

Wyoming Department of Environmental Quality  
Water Quality Division  
WYPDES Program

STATEMENT OF BASIS

Major Modification

APPLICANT NAME: Pennaco Energy, Inc.

MAILING ADDRESS: 3601 Southern Drive  
Gillette, WY 82718

FACILITY LOCATION: South East Kuhn-Mickleberry which is located in the SENE and NESE of Section 12; NESE of Section 11; and the SENW, NENE, SWNE, SWNW, and SESW of Section 13 all in Township 53 North, Range 77 West in Sheridan County. The wastewater will be discharged to and contained in an off channel pit, stock pond or other man made containment unit (class 4 water) which is within the Powder River (class 2ABww) watershed and will be discharged to reservoirs located on unnamed ephemeral draws and Mickleberry Creek (class 3B) tributary to the Powder River (class 2ABww). In the permittee's original submitted application for coal bed methane water discharge, a total flow rate of 0.52 MGD has been estimated from this facility.

NUMBER: WY0047546

*Upon approval of this modification, the terms of permit WY0047546 are hereby modified as follows:*

- 1. Effluent limits for radium<sup>226</sup> are updated to distance-based effluent limits in accordance with current WDEQ policy. This update applies only to those outfalls that do not discharge to off-channel containment units.*
- 2. In accordance with current WDEQ policy, the effluent limit and monitoring requirements for total petroleum hydrocarbons (TPH) are removed from this permit.*
- 3. The initial monitoring list is updated to 24 constituents.*
- 4. The dissolved iron effluent limit is updated to 1000 µg/l for all outfalls greater than one mile from the nearest class 2 water. This update applies only to those outfalls that do not discharge to off-channel containment units.*
- 5. Current outfall relocation language is added which establishes conditions that must be met in order for the permittee to relocate an outfall.*
- 6. The expiration date has been changed from February 11, 2007 to January 31, 2007 to be consistent with WDEQ permit expiration date policy.*

*With the exception of items explicitly delineated in this major modification, all terms and conditions of WY0047546, including Parts II and III of the original permit, shall remain unchanged and in full force and effect.*

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 to enhance 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. Produced water from outfalls 001, 005, 006, and 008 will immediately be discharged to a series of on-channel reservoirs located on class 3 receiving streams that are eventually tributary to a class 2AB perennial water of the state. Effluent limitations protective of class 2AB waters will be established at these outfalls. The permit establishes effluent limits for the end of pipe at outfalls 001, 005, 006, and 008, 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.

Produced water from outfalls 002, 003, 004, and 007 will immediately be discharged to a confined, off channel pit, stock pond or other man made containment unit (class 4 water) that will not flow into any other waters of the state. The permit establishes effluent limits for the end of pipe at outfalls 002, 003, 004, and 007, which are protective of recreation, agriculture, industry, scenic value, and livestock and wildlife watering.

The permittee has demonstrated through a water balance study that, considering CBM well inflow, natural precipitation, evaporation and infiltration, that both the on and off channel containment units will be adequate to contain all CBM discharge water and stormwater up to a 2 year 24 hour event. In addition, the permittee has committed to the complete containment of all discharged water.

The Wyoming DEQ has determined through review of the permit application and available scientific information that effluent discharged from this facility will be put to beneficial use and is unlikely to reach the Powder River. Kuhn Ranch, LLC on which discharge of effluent shall occur, have submitted certified statements that demonstrate discharged effluent will be put to beneficial use for livestock and wildlife watering. Although most of the discharge will be used by wildlife and livestock, a portion of the flow may also be lost due to stream channel infiltration. Information gathered from Western Land Services, Sheridan Wyoming (April 19, 2001) and Hydrologic Consultants, Inc. (2001) indicate a mean channel infiltration loss rate for ephemeral drainages in the Powder River at 0.1 cfs per mile of stream channel. Review of the permit application reveals that this facility is located approximately <0.5 mile from the confluence with the Powder River. In addition, maximum total effluent flow rate from this facility is estimated at 0.80 cfs. Consideration of natural channel infiltration and the capacity of both the on and off-channel reservoirs to contain all effluent and runoff from a 2 year/24 hour storm event, it appears that effluent has a negligible chance of reaching the Powder River. The permittee has committed that effluent shall not reach the Powder River. However, in the event that such a situation occurs, this permit establishes a monitoring

station on the receiving stream prior to the confluence with the Powder River. This station will function to monitor any effluent flows to the Powder River.

