

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

STATEMENT OF BASIS

Major Modification

APPLICANT NAME: Medallion Exploration

MAILING ADDRESS: 3165 East Millrock Dr, Suite 550
Holladay, UT 84121

FACILITY LOCATION: CI Wings Field, which is located in the NENE of Section 32 and the SESE of Section 29 all in Township 51 North, Range 72 West in Campbell County. The produced water will be discharged to Little Rawhide Creek (class 3B) which is tributary to Rawhide Creek (class 3B) which is tributary to Little Powder River (class 2ABww). The established irrigation compliance point(s) are located in the NENE of Section 32 and SENE of Section 4 all in Township 51 North, Range 72 West, prior to the first downstream points of irrigation diversion/use on Rawhide Creek. In the permittee's originally submitted application for coal bed methane water discharge, a total flow rate of 0.32 MGD has been estimated from this facility. This permit requires that the produced water being discharged from this facility originate from the Fort Union, Canyon and Anderson coal seams.

NUMBER: WY0048607

This Major Modification was implemented by Wyoming Department of Environmental Quality the update conditions of the permit.

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, the terms of permit WY0048607 are hereby modified as follows:

- 1. The operator has submitted historic background water quality data for Rawhide Creek. Based on this data, the WDEQ has determined that effluent limits of SAR 20 and EC 3175 μ mhos/cm are protective of downstream irrigation activity on Rawhide Creek. These effluent limits must be met at the end-of-pipe for all permitted outfalls.*
- 2. The irrigation compliance point (ICPI) is reclassified as an irrigation monitoring point (IMPI).*
- 3. Information is included to bring the permit up to current WDEQ standards for irrigation.*

With the exception of items explicitly delineated in this major modification, all terms and conditions of Permit No. WY0048607, including Parts II and III of the renewed permit, shall remain unchanged and in full force and effect.

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. In addition, the permit establishes two irrigation monitoring points (IMP1-IMP2, listed in Table 1 of the permit below). Irrigation monitoring points are designated monitoring locations prior to the first downstream point of irrigation diversion/use on Rawhide Creek from the permitted facility. An IMP differs from an irrigation compliance point (ICP) in that the IMP does not establish effluent limits. IMP sampling is for data-gathering purposes only.

Effluent Limits

Permit effluent limits are based on federal and state regulations and are effective as of the date of issuance. The daily maximum effluent flow limit for this facility is 0.32 million gallons per day (MGD). This permit requires that the produced water being discharged by this facility originate in Anderson and/or Canyon coal seams. The permit requires that the pH must remain within 6.5 and 9.0 standard units. The permit also establishes 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*. The permit also establishes a dissolved iron limit of 1,000 µg/l, this limit is based on chronic aquatic life standards for class 3B waters as required in Chapter 1 of the Wyoming Water Quality Rules and Regulations. The permit also establishes a total barium limit of 1800 µg/l and a total arsenic limit of 3.6 µg/l, which 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*.

Additionally, this permit originally established a sulfate limit of 3000 mg/l, a total petroleum hydrocarbons (TPH) limit of 10 mg/l, a total radium²²⁶ limit of 1 pCi/l, and a dissolved manganese limit of 718.5 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, 718.5 µg/l for dissolved manganese and 3000 mg/l for sulfates established in Chapter 1 of the Wyoming Water Quality Rules and Regulations. Therefore, WDEQ has removed the effluent limits and monitoring requirements for TPH, dissolved manganese and sulfate in this permit. Based on evaluation of the available data, it is WDEQ's determination that removing the sulfate, dissolved manganese, total radium²²⁶, 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.

