

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

STATEMENT OF BASIS

Major Modification

APPLICANT NAME: Nance Petroleum Corporation

MAILING ADDRESS: 550 N. 31<sup>st</sup> Street  
Billings, MT 59101

FACILITY LOCATION: Antelope Project, which is located in the NWSE of Section 4, the NWNW of Section 9, the SESE, NWSE of Section 8, the NENE of Section 17, the SESW of Section 16, the NWSW, SWSW of Section 6, the NWNE, NWSE, SWSE of Section 18, the SWSW, SESE of Section 7, Township 57 North, Range 79 West; the SWNE, SENW of Section 13, the NENW, SWNW of Section 3, the NESW of Section 10, the SESE of Section 15, the NWNW of Section 4, the NWSE, NESW of Section 1, the NESW of Section 11, the NENE, NESW of Section 10, the SENE, SESW of Section 12, the SWNE of Section 14, Township 57 North, Range 80 West; the SWSW of Section 19, Township 58 North, Range 78 West; the NWNE of Section 24, Township 58 North, Range 81 West; the NWNE, SWSW of Section 32, the NENW, NESW, SESE of Section 33, the SENW of Section 25, the NWNE, SWNE of Section 23, the NENE of Section 24, the NWSE of Section 27, the SENE of Section 17, the NESW of Section 19, the NESW, SESW of Section 20, the NWSE of Section 21, the SENW of Section 28, the NWNE, SESW of Section 29, the SENW, NENE, NENW, SENE, NESW of Section 30, the SWNE, SWSW of Section 31, Township 58 North, Range 79 West; the SENE of Section 26, the SENW, SWNE, NWSE of Section 22, the NESW, SWSW of Section 23, the NWSW of Section 24, the SWNW of Section 27, the NESE of Section 36, the NENW, NESW of Section 28, the SESW of Section 21, the NWSW, NWNE, NWNW of Section 20, the SESW of Section 29, the NENW of Section 32, the NESE of Section 19, the NENE of Section 35, the NESW of Section 34, Township 58 North, Range 80 West, all in Sheridan County. A portion of the produced water will be contained within off-channel pits (class 4C), located within, but not tributary to, the Hanging Woman Creek (class 3B) and Waddle Creek (class 3B) sub-basins of the Tongue River (class 2AB) drainage. A portion of the produced water will be contained within on-channel reservoirs located on named and unnamed ephemeral tributaries (class 3B) to Waddle Creek (class 3B) and to Hanging Woman Creek (class 3B). Waddle Creek is tributary to Hanging Woman Creek which is tributary to the Tongue River. The permit also requires that the produced water being discharged originate in one of the following formations: the Anderson, Canyon, Cook, Kendrick, Nance, Roberts, Dietz, Roland, Wall, Pawnee, Knobloch and/or Brewster-Arnold coal seams.

NUMBER: WY0052407

*This major modification adds two outfalls, 024 and 073 to permit WY0052407. In the previous major modification of WY0052407 (submitted to the June 15, 2007 public notice), these outfalls were inadvertently removed from the permit at the request of the permittee. The permittee is requesting through this major modification that these outfalls be added back to the permit as the permittee determined that they did not intend to remove them. In addition, language clarifying containment requirements for Option 1 facilities is included in the modified permit. With the exception of items explicitly delineated in the major modification, all terms and conditions of permit WY0052407, including Parts II and III of the original permit, shall remain unchanged and in full force and effect.*

### **General Background**

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 state regulations and standards have been considered and the most stringent requirements incorporated into the permit. The effluent limits established in this permit are based upon Chapters 1 and 2 of the Wyoming Water Quality Rules and Regulations and other evaluations conducted by WDEQ related to this industry. 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.

### **Outfall Description—Outfalls 024, 055, 073, 075, 076, 081, 084, 089, 091, 092, 094, 096, 099, 100 (Option 1B discharges)**

The permittee has chosen option 1B of the coal bed methane permitting options for discharges from the above outfalls. Under this permitting option, the produced water is immediately discharged to a class 3 surface water impoundment. This permit prohibits discharge to the nearest class 2 water (Tongue River) from these outfalls. This permit authorizes discharge of CBM effluent into headwater on-channel reservoirs from the above outfalls. The permit establishes effluent limits for the end of pipe, which are protective of all designated uses of the class 3B receiving waters defined in Chapter 1 of Wyoming Water Quality Rules and Regulations. This may include aquatic life other than fish, recreation, agriculture (livestock watering), wildlife, industry and scenic value. Neither the reservoir nor its spillways will constitute regulated discharge points under this permit.

