

**Wyoming Department of Environmental Quality
Water Quality Division
NPDES Program**

STATEMENT OF BASIS

Major Modification

APPLICANT NAME: Pennaco Energy, Inc.

MAILING ADDRESS: 3601 Southern Drive
Gillette, WY 82718

FACILITY LOCATION: Jamison Twenty-Mile Option 2, which is located in the in the SWSE and NENW of Section 25 and the SWSW of Section 36, all in Township 52 North, Range 74 West; and in the SESW of Section 1, the NESE of Section 2, and the NENW of Section 12, all in Township 51 North, Range 74 West in Campbell County. The produced water will be discharged to the Jamison Prong (class 3B) drainage, which is tributary to Wildcat Creek (class 3B), which is tributary to Horse Creek (class 3B), which is tributary to the Little Powder River (class 2AB). The established attenuation zone terminus (AZTE) is located downstream of the outfalls in the SENW of Section 24, Township 52 North, Range 74 West, on Jamison Prong, prior to the first downstream point of irrigation diversion/use on Wildcat Creek (DIV3). The permit requires that the produced water being discharged by this facility originate in one or more of the following formations: the Canyon, Smith, and/or Anderson coal seams.

NUMBER: **WY0048224**

The following Statement of Basis only includes information that has changed with this modification. For a complete Statement of Basis, please see previously issued modifications or renewals for this permit.

Upon approval of this major modification, all terms and conditions of WY0048224 are hereby modified as follows:

- 1. The effluent limit and monitoring requirements for radium²²⁶ are removed from this permit in accordance with the WDEQ's current distance-based permitting approach for this constituent.*
- 2. The pH effluent limit is updated from 6.5-8.5 to 6.5-9.0 standard units.*
- 3. The effluent limits and routine end-of-pipe monitoring requirements for sulfate, manganese, total petroleum hydrocarbons (TPH), copper and lead are removed from this permit.*

4. *The locations of water quality monitoring stations are updated.*
5. *The required routine monitoring frequencies for alkalinity, chloride, and bicarbonate are updated to an annual sampling frequency.*

With the exception of items explicitly delineated in this major modification, all terms and conditions of permit WY0048224, including Parts II and III of the renewed permit, shall remain unchanged and in full force and effect.

Effluent Limits:

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), and specific conductance (7,500 micromhos/cm) 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 the following water quality based effluent limits at each outfall: a dissolved iron limit of 1000 µg/l, a total barium limit of 1800 µg/l, a total arsenic limit of 3.6 µg/l, and a chlorides limit of 46 mg/l. These limits are based on standards for class 3B and class 2AB waters, which are intended to protect for the above listed designated uses and reflect the application of the antidegradation provisions required under Chapter 1 of the Wyoming Water Quality Rules and Regulations.

This permit originally established a total radium²²⁶ limit of 5 pCi/l, a sulfate limit of 3000 mg/l, a total petroleum hydrocarbons (TPH) limit of 10 mg/l, a dissolved copper limit of 14.6 µg/l, a dissolved lead limit of 7.7 µg/l, and a dissolved manganese limit of 718 µg/l at the end of pipe. 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 removal of the originally-established total radium²²⁶ limit 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), dissolved manganese and sulfate in the discharge were well below the water quality standards of 10 mg/l for TPH and 3000 mg/l for sulfates established in *Chapter 1 of the Wyoming Water Quality Rules and Regulations*, and well below the originally established effluent limit of 718 µg/l for dissolved manganese, 14.6 µg/l for copper, and 7.7 µg/l for lead. Therefore, WDEQ has removed the effluent limit and routine monitoring requirements for TPH, sulfate, dissolved manganese, copper and lead in this permit. Based on evaluation of the available data, it is WDEQ's determination that removing the total radium²²⁶, sulfate, dissolved manganese, copper and lead, and total petroleum hydrocarbons limits from this permit conforms to the anti-backsliding requirements established in *Section 402(o).2.B.i of the Clean Water Act*.