For outfalls 001, 005, 006, and 008, permit effluent limits are based on federal and state regulations and are effective as of the date of issuance. The pH 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. The permit also establishes a dissolved manganese limit of 629 µg/l, a dissolved lead limit of 3.7 µg/l, a dissolved copper limit of 9.2 µg/l, and a chlorides limit of 46 mg/l. These limits are based on chronic aquatic life standards for class 2AB waters as established in *the Wyoming Water Quality Rules and Regulations, Chapter 1*. Review of the representative water quality data submitted with the application revealed that effluent from this facility may have the potential to exceed chronic aquatic life water quality standards for dissolved copper and dissolved lead for class 2AB waters. Based on this information, the permit establishes additional effluent limits for dissolved copper and dissolved lead that are protective of aquatic life uses for class 2AB waters. The permit also establishes a total barium limit of 1800 µg/l, and a total arsenic limit of 7 µg/l. These limits are based on Water Quality Criteria as established in *the Wyoming Water Quality Rules and Regulations, Chapter 1*, for Human Health values. The limits established in this permit for metals and chlorides reflect the application of the antidegradation provisions required under *the Wyoming Water Quality Rules and Regulations, Chapter 1*. In addition, the permit establishes a dissolved iron limit of 1000 µg/l, which is based upon chronic aquatic life standards for class 3B waters greater than one mile from the confluence of a class 2 water, and reflects the application of standards required under Chapter 1 of the Wyoming Water Quality Rules and Regulations. All limits described in this section are intended to protect for the above listed designated uses, on both the immediate receiving water and the perennial mainstem, and apply at the end of pipe.

This permit originally established a total radium<sup>226</sup> limit of 1 pCi/l and a total petroleum hydrocarbons (TPH) limit of 10 mg/l at the end of pipe for outfalls 001, 005, 006, and 008. Based upon water quality data collected by WDEQ since the time this permit was originally issued, a permitting approach for establishing total radium limits in coal bed methane permits has been developed. This approach is based upon the distance of the outfall from a class 2 water. The increase of the originally-established total radium<sup>226</sup> limit for outfalls 001, 005, 006, and 008 is based on this permitting approach. In addition, review of discharge monitoring report data for this facility and other CBM facilities in Northeast Wyoming indicates that the maximum reported concentrations for total petroleum hydrocarbons (TPH) in the discharge were well below the water quality standard of 10 mg/l established in Chapter 1 of the Wyoming Water Quality Rules and Regulations. Therefore, WDEQ has removed the effluent limit and monitoring requirement for TPH in this permit. Based on evaluation of the available data, it is WDEQ's determination that increasing the total radium<sup>226</sup> limit and removing the total petroleum hydrocarbons limit from this permit conforms to the anti-backsliding requirements established in Section 402(o).2.B.i of the Clean Water Act.

For outfalls 002, 003, 004, and 007, permit effluent limits are based on federal and state regulations and are effective as of the date of issuance. The pH 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. The permit also establishes a radium 226 limit of 60 pCi/l at the end of the pipe. These limits are based upon Wyoming Water Quality Rules and Regulations, Chapters 1 and 2 and apply to discharge from permitted outfalls 002, 003, 004, and 007.

Results are to be reported twice-yearly and if no discharge occurs then "no discharge" is to be reported. 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.

The permit also requires sampling at designated water quality monitoring stations located on the receiving streams unnamed ephemeral draws and Mickleberry Creek and at locations on the Powder River (class 2AB water) that the unnamed ephemeral draws confluence. Water quality monitoring stations on the Powder River will be located upstream and downstream of the confluences of the unnamed ephemeral draws with the Powder River. Effluent samples at the designated water quality monitoring stations must be collected on a monthly sampling period and are to be reported semiannually. If no discharge occurs at the tributary monitoring station then "no discharge" is to be reported and samples need not be collected at the three water quality monitoring stations for that monthly sampling period. At the designated water quality monitoring stations, monitoring will be required for calcium, chlorides, 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.

The designated water quality monitoring stations are located on the tributaries in the SWSW and NENW of Section 12, and SESE of Section 14 in Township 53 North, Range 77 West and on the mainstem in the NENW of Section 23, Township 53 North, Range 77 West and the NWNE of Section 35, Township 54 North, Range 77 West. Established water quality monitoring stations on the mainstem are to be located outside the mixing zone of the tributaries with the 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 January 31, 2007.

