The written submission shall contain:

- (1) A description of the noncompliance and its cause;
 - (2) The period of noncompliance, including exact dates and times;
 - (3) The estimated time noncompliance is expected to continue if it has not been corrected; and
 - (4) Steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.
- d. The following occurrences of unanticipated noncompliance shall be reported by telephone to the Water Quality Division, Watershed Management Section, WYPDES Program (307) 777-7781 by the first workday following the day the permittee became aware of the circumstances.
- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - (2) Any upset which exceeds any effluent limitation in the permit; or
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.

- e. The administrator of the Water Quality Division may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Quality Division, Watershed Management Section, WYPDES Program (307) 777-7781.
- f. Reports shall be submitted to the Wyoming Department of Environmental Quality at the address in Part I under Reporting and to the Planning and Targeting Program, 8ENF-PT, Office of Enforcement, Compliance, and Environmental Justice, U.S. EPA Region 8, 999 18th St., Suite 300, Denver, CO 80202-2466.
- g. The permittee shall report all instances of noncompliance that have not been specifically addressed in any part of this permit at the time the monitoring reports are due.

3. Facilities Operation

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

4. Adverse Impact

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

5. Bypass of Treatment Facilities

- a. Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- b. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs c. and d. of this section. Return of removed substances to the discharge stream shall not be considered a bypass under the provisions of this paragraph.
- c. Notice:
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice at least 60 days before the date of the bypass.
 - (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.A.2.
- d. Prohibition of bypass.
 - (1) Bypass is prohibited and the administrator of the Water Quality Division may take enforcement action against a permittee for a bypass, unless:

- (a) The bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The permittee submitted notices as required under paragraph c. of this section.
- e. The administrator of the Water Quality Division may approve an anticipated bypass, after considering its adverse effects, if the administrator determines that it will meet the three conditions listed above in paragraph d. (1) of this section.

6. Upset Conditions

- a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improper designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph c. of this section are met.
- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required under Part II.A.2; and
 - (4) The permittee complied with any remedial measures required under Part II.A.4.
- d. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

7. Removed Substances

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