Water Quality Division
Department of Environmental Quality
Drafted: August 20, 2004
Revised: December 14, 2004

Major Modification
Dena Hicks
Water Quality Division
Department of Environmental Quality
February 22, 2007

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

Jamison Twenty-Mile Option 2

located in

the SWSE and NENW of Section 25 and the SWSW of Section 36, all in Township 52 North, Range 74 West; and in the SESW of Section 1, the NESE of Section 2, and the NENW of Section 12, all in Township 51 North, Range 74 West in Campbell County


to receiving waters named

Jamison Prong (class 3B) drainage, which is tributary to Wildcat Creek (class 3B), which is tributary to Horse Creek (class 3B), which is tributary to the Little Powder River (class 2AB)

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

This 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 the major modification, all terms and conditions of permit WY0048224, 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, June 30, 2009.


John F. Wagner
Administrator, Water Quality Division

5/8/07
Date


John V. Corra
Director - Department of Environmental Quality

5/9/07
Date

PART I

The Wildcat Creek drainage is an ephemeral/intermittent watershed with distinctive topography, water, hydrology, soil, and vegetation conditions. Therefore, certain terms and conditions of this permit, including but not necessarily limited to the sampling and monitoring protocol and effluent limitations, are specific to the Wildcat Creek drainage.

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 numbers 001 - 006.

1. Such discharges shall be limited as specified below:

Effluent Limits

<u>Effluent Characteristic</u>	<u>Daily Maximum Outfall</u>	<u>Daily Maximum Attenuation Zone</u>
Chloride, mg/l	46	
Dissolved Iron, µg/l	1000	
pH, standard units	6.5 – 9.0	
Specific Conductance, µmhos/cm (When flow at DIV3 is ≥ 20 cfs)**	2500	
Specific Conductance, µmhos/cm (When flow at DIV3 is < 20 cfs)	7500	
Total Recoverable Arsenic, µg/l	3.6	
Total Recoverable Barium, µg/l	1800	
Total Dissolved Solids, mg/l	5000	
Sodium Adsorption Ratio, calc. (When flow at DIV3 is ≥ 20 cfs)**	N/A	(7.10 x EC dS/m) - 2.48
Sodium Adsorption Ratio, calc. (When flow at DIV3 is < 20 cfs)	N/A	N/A

**Irrigation effluent limits [EC=2,500 µmhos/cm at outfall; SAR= (7.10 x EC dS/m) - 2.48 at AZT] will apply during any monitoring week in which irrigable flow (≥ 20 cfs) occurs at the first downstream point of irrigation diversion (DIV3). A monitoring week begins at 12:01 AM Sunday morning and ends at 12:00 midnight Saturday evening.

Effluent limit for SAR, (7.10 x EC dS/m) - 2.48, which applies during any monitoring week in which irrigable flow occurs at DIV3, is based on EC, dissolved sodium, dissolved calcium, and dissolved magnesium measured at the attenuation zone terminus (AZTE).

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

The effluent discharged at this facility will originate from the Canyon, Smith, and/or Anderson coal seams. The permittee may discharge water produced from any authorized well to any permitted outfall, as long as all permit limits and requirements are met.

Information gathered in conjunction with this permit may result in modification of the permit to protect existing uses on the tributary and the mainstem.

Perennial Flow Monitoring: The approved Water Administration Plan for this permit (Appendix A, dated 8/27/04) requires several operators, including this permittee, to coordinate discharges and reservoir releases in order to prevent Wildcat Creek from becoming a perennial stream. Therefore, this permit requires daily measurement of flow at two locations along the main channel of Wildcat Creek (DIV3: in the SESE of Section 21 in Township 53 North, Range 73 West; and CRX: in the NWNE of Section 12 in Township 53 North, Range 73 West). All daily flow rate measurements at the above locations shall be listed in an addendum report (in electronic form) to accompany quarterly discharge monitoring reports. Information in the addendum report must include for each station the date and recorded flow for each day. If stream flow exceeds 120 days during any 365-day period at either location DIV3 or location CRX, then the permittee will notify DEQ and submit all daily flow data from the DIV3 and CRX stations, as well as all daily flow data from the AZT location(s) associated with this permit. DEQ will evaluate the flow data and determine if there is a need to re-open and modify the permits (in accordance with Parts III.A.3 and III.A.4 below) in order to prevent Wildcat Creek from becoming a perennial stream.