### **Outfall Description—Outfalls 001, 003-007, 009-010, 012-019, 022, 023, 025-027, 031, 033-035, 038-049, 051, 053, 054, 056, 057, 059, 061-072, 074, 077-079, 082, 087, 090, 093, 095-098 (Option 1A discharges)**

The permittee has chosen option 1A of the coal bed methane permitting options. Under this permitting option, the produced water is immediately discharged to confined, off channel pits, stock ponds or other man made containment units (class 4C water) that will not flow into any other waters of the state. The permittee has demonstrated through a water balance study that, considering CBM well inflow, natural precipitation, evaporation and infiltration, the off channel containment unit(s) associated with this facility will be adequate to contain all CBM discharge water and stormwater up to a 50 year 24 hour event (*ref. "Isopluvials of 50-yr / 24-hr precipitation map," NOAA Atlas II, Volume II*). The permittee has committed to the complete containment of all discharged water within the containment units. The permit establishes effluent limits for the end of pipe, which are protective of recreation, agriculture, industry, scenic value, and livestock and wildlife watering.

**Effluent Limits and Monitoring Requirements— Outfalls 024, 055, 073, 075, 076, 081, 084, 089, 091, 092, 094, 096, 099, 100 (Option 1B discharges)**

**Effluent Limits:** The permit establishes the following effluent limits. Permit effluent limits are based on federal and state regulations and are effective as of the date of issuance. The permit requires that the pH remains within 6.5 and 9.0 standard units. An effluent limit for specific conductance (7,500 micromhos/cm) is included to protect for stock and wildlife watering. This limit is based upon Wyoming Water Quality Rules and Regulations, Chapter 2 and applies at the end of pipe. This permit also establishes a total recoverable arsenic limit of 150 µg/l, a dissolved iron effluent limit of 1000 µg/l, and a chlorides limit of 230 mg/l. These limits are based on standards for class 3B waters which are intended to protect for the above listed designated uses and reflect the application of "tier 1" antidegradation protection. Tier 1 antidegradation protection is the level of protection which applies to all waters of the state, as described in the *Wyoming Surface Water Quality Standards "Implementation Policies for Antidegradation."* Based upon the results of the initial monitoring, this permit may be reopened and more stringent limits and/or monitoring and reporting required.

The reservoir being utilized for containment of the CBM produced water at this facility was described by the permittee in their application materials as being able to effectively contain all estimated produced water in addition to the stormwater runoff from up to a 50 year/24 hour precipitation event (*ref. "Isopluvials of 50-yr / 24-hr precipitation map," NOAA Atlas II, Volume II*). Should the volume of water within the reservoir exceed the freeboard needed to contain runoff from a 50 year/24 hour precipitation event under normal operating conditions, the permittee is required to cease discharge into the reservoir until the volume of water within the reservoir drops back below the 50 year/24 hour freeboard reserve.

**Monitoring Requirements:** 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.

This permit requires daily monitoring year-round at the flow monitoring stations (FM1-FM14) located immediately downstream of the reservoirs in order to determine if any effluent from this facility is reaching an established flow monitoring station(s). The established flow monitoring stations are located as described in Part I.B.12 (Table 1) of the permit below. This permit prohibits discharge of effluent from the reservoirs except in the event of a 50-year/24-hour storm event or greater. If a reservoir overtopping event occurs, verification of storm magnitude will be the responsibility of the permittee. Discharge from the reservoirs resulting from a 50-year/24-hour precipitation event or greater is limited by the permit to natural overtopping and shall not extend beyond a 48 hour period following commencement of natural overtopping. Additional release from the reservoir(s) is not authorized. If any effluent discharged from this facility does reach the flow monitoring station (FM1-FM14) except in the event of a 50-year/24-hour storm event or greater, this permit requires the permittee to cease all discharge of effluent from the contributing wells until the effluent is no longer reaching the flow monitoring station(s). Any effluent from this facility that reaches the established flow monitoring station(s), except as the direct result of reservoir(s) overtopping during a 50-year / 24-hour storm event or greater, will constitute a violation of this permit and must be corrected by the permittee immediately.