Irrigation Use Protection

In order to monitor and regulate coal bed methane discharge for compliance with Chapter 1, Section 20 of the Wyoming Water Quality Rules and Regulations (protection of agricultural water supply), effluent limits for sodium adsorption ratio (SAR) and specific conductance (EC) are included in this permit. The Wyoming DEQ has determined that an SAR effluent limit of 20 and a specific conductance effluent limit of 3,175 $\mu\text{mhos/cm}$ are appropriate for protection of agriculture use in the Rawhide Creek drainage. These limits were derived using historical background water quality data for Rawhide Creek, submitted by the permittee. The historical water quality dataset submitted with this application consisted of samples collected by the USGS, BLM, and Triton Coal Company between 1975 and 1988, at various locations on Rawhide Creek above the known irrigation activity. To determine the above effluent limits, only EC values that were reported with a flow value greater than zero were considered as representative data. In addition, only samples taken below the Rawhide Creek surface coal mine were considered, as it was determined that these samples would be most representative of water quality that would have been used historically by the downstream irrigator. The specific conductance limit of 3,175 $\mu\text{mhos/cm}$ is derived by averaging the ten samples for specific conductance that met the above criteria. These samples were obtained between 1981 and 1987. Using the calculated irrigation water EC effluent limit of 3,175 $\mu\text{mhos/cm}$, a sodium adsorption ratio effluent limit of 20 is derived from Figure 3 of the USDA "Agricultural Salinity and Drainage" handbook, Hanson et al., 1999 revision. The SAR limit in this permit is intended to prevent a reduction in soil permeability within the downstream irrigated areas along Rawhide Creek. The calculated EC effluent limit corresponds to a total dissolved solids (TDS) value of 2,110 mg/l (3,175/1.5). The above described effluent limits for specific conductance and sodium adsorption ratio are established at each outfall authorized under this permit, and are effective year-round.

Monitoring and Reporting Requirements

The permit requires daily monitoring below the outfalls in order to determine whether effluent discharged from the outfalls reaches the established irrigation monitoring points (IMP1-IMP2, listed in Table 1 of the permit below). Daily monitoring is necessary because the permit establishes different sampling and analysis requirements based on whether the effluent reaches the irrigation monitoring points. Once effluent flow at the irrigation monitoring point has been documented within a sampling month, then weekly monitoring of flow at the IMPs is required for the remainder of that calendar month. At the beginning of each calendar month, the monitoring frequency will revert to daily until such time as effluent flow occurs at the irrigation monitoring points and a sample is collected to represent effluent quality for irrigation monitoring point constituents. Results are to be reported twice-yearly and if no effluent from this facility reaches the irrigation monitoring points during an entire sampling month, then "no discharge" is to be reported for the IMPs that month. The IMPs are not a compliance point. It is intended only as a location to gather downstream water quality data.

The permit also requires sampling at a designated tributary water quality monitoring station located on the receiving stream – Rawhide Creek, and at mainstem water quality monitoring station locations on the Little Powder River upstream and downstream of the Rawhide Creek – Little Powder River confluence. Water quality monitoring stations on the Little Powder River will be located in the main channel of the Little Powder River outside of the mixing zone of Rawhide Creek and the Little Powder River. Effluent samples at the designated water quality monitoring stations 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 locations: designated water quality monitoring stations identified as TRIB1, ULPR, and DLPR 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 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 Rawhide 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.

At the designated water quality monitoring stations, monitoring will be required for calcium, magnesium, sodium, sodium adsorption 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.

Results are to be reported twice-yearly and if no discharge occurs at the outfall 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.

Eric Hargett
Water Quality Division
Department of Environmental Quality
May 24, 2002
Major Modification – Bob Alexander – January 24, 2006
Renewal – Bob Alexander – May 8, 2007
Major Modification – Bob Alexander – August 13, 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,

Medallion Exploration

is authorized to discharge from the wastewater treatment facilities serving the

CI Wings Field

located in

NENE of Section 32 and the SESE of Section 29 all in Township 51 North, Range 72 West in Campbell County


to receiving waters named

Little Rawhide Creek (class 3B) which is tributary to Rawhide Creek (class 3B) which is tributary to Little Powder River (class 2ABww)

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

The original permit became effective on July 12, 2002 and expires on June 30, 2007. This permit renewal shall become effective on the signature of the Director of the Department of Environmental Quality. This permit is being renewed before expiration due to a requested increase in the daily flow limit.

This permit and the authorization to discharge shall expire at midnight December 31, 2011.



John Wagner
Administrator - Water Quality Division

Date

11/15/07



John V. Corra
Director - Department of Environmental Quality

Date

11/07/07

PART IA. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effective immediately and lasting through December 31, 2011, 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 001-002.