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

All waters shall be discharged in a manner to prevent erosion, scouring, or damage to stream banks, streambeds, 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. Routine monitoring End of Pipe (Outfalls 001 - 006)

For the duration of the permit, samples for the constituents described below shall be collected at the indicated frequencies. Monitoring will be reported based on quarterly time frames, from January through March, April through June, July through September, and October through December.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Bicarbonate, mg/l	Annually	Grab
Dissolved Calcium, mg/l	Monthly	Grab
Chloride, mg/l	Annually	Grab
Dissolved Iron, µg/l	Annually	Grab
Dissolved Magnesium, mg/l	Monthly	Grab
pH, standard units	Monthly	Grab
Dissolved Sodium, mg/l	Monthly	Grab
Sodium Adsorption Ratio, unitless	Monthly	Calculated
Specific Conductance, µmhos/cm	Monthly	Grab
Total Alkalinity, mg/l as CaCO ₃	Annually	Grab
Total Recoverable Arsenic, µg/l	Annually	Grab
Total Recoverable Barium, µg/l	Annually	Grab
Total Dissolved Solids, mg/l	Annually	Grab
Total Flow Rate, cfs	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.

b. Attenuation Zone Terminus (AZTE)

For the duration of the permit, flow rate shall be measured daily at the attenuation zone terminus. Samples for the remaining constituents described below shall be collected at the indicated frequencies when irrigable flow ($\geq 20_{\text{cfs}}$) is present at DIV3. Results of chemical sampling at AZTE will be submitted in quarterly discharge monitoring reports and will also be submitted, when necessary, in accordance with the conditions of Appendix D (dated 7/26/04) "Process for Determining Contribution to Effluent Limit Exceedence". All daily flow rate measurements at AZTE shall be listed in an addendum report to accompany quarterly discharge monitoring reports. Information in the addendum report must include date and recorded flow at AZTE for each day. Submission of daily flow rate data for AZTE may also be required in conjunction with Part I.A.1 of the permit "Perennial Flow Monitoring."

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Total Flow Rate, cfs	Daily	Field Reading
Specific Conductance, µmhos/cm	Weekly	Grab

Dissolved Sodium, mg/l	Weekly	Grab
Dissolved Calcium, mg/l	Weekly	Grab
Dissolved Magnesium, mg/l	Weekly	Grab
Sodium Adsorption Ratio, calc	Weekly	Calculated

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at the attenuation zone terminus (AZTE), which is located in:

the SENW of Section 24, Township 52 North, Range 74 West, on Jamison Prong.

Flow rate shall be measured daily at the attenuation zone terminus and if no effluent from this facility reaches AZTE for an entire weekly monitoring period, then “no discharge” is to be reported for AZTE that week. In addition, if flow remains below 20 cfs at DIV3 for an entire weekly monitoring period, then no chemical sampling is required at AZTE for that weekly monitoring period. Flow measurement at AZTE is still required daily, regardless of whether full irrigable flow is occurring at DIV3. Irrigation effluent limits [EC=2,500 µmhos/cm at outfall; SAR =(7.10 x EC dS/m) - 2.48 at AZT] will apply during any weekly monitoring period in which irrigable flow (≥ 20 cfs) occurs at DIV3. A monitoring week begins at 12:01 AM Sunday morning and ends at 12:00 midnight Saturday evening.

c. First Downstream Point of Irrigation Diversion (DIV3)