**Effluent Limits and Monitoring Requirements— Outfalls 001, 003-007, 009-010, 012-019, 022, 023, 025-027, 031, 033-035, 038-049, 051, 053, 054, 056, 057, 059, 061-072, 074, 077-079, 082, 087, 090, 093, 095-098 (Option 1A discharges)**

**Effluent Limits:** The permit establishes the following effluent limits. Permit effluent limits are based on state regulations and are effective as of the date of issuance. The permit requires that the pH must remain within 6.5 and 9.0 standard units. Effluent limits for chlorides (2,000 mg/l) and specific conductance (7,500 micromhos/cm) are included to protect for livestock and wildlife watering. These limits are based upon *Wyoming Water Quality Rules and Regulations, Chapters 1 and 2* and apply to discharge from any permitted outfall. Based upon the results of the initial monitoring, this permit may be reopened and more stringent limits and/or monitoring and reporting required.

**Monitoring Requirements:** 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.

**Additional Requirements Applicable to All Permitted Outfalls**

This permit originally established a sulfates limit of 3000 mg/l, a selenium limit of 5 µg/l for Option 1B outfalls, and a selenium limit of 50 µg/l for Option 1A outfalls at the end of pipe. Review of discharge monitoring report data for this facility and other CBM facilities in Northeast Wyoming indicates that the maximum reported concentrations for sulfates in the discharge were well below the water quality standard of 3000 mg/l established in Chapter 2 of the Wyoming Water Quality Rules and Regulations and well below the 5 µg/l and 50 µg/l limits established for selenium. Therefore, WDEQ has removed the effluent limits and routine end-of-pipe monitoring requirements for sulfates and selenium in this permit. Based on evaluation of the available data which was not available at the time of original permit issuance, it is WDEQ's determination that removing the sulfates and selenium limits from this permit conforms to the anti-backsliding requirements established in Section 402(o).2.B.i of the Clean Water Act. In addition, this permit originally established an arsenic limit of 200 µg/l for Option 1A outfalls. The arsenic limit has been removed from Option 1A outfalls as this limit does not apply to discharges into class 4 waters.

The permit requires the permittee to install a staff gage within each option 1 containment unit at this facility. The staff gage must mark the elevation of the 50-year / 24-hour storm freeboard capacity within each containment unit. The permittee will be required to maintain effluent levels within each containment unit at or below that elevation. Should the volume of water within the reservoirs exceed the freeboard needed to contain runoff from a 50-year / 24-hour precipitation event, the permittee is required to cease discharge into these reservoirs until the volume of water within the reservoir drops back below the 50-year / 24-hour freeboard reserve.

This permit requires annual sampling within the containment units at all permitted outfalls to ensure that the effluent does not exceed water quality standards for livestock and wildlife watering as the result of concentration due to evaporation. The permittee is required to monitor the effluent within containment units and report the results to the WDEQ on an annual basis. Sampling within the containment units is to occur a minimum of 50 feet from the location where the CBM effluent enters the containment units. The containment unit monitoring locations have been identified in Table 1, Part I.B.12 of the permit below. This monitoring requirement is intended to aid in the protection of the uses associated with the impoundments at this facility (recreation, livestock watering, wildlife, industry, scenic value, and/or

aquatic life other than fisheries). If monitoring of the effluent within the containment units reveals an exceedence of any applicable standards for those waters, then this permit may be modified in order to protect all uses of the receiving water bodies.

Documentation submitted in support of this permit by the permittee was based upon water quality representative of water quality from the Anderson, Canyon, Cook, Kendrick, Nance, Roberts, Dietz, Roland, Wall, Pawnee, Knobloch and Brewster-Arnold coal seams in the surrounding geographical area. Therefore, the permit requires that the produced water being discharged by this facility originate in the Anderson, Canyon, Cook, Kendrick, Nance, Roberts, Dietz, Roland, Wall, Pawnee, Knobloch and/or Brewster-Arnold coal seams.

The permittee has indicated that the development of wells in this area will proceed in a phased manner such that the volume of discharge effluent never exceeds containment unit capacities.

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 April 30, 2009. This expiration date was determined through review of the watershed permitting schedule which the WDEQ is implementing in order to synchronize the permitting and expiration of facilities within the same watershed. This holistic approach will provide for more efficient permitting of point-source discharges and allow for simultaneous review and renewal of all permits within a drainage.