- Such discharges shall be limited as specified below:

| <u>Effluent Characteristic</u> | <u>Daily Maximum, Outfalls</u> |
|--|--------------------------------|
| Chlorides , mg/l | 46 |
| pH , standard units | 6.5 – 9.0 |
| Specific Conductance , μ mhos/cm | 3175 |
| Sodium Adsorption Ratio , unadjusted | 20 |
| Total Recoverable Arsenic , μ g/l | 3.6 |
| Total Recoverable Barium , μ g/l | 1800 |
| Dissolved Iron , μ g/l | 1000 |
| *Total Flow , MGD | 0.32 |

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

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 0.32 MGD from 18 wells for this facility. This permit requires that the produced water being discharged from this facility originate from the Fort Union, Canyon and Anderson coal seams.

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:

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. ***If Initial Monitoring Reports have already been submitted for an outfall, resubmission is not required unless a new coal seam has been added to that outfall.*** This summary report must include the results and detection limits for each of the 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.

| Parameter* (See notes following the table on chemical states) | Required Detection Limits and Required Units |
|---|--|
| Alkalinity, Total | 1 mg/l as CaCO ₃ |
| Aluminum, Dissolved | 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 mg/l |
| Chlorides | 5 mg/l |
| Copper, Dissolved | 10 µg/l |
| Dissolved Solids, Total | 5 mg/l |
| Dissolved Fluoride | 0.1 µg/l |
| Hardness, Total | 10 mg/l as CaCO ₃ |
| Iron, Dissolved | 50 µg/l |
| Lead, Dissolved | 2 µg/l |

| Parameter* (See notes following the table on chemical states) | Required Detection Limits and Required Units |
|--|---|
| 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 mg/l |
| Specific Conductance | 5 micromhos/cm |
| Sulfates | 10 mg/l |
| Zinc, Dissolved | 50 µg/l |

*Dissolved is the value based on the dissolved amount which is the amount that will pass through a 0.45 um membrane filter prior to acidification to pH 1.5 - 2.0 with nitric acid. Total is the value expressed in terms of total recoverable metal in the water column.

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
1595 Wynkoop Street
Denver, CO 80202-1129

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 (001-002)

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 (mg/l) | Monthly | Grab |
| Dissolved Calcium (mg/l) | Monthly | Grab |
| Chloride (mg/l) | Annually | Grab |
| Dissolved Magnesium (mg/l) | Monthly | Grab |
| pH (standard units) | Once Every Six Months | Grab |
| Dissolved Sodium (mg/l) | Monthly | Grab |
| Sodium Adsorption Ratio (unadjusted for bicarbonate) | Monthly | Calculated |
| Specific Conductance (micromohs/cm) | Monthly | Grab |
| Total Alkalinity (mg/l) | Monthly | Grab |
| Total Recoverable Arsenic (µg/l) | Annually | Grab |
| Total Recoverable Barium (µg/l) | Annually | Grab |
| Total Flow – (MGD) | Monthly | Continuous |
| Dissolved Iron (µg/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. Irrigation Monitoring Points (IMP1-IMP2)

For the duration of the permit, at a minimum, samples for the constituents described below shall be collected at the indicated frequencies when water discharged from the outfalls reaches the irrigation monitoring points. Monitoring will be based on monthly time frames and reported semi-annually.

| <u>Parameter</u> | <u>Measurement Frequency</u> | <u>Sample Type</u> |
|--|------------------------------|--------------------|
| Dissolved Calcium, mg/l | Monthly | Grab |
| Dissolved Magnesium, mg/l | Monthly | Grab |
| Dissolved Sodium, mg/l | Monthly | Grab |
| Sodium Adsorption Ratio, unitless | Monthly | Calculated |
| Specific Conductance, µmhos/cm | Monthly | Grab |

| <u>Parameter</u> | <u>Measurement Frequency</u> | <u>Sample Type</u> |
|--|------------------------------|--------------------|
| Bicarbonate, mg/l as CaCO₃ | Monthly | Grab |
| Flow, MGD | Monthly | Instantaneous |

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the irrigation monitoring points which are located as described in Table 1 of the permit below.