For the duration of the permit, samples for the constituents described below shall be collected at the indicated frequencies. Reporting of results will occur in quarterly discharge monitoring reports.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Total Flow Rate, cfs	Daily	Field Reading
Specific Conductance, µmhos/cm	Weekly	Grab
Dissolved Sodium, mg/l	Weekly	Grab
Dissolved Calcium, mg/l	Weekly	Grab
Dissolved Magnesium, mg/l	Weekly	Grab
Sodium Adsorption Ratio, calc	Weekly	Calculated

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: at the first downstream point of irrigation diversion (DIV3), which is located in SESE, Section 21, Township 53 North, Range 73 West, on Wildcat Creek. Flow rate shall be measured daily at DIV3 and if no flow from any source occurs at DIV3 for an entire weekly monitoring period, then “no discharge” is to be reported for DIV3 that week. In addition, if flow remains below 20 cfs at DIV3 for an entire weekly monitoring period, then no chemical sampling is required at DIV3 for that weekly monitoring period. Flow measurement at DIV3 is still required daily, regardless of whether full irrigable flow is occurring at DIV3.

Modification of Irrigable Flow Rate: DEQ anticipates that during the life of this permit, physical alterations could be made to the downstream irrigation diversion structures, which may affect where and how those structures function. In the event that the location and/or unrestricted flow capacity of the downstream irrigation structure(s) become altered in the field to the extent that they would affect the downstream irrigable flow rate and/or the location where the irrigable flow rate is measured for this permit, the permit may need to be modified to reflect those physical changes in the field. If the irrigable flow rate changes, or if the location of the first downstream point of irrigation diversion changes, DEQ may administratively modify the permit to reflect any such changes in the field. This type of modification to the permit may not require further public notice. Prior to approving any such modifications of the permit, DEQ will review the updated physical / hydraulic data related to the affected irrigation diversion structure(s). This data must be submitted to DEQ by the permittee in conjunction with a completed application to modify the permit. DEQ will not modify the irrigable flow rate and/or location of the first downstream point of irrigation diversion in the permit until the changes in the field have been completed and all of the associated physical / hydraulic data have been reviewed.

d. Water Quality Monitoring Stations (TRIB1, ULPR, DLPR)

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 quarterly.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Total Flow Rate, cfs	Monthly	Field Reading
Specific Conductance, µmhos/cm	Monthly	Grab
Dissolved Sodium, mg/l	Monthly	Grab
Dissolved Calcium, mg/l	Monthly	Grab
Dissolved Magnesium, mg/l	Monthly	Grab

Sodium Adsorption Ratio, calc	Monthly	Calculated
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: designated water quality monitoring stations identified as TRIB1, ULPR, and DLPR in Table 1 of the permit below. Established water quality monitoring stations on the mainstem are to be located outside the mixing zone with the tributary and the mainstem. Monthly water quality samples are to be collected at all three water quality monitoring stations when effluent from this CBM facility reaches the TRIB1 station on Horse 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 three 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 three water quality monitoring stations for that monthly monitoring period.

e. Sampling and Monitoring Protocol

(See Appendix B, approved by DEQ 3/12/04)

- 1) The WDEQ-approved Sampling and Monitoring Protocol (Appendix B) shall be implemented by the permittee.
- 2) The permittee shall submit to WDEQ an Annual Review of the sampling and monitoring based on the WDEQ-approved protocol. The Annual Review shall be received by WDEQ yearly on or before March 31, beginning in 2005 and shall include all associated data that is specified in the Sampling and Monitoring Protocol.
- 3) The data collected in the Sampling and Monitoring Protocol is not an effluent limit or otherwise used for compliance under this permit, but may be considered by WDEQ as a basis for re-opening this permit.
- 4) The permittee shall submit any modification(s) of the Sampling and Monitoring Protocol to the WDEQ for its review and approval prior to implementation of any such change.

f. Water Administration Plan

(See Appendix A, approved by DEQ 8/27/04)