Kathy Shreve  
Water Quality Division  
Department of Environmental Quality  
Drafted: October 22, 2004  
Revised: December 6, 2004  
Major Modification: Drafted December 15, 2004

Jennifer Zygmunt—Major Modification  
Water Quality Division  
Department of Environmental Quality  
Drafted: May 11, 2005

Jennifer Zygmunt—Major Modification  
Water Quality Division  
Department of Environmental Quality  
Drafted: October 28, 2005

Bob Alexander—Major Modification  
Water Quality Division  
Department of Environmental Quality  
Drafted: December 12, 2006

Jennifer Zygmunt—Major Modification  
Water Quality Division  
Department of Environmental Quality  
Drafted: June 6, 2007

Jennifer Zygmunt—Major Modification  
Water Quality Division  
Department of Environmental Quality  
Drafted: July 18, 2007

MODIFICATION OF AUTHORIZATION TO DISCHARGE UNDER THE  
WYOMING POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

Nance Petroleum Corporation

is authorized to discharge from the wastewater treatment facilities serving the

Antelope Project ,

located in


NWSE of Section 4, the NWNW of Section 9, the SESE, NWSE of Section 8, the NENE of Section 17, the SESW of Section 16, the NWSW, SWSW of Section 6, the NWNE, NWSE, SWSE of Section 18, the SWSW, SESE of Section 7, Township 57 North, Range 79 West; the SWNE, SENW of Section 13, the NENW, SWNW of Section 3, the NESW of Section 10, the SESE of Section 15, the NWNW of Section 4, the NWSE, NESW of Section 1, the NESW of Section 11, the NENE, NESW of Section 10, the SENE, SESW of Section 12, the SWNE of Section 14, Township 57 North, Range 80 West; the SWSW of Section 19, Township 58 North, Range 78 West; the NWNE of Section 24, Township 58 North, Range 81 West; the NWNE, SWSW of Section 32, the NENW, NESW, SESE of Section 33, the SENW of Section 25, the NWNE, SWNE of Section 23, the NENE of Section 24, the NWSE of Section 27, the SENE of Section 17, the NESW of Section 19, the NESW, SESW of Section 20, the NWSE of Section 21, the SENW of Section 28, the NWNE, SESW of Section 29, the SENW, NENE, NENW, SENE, NESW of Section 30, the SWNE, SWSW of Section 31, Township 58 North, Range 79 West; the SENE of Section 26, the SENW, SWNE, NWSE of Section 22, the NESW, SWSW of Section 23, the NWSW of Section 24, the SWNW of Section 27, the NESE of Section 36, the NENW, NESW of Section 28, the SESW of Section 21, the NWSW, NWNE, NWNW of Section 20, the SESW of Section 29, the NENW of Section 32, the NESE of Section 19, the NENE of Section 35, the NESW of Section 34, Township 58 North, Range 80 West, all in Sheridan County,

to receiving waters named

off-channel pits (class 4C), located within, but not tributary to, the Hanging Woman Creek (class 3B) and Waddle Creek (class 3B) sub-basins of the Tongue River (class 2AB) drainage. A portion of the produced water will be contained within on-channel reservoirs located on named and unnamed ephemeral tributaries (class 3B) to Waddle Creek (class 3B) and to Hanging Woman Creek (class 3B). Waddle Creek is tributary to Hanging Woman Creek which is tributary to the Tongue River,

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

This permit 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 WY0052407, 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 April 30, 2009 at midnight.

  
John F. Wagner—Administrator, Water Quality

8-30-07  
Date

  
John V. Corra—Director, Department of Environmental Quality

8/30/07  
Date

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effective immediately and lasting through April 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 outfall(s) serial numbers 001, 003-007, 009-010, 012-019, 022, 023-027, 031, 033-035, 038-049, 051, 053-057, 059, 061-079, 081-082, 084, 087, 089-100.

**1a. Discharges shall be limited as specified below for Option 1B discharges (024, 055, 073, 075, 076, 081, 084, 086, 089, 091, 092, 094, 099, 100):**

<u>Effluent Characteristic</u>	<u>Daily Maximum, Outfalls</u>
<b>Chlorides</b> , mg/l	230
<b>Dissolved Iron</b> , µg/l	1000
<b>pH</b> , standard units	6.5 – 9.0
<b>Specific Conductance</b> , micromhos/cm	7500
<b>Total Recoverable Arsenic</b> , µg/l	150

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

This permit prohibits discharge of effluent from the on-channel reservoir associated with this facility except in the event of a 50-year / 24-hour storm event (*ref. "Isopluvials of 50-yr / 24-hr precipitation map," NOAA Atlas II, Volume II*) or greater. If a reservoir overtopping event occurs, verification of storm magnitude will be the responsibility of the permittee. Discharge from reservoir(s) resulting from a 50-year/24 hour storm event or greater is limited by the permit to natural overtopping and shall not extend beyond a 48 hour period following commencement of natural overtopping. Additional release from reservoir(s) is not authorized.