The permit requires daily monitoring below the reservoirs in order to determine whether effluent discharged from the outfalls reaches the established irrigation monitoring points (IMP1-IMP2, location listed in Table 1 of the permit below). Daily monitoring is necessary because the permit establishes different sampling and analysis requirements based on whether the effluent reaches the irrigation monitoring points. Once effluent flow at the irrigation monitoring points has been documented within a sampling month, then weekly monitoring of flow at the IMP is required for the remainder of that calendar month. At the beginning of each calendar month, the monitoring frequency will revert to daily until such time as effluent flow occurs at the irrigation monitoring points and a sample is collected to represent effluent quality for irrigation monitoring point constituents. Results are to be reported twice-yearly and if no effluent from this facility reaches the irrigation monitoring points during an entire sampling month, then "no discharge" is to be reported for the IMP that month.

d. Water Quality Monitoring Stations TRIB1, ULPR, and 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 semiannually.

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

*The permittee is only required to monitor and report flow at the tributary monitoring station (TRIB1) on Rawhide Creek. The permittee is not required to monitor or report flow data at the

mainstem water quality monitoring stations (ULPR and DLPR), see Table 1 at the end of Part I for location descriptions.

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 (Part I.B.12) of the permit below. Established water quality monitoring stations on the mainstem are to be located outside the mixing zone with the tributaries and the mainstem. Monthly water quality samples are to be collected at all the water quality monitoring stations when flow containing effluent from this CBM facility reaches the tributary water quality monitoring station identified as "TRIB1" in Table 1, Part I.B.12 of the permit during a given monthly monitoring period. If flow reaches the tributary monitoring station, but this CBM facility did not contribute to that flow, the permittee will report "did not contribute" in the discharge monitoring reports for the associated downstream water quality monitoring stations for that monthly monitoring period. Under such circumstances, sampling is not required at the associated 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 flow occurring at the tributary water quality monitoring station identified as "TRIB1". If no flow at all occurs at the tributary water quality monitoring station for an entire monthly monitoring period, then "no flow" is to be reported and samples need not be collected at the associated water quality monitoring stations for that monthly monitoring 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 90 days after the commencement of discharge.

Results of routine end of pipe, irrigation compliance point, 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. 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 is due on February 15, 2008.

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 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. 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 Irrigation Compliance Points

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

SEE TABLE 1 FOR A LIST OF OUTFALLS AND IRRIGATION
COMPLIANCE POINTS

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 STATION

Table 1: WY0048607 – CI Wings

| Out-fall | Qtr/Qtr | SEC-TION | TWP (N) | RNG (W) | LATITUDE | LONGITUDE | Drainage / Description | Groundwater approval required prior to Discharge? | Reservoir Bond to WDEQ Required prior to Discharge? |
|----------|---------|----------|---------|---------|----------|------------|--|---|---|
| 001 | SESE | 29 | 51 | 72 | 44.36472 | -105.52972 | Discharges to on-channel reservoir "Cottonwood" in Little Rawhide Creek tributary to Rawhide Creek, tributary to the Little Powder River | N/A | N/A |
| 002 | NENE | 32 | 51 | 72 | 44.36274 | -105.53191 | Discharges to on-channel reservoir "Mallard #2" in Little Rawhide Creek tributary to Rawhide Creek, tributary to the Little Powder River | N/A | N/A |
| IMP1 | NENE | 32 | 51 | 72 | 44.36250 | -105.53139 | Little Rawhide Creek | -- | -- |
| IMP2 | SENE | 4 | 51 | 72 | 44.43167 | -105.50750 | Little Rawhide Creek | -- | -- |
| TRIB1 | SWNE | 26 | 52 | 72 | 44.46169 | -105.47269 | Rawhide Creek | -- | -- |
| ULPR | SWNE | 26 | 52 | 72 | 44.46130 | -105.47113 | Little Powder River | -- | -- |
| DLPR | NENE | 26 | 52 | 72 | 44.46446 | -105.46968 | Little Powder River | -- | -- |

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 WDQ.

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

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.