- 1) The WDEQ-approved Water Administration Plan (Appendix A) shall be implemented by the permittee.
- 2) Any modification(s) of the Water Administration Plan must be approved by WDEQ prior to implementation of any such changes.

g. Determining Contribution to Effluent Limit Exceedence

(See Appendix D, approved by DEQ 7/26/04)

- 1) The permittee has submitted a process for determining the contribution of their CBM discharge to an effluent limit exceedence at the attenuation zone terminus (AZTE). This document is referred to as Appendix D for this permit.
- 2) The DEQ may use this process to determine responsibility for exceedence(s) at attenuation zone terminus location(s).
- 3) The permittee will not have contributed to an exceedence if it can prove that it was not discharging CBM water during the period that would contribute to the exceedence.
- 4) For purposes of applying Appendix D in this permit, the term "discharge" refers to discharge from a CBM outfall or release from a reservoir containing CBM effluent.

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 routine end of pipe, attenuation zone terminus, and water quality station monitoring during the previous three (3) months shall be summarized and reported quarterly 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 quarterly DMR shall contain a summary of flow measurements and any additional monitoring conducted subsequent to the submittal of the initial monitoring report. If whole effluent toxicity testing (biomonitoring) is required, 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 second the month following the completed reporting period. **The first monitoring period for the permit renewal began on January 1, 2005. The first report following the issuance of this modification is due on August 15, 2007.**

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. "cfs" is defined as cubic feet per second.
- 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 rate.

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 rate of water discharged, measured on a continuous basis and reported as a total rate for each reporting period. The accuracy of flow measurement must comply with Part III.A.1.

j. "Irrigable Flow" is the flow rate measured at the first downstream point of irrigation diversion (DIV3), located in the SESE, Section 21, Township 53 North, Range 73 West, that is capable of causing that irrigation system to spread water over the fields at a volume that will result in significant irrigation, even if the flow is unrestrained. The irrigable flow for this permit is any flow equal to or exceeding 20 cubic feet per second at DIV3.

k. "Non-Irrigable Flow" is any flow rate measured at DIV3 that is less than the irrigable flow. The non-irrigable flow for this permit is any flow less than 20 cubic feet per second at DIV3.

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 NPDES 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 NPDES 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 NPDES 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.

12. Location of Outfalls and Attenuation Zone Terminus

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

SEE TABLE 1 FOR LOCATIONS OF OUTFALLS (001 - 006), ATTENUATION ZONE TERMINUS (AZTE), AND FIRST DOWNSTREAM POINT OF IRRIGATION DIVERSION (DIV3).

13. Location of water quality monitoring stations

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

SEE TABLE 1 FOR A LIST OF WATER QUALITY MONITORING STATIONS (TRIB1, ULPR, DLPR).