For the duration of the permit, at a minimum, the permittee is required to monitor for flow at the flow monitoring station locations as described in Table 1 (Part I.B.12) of the permit on a daily basis. If any effluent discharged from this facility does reach a downstream flow monitoring point (FM1-FM12) except in the event of a 50-year/24-hour storm event or greater, this permit requires the permittee to cease all discharge of effluent from the contributing wells until the effluent is no longer reaching the flow monitoring point(s).

**1b. Discharges shall be limited as specified below for Option 1A discharges (001, 003-007, 009-010, 012-019, 022, 023, 025-027, 031, 033-035, 038-049, 051, 053, 054, 056, 057, 059, 061-072, 074, 077-079, 082, 087, 090, 093, 095-098):**

<u>Effluent Characteristic</u>	<u>Daily Maximum, Outfall</u>
Chlorides, mg/l	2000
pH, standard units	6.5 – 9.0
Specific Conductance, micromhos/cm	7500

Intentional discharge from the off-channel containment units being utilized for produced water containment at this facility is prohibited. Discharge from the off-channel containment units is not allowed except during those periods of time that a precipitation event equal to or greater than a 50 year, 24 hour storm event (*ref. "Isopluvials of 50-yr / 24-hr precipitation map," NOAA Atlas II, Volume II*) causes the reservoirs to fill and overtop, and discharges under such circumstances will be limited to natural overtopping only. In the event of discharge from the containment units, it shall be the permittee's responsibility to demonstrate whether or not the discharge was related to a 50 year, 24 hour storm event. Discharges from the containment units not directly related to a 50 year, 24 hour storm event will be considered a violation of this permit.

**1c. Such discharges shall be limited as specified below for all permitted outfalls:**

The permit requires the permittee to install a staff gage within each option 1 containment unit at this facility. The staff gage must mark the elevation of the 50-year / 24-hour storm freeboard capacity within each containment unit. The permittee will be required to maintain effluent levels within each containment unit at or below that elevation. Should the volume of water within the reservoirs exceed the freeboard needed to contain runoff from a 50 year/24 hour precipitation event, the permittee is required to cease discharge into these reservoirs until the volume of water within the reservoir drops back below the 50 year/24 hour freeboard reserve.

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

This permit requires that the produced water being discharged by this facility originate in the Anderson, Canyon, Cook, Kendrick, Nance, Roberts, Dietz, Roland, Wall, Pawnee, Knobloch and/or Brewster-Arnold coal seams. The permittee is authorized to discharge from all wells to all permitted outfalls, provided all effluent limits can be met.

In the event of a discharge, waters shall be released 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.

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.

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

**a. Monitoring of the initial discharge**

*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.*

Within 60 days of commencement of discharge, a sample shall be collected from each outfall and analyzed for all 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 effluent limits and monitoring requirements established in this permit may be modified.

<b><u>Parameter*</u></b> (See notes following the table on chemical states)	<b><u>Required Detection Limits and Required Units</u></b>
Alkalinity, Total	1 mg/l as CaCO <sub>3</sub>
Aluminum, Dissolved	50 µg/l
Arsenic, Total Recoverable	1 µg/l
Barium, Total Recoverable	100 µg/l
Bicarbonate	10 mg/l
Cadmium, Dissolved	5 µg/l
Calcium, Dissolved	50 µg/l, report as mg/l
Chloride	5 mg/l
Copper, Dissolved	10 µg/l
Dissolved Solids, Total	5 mg/l
Fluoride, Dissolved	100 µg/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 mg/l
Manganese, Dissolved	50 µg/l
Mercury, Dissolved	1 µg/l

<b><u>Parameter*</u></b> (See notes following the table on chemical states)	<b><u>Required Detection Limits and Required Units</u></b>
pH	to 0.1 pH unit
Radium 226, Total Recoverable	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
Sulfate	10 mg/l
Zinc, Dissolved	50 µg/l

**DISSOLVED:** Value is