Eric Hargett  
Water Quality Division  
Department of Environmental Quality

December 10, 2001  
Amended - February 8, 2002 - Eric Hargett  
Amended - October 17, 2002 - Kathy Shreve  
Water Quality Division  
Amended - September 9, 2005 - Jennifer Zygmunt

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,

Pennaco Energy, Inc.

is authorized to discharge from the wastewater treatment facilities serving the

South East Kuhn-Mickleberry Creek

located in

the SENE and NESE of Section 12; NESE of Section 11; and the SENW, NENE, SWNE, SWNW, and SESW of Section 13 all in Township 53 North, Range 77 West in Sheridan County


to receiving waters named

off channel pit, stock pond or other man made containment unit (class 4 water) which is within the Powder River (class 2ABww) watershed and will be discharged to reservoirs located on unnamed ephemeral draws and Mickleberry Creek (class 3B) which are tributary to the Powder River (class 2ABww)


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

This permit became effective on February 12, 2002, and this major modification shall become effective on the date of signature by the Director of the Department of Environmental Quality. ***With the exception of items explicitly delineated in this major modification, all terms and conditions of WY0047546, including Parts II and III of the original permit, shall remain unchanged and in full force and effect.***

This permit and the authorization to discharge shall expire at midnight, January 31, 2007.

  
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John F. Wagner  
Administrator - Water Quality

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
John V. Corra  
Director - Department of Environmental Quality

  
\_\_\_\_\_  
Date

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effective immediately and lasting through January 31, 2007, the quality of effluent discharged by the permittee shall, at a minimum, meet the limitations set forth below. The permittee is authorized to discharge from outfall(s) serial numbers **001-008**.

- 1a. Such discharges shall be limited as specified below for outfalls **001, 005, 006, and 008**. These outfalls discharge to on-channel reservoirs and are greater than one mile from the nearest class 2 water.

<u>Effluent Characteristic</u>	<u>Effluent Limits</u>	<u>Daily Maximum</u>
Chlorides, mg/l		46
Dissolved Iron, µg/l		1000
Dissolved Manganese, µg/l		629
pH, standard units		6.5 – 9.0
Specific Conductance, micromhos/cm		7500
Sulfates, mg/l		3000
Total Arsenic, µg/l		7
Total Barium, µg/l		1800
Total Dissolved Solids, mg/l		5000
Dissolved Lead, ug/l		3.7
Dissolved Copper, ug/l		9.2
Total Radium 226, pCi/l		3

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

The permittee's original submitted application for coal bed methane water discharge estimates a total flow rate of 0.52 MGD from 24 wells for this facility.

Information gathered from the water quality monitoring stations may result in modification of the permit to protect existing uses on the tributary and the mainstem.

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.

- 1B. Such discharges shall be limited as specified below for outfalls **002, 003, 004, and 007**. These outfalls discharge to off-channel containment units.

<u>Effluent Characteristic</u>	<u>Effluent Limits</u>	<u>Daily Maximum</u>
Chlorides, mg/l		2000
pH, standard units		6.5 – 9.0
Specific Conductance, micromhos/cm		7500
Sulfates, mg/l		3000
Total Dissolved Solids, mg/l		5000
Total Radium 226, pCi/l		60

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

The permittee's original submitted application for coal bed methane water discharge estimates a total flow rate of 0.52 MGD from 24 wells for this facility.

Information gathered from the water quality monitoring stations may result in modification of the permit to protect existing uses on the tributary and the mainstem.

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:

*If the outfalls being authorized for discharge under this permit modification have already been sampled and analyzed for initial monitoring constituents, the permittee is not required to re-sample and re-analyze the outfalls if results have been obtained for all the constituents listed below and reported to the WDEQ.*

- 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 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 constituents listed below. 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> (See notes following the table on chemical states)	<u>Required Detection Limits and Required Units</u>
Alkalinity, Total	1 mg/l as CaCO <sub>3</sub>
Aluminum, Total Recoverable	50 µg/l
Arsenic, Total	1 µg/l
Barium, Total	100 µg/l
Bicarbonate	10 mg/l
Cadmium, Dissolved	5 µg/l
Calcium, Dissolved	50 µg/l, report as meq/l
Calcium, Dissolved	50 µg/l, report as mg/l
Chlorides	5 mg/l
Copper, Dissolved	10 µg/l
Dissolved Solids, Total	5 mg/l
Hardness, Total	10 mg/l as CaCO <sub>3</sub>
Iron, Dissolved	50 µg/l
Lead, Dissolved	2 µg/l
Magnesium, Dissolved	100 µg/l, report as meq/l
Magnesium, Dissolved	100 µg/l, report as mg/l
Manganese, Dissolved	50 µg/l
Mercury, Dissolved	1 µg/l
pH	to 0.1 pH unit
Radium 226, Total	0.2 pCi/l
Selenium, Total Recoverable	5 µg/l
Sodium Adsorption Ratio	Calculated as unadjusted ratio
Sodium, Dissolved	100 µg/l, report as meq/l

Parameter\* (See notes following  
the table on chemical states)