Table 1: WY0048224 - Jamison Twenty Mile 35 Option 2

Out-fall	Previous Permit	QTR/QTR	SECTION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Ground-water approval required prior to Discharge?	Reservoir Bond to WDEQ Required prior to Discharge?
001	Unchanged	SWSE	25	52	74	44.44889	-105.70610	Little Powder River (2AB), via Horse Creek (3B), via Wildcat Creek (class 3B), via Jamison Prong Wildcat Creek (class 3B), via *UET (class 3B), via on channel reservoir "Earl S. Gupton #6" (3B)	No	YES
002	Unchanged	NENW	25	52	74	44.46233	-105.70822	Little Powder River (2AB), via Horse Creek (3B), via Wildcat Creek (class 3B), via Jamison Prong Wildcat Creek (3B) via *UET (3B) via on channel reservoir "Helen Hinkes" (3B)	No	No
003	Unchanged	SWSW	36	52	74	44.43510	-105.71303	Little Powder River (2AB), via Horse Creek (3B), via Wildcat Creek (3B) via Jamison Prong, Wildcat Creek (3B) via *UET (3B), via on channel reservoir "Lonely Doe" (3B)	No	YES
004	WY0048232-001	NESE	2	51	74	44.42570	-105.71500	Little Powder River (2AB), via Horse Creek (3B), via Wildcat Creek (3B) via Jamison Prong, Wildcat Creek (3B) via *UET (3B), via on channel reservoir "Louise J. Daly #7" (3B)	No	No
005	WY0048232-002	SESW	1	51	74	44.42088	-105.70810	Little Powder River (2AB), via Horse Creek (3B), via Wildcat Creek (3B) via Jamison Prong, Wildcat Creek (3B) via *UET (3B) via an on channel reservoir "Jennie M. Chaplin #1" (3B)	No	No
006	WY0048232-003	NENW	12	51	74	44.41899	-105.70455	Little Powder River (2AB), via Horse Creek (3B), via Wildcat Creek (3B) via Jamison Prong, Wildcat Creek (3B) via *UET (3B), via on channel reservoir "Jennie M. Chaplin #3" (3B)	No	No
AZTE	N/A	SESW	24	52	74	44.55410	-105.67315	Attenuation Zone Terminus (Earl) located on Jamison Prong.	N/A	N/A
DIV3	N/A	SESE	21	53	73	44.55411	-105.63726	first downstream point of Irrigation diversion below AZTE (located on Wildcat Creek at upstream side of "spreader dam 33"); Irrigable flow = 20 cfs or greater.	N/A	N/A
TRIB1	N/A	SWSE	22	55	71	44.72886	-105.37511	Tributary monitoring station on Horse Creek	N/A	N/A
ULPR	N/A	NENE	27	55	71	44.72830	-105.37174	Upstream Little Powder River monitoring station (above Horse Creek)	N/A	N/A
DLPR	N/A	SESW	23	55	71	44.72964	-105.36235	Downstream Little Powder River monitoring station (below Horse Creek)	N/A	N/A

*UET=Unnamed ephemeral tributary

All CBM wells at this facility may discharge to any of the above listed outfalls (001-006).

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 National Pollutant Discharge Elimination System Permit Modification Application For Coal Bed Methane. Incomplete application forms will be returned to the applicant.

The outfalls listed in Table 1 (Part I.B.12) 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 and/or total radium 226 effluent limits established in the permit for the outfall are based upon Class 3 standards.

C. RESERVOIR / IMPOUNDMENT REQUIREMENTS

1. Groundwater Monitoring Beneath Impoundments:

Table 1 of the permit above identifies which outfalls (if any) are designed to discharge into impoundments that are subject to groundwater monitoring requirements established in the latest version of the Water Quality Division guideline "*Compliance Monitoring for Groundwater Protection Beneath Unlined Coalbed Methane Produced Water Impoundments.*" These specified outfalls are not authorized to discharge until a written groundwater compliance approval has been granted by the Groundwater Pollution Control Program of the Water Quality Division. A groundwater compliance approval will consist of either a final approved groundwater compliance monitoring plan, or written authorization for an exemption thereof. Once an impoundment has been granted a written

groundwater compliance approval, the contributing outfall(s) to that reservoir may commence discharge.

2. Reclamation Performance Bonds for On-Channel Reservoirs:

Table 1 of the permit above also identifies which outfalls (if any) are designed to discharge into impoundments that are subject to WDEQ bonding requirements, as set forth in the latest version of the Water Quality Division guideline *“Implementation Guidance for Reclamation and Bonding of On-Channel Reservoirs That Store Coalbed Natural Gas Produced Water.”* These specified outfalls are not authorized to discharge until the associated reservoir reclamation bond is approved by WDEQ. Once the reservoir reclamation bond is approved by WDEQ, the contributing outfall(s) to that reservoir may commence discharge.

Any discharge into an above-listed impoundment which has not been secured by the required WDEQ-approved bond, or which has not been granted the required groundwater compliance approval, will constitute a violation of this permit, and may result in enforcement action from the Water Quality Division.