Required Detection Limits and Required Units

Sodium, Dissolved	100 µg/l, report as mg/l
Specific Conductance	5 micromhos/cm
Sulfates	10 mg/l
Zinc, Dissolved	50 µg/l

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 for outfalls 001, 005, 006, and 008

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>
Bicarbonate	Monthly for April, May, June, July	Grab
Dissolved Calcium	Monthly for April, May, June, July	Grab
Chloride	Monthly for April, May, June, July	Grab
Dissolved Iron	Annually	Grab

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Dissolved Manganese	Annually	Grab
Dissolved Fluoride	Monthly for April, May, June, July	Grab
Dissolved Magnesium	Monthly for April, May, June, July	Grab
pH	Once Every Six Months	Grab
Dissolved Potassium	Monthly for April, May, June, July	Grab
Radium 226	Annually	Grab
Dissolved Sodium	Monthly for April, May, June, July	Grab
Sodium Adsorption Ratio	Monthly for April, May, June, July	Calculated
Specific Conductance	Monthly for April, May, June, July	Grab
Sulfate	Monthly for April, May, June, July	Grab
Total Alkalinity	Monthly for April, May, June, July	Grab
Total Arsenic	Annually	Grab
Total Barium	Annually	Grab
Total Flow - (MGD)	Monthly	Continuous
Dissolved Copper	Annually	Grab
Dissolved Lead	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 End of Pipe for outfalls 002, 003, 004, and 007

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>
Chlorides	Once Every Six Months	Grab
pH	Once Every Six Months	Grab
Radium 226	Annually	Grab
Specific Conductance	Once Every Six Months	Grab
Total Flow - (MGD)	Monthly	Continuous

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.

d. Water Quality Monitoring Stations (TRIB1-TRIB3, UPR, DPR)

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	Monthly	Grab
Chloride	Monthly	Grab

Dissolved Magnesium	Monthly	Grab
Dissolved Sodium	Monthly	Grab
Sodium Adsorption Ratio	Monthly	Calculated
Specific Conductance	Monthly	Grab
Flow	Monthly	Instantaneous

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): designated water quality monitoring stations located in the unnamed ephemeral draws and in the main channel of the Powder River, upstream and downstream of the confluences with the unnamed ephemeral draws. The designated water quality monitoring stations are located in on the tributaries in the SWSW and NENW of Section 12, and SESE of Section 14 in Township 53 North, Range 77 West and on the mainstem in the NENW of Section 23, Township 53 North, Range 77 West and the NWNE of Section 35, Township 54 North, Range 77 West. Established water quality monitoring stations on the mainstem are located outside the mixing zone with the tributary and the mainstem. Results are to be reported semiannually and if no flow occurs at the designated tributary monitoring station, then "no flow" is to be reported and samples need not be collected at the water quality monitoring stations for that monthly sampling period.

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 (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 following issuance of this modification 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

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

SEE TABLE 1 FOR A LIST OF OUTFALLS AND WELLS

13. Location of water quality monitoring stations

As of the date of issuance, authorized water quality monitoring stations were as follows:

SEE TABLE 1 FOR A LIST OF WATER QUALITY MONITORING STATIONS

**TABLE 1: OUTFALL AND WATER QUALITY MONITORING STATION LOCATION INFORMATION**

Discharge Point # (Outfall)	Distance from outfall to mainstem (stream miles)	Mainstem	Quarter / Quarter	Section	Township	Range	Latitude	Longitude	Reservoir Name
001	1.44	Powder River	SENE	12	53	77	44.5878890	106.0648880	Jerry
002	1.94	Powder River	NESE	12	53	77	44.5820278	106.0595556	Clarence
003	0.19	Powder River	NESE	11	53	77	44.5828611	106.0828611	Jeff #5
004	0.69	Powder River	SENE	13	53	77	44.5733180	106.0734910	Proposed Pon
005	1.02	Powder River	NENE	13	53	77	44.5746250	106.0642600	Sorrenson #
006	1.06	Powder River	SWNE	13	53	77	44.5708333	106.0683333	Roken
007	0.34	Powder River	SWNW	13	53	77	44.5701310	106.0773430	Jeff #6
008	1.13	Powder River	SESW	13	53	77	44.5627780	106.0700000	Anna
TRIB1		Powder River	SWSW	12	53	77	44.576577	106.075260	
TRIB2		Powder River	NENW	12	53	77	44.588212	106.068272	
TRIB3		Powder River	SESE	14	53	77	44.564786	106.078577	
UPR		Powder River	NENW	23	53	77	44.560510	106.092930	
DPR		Powder River	NWNE	35	54	77	44.612370	106.086640	

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.

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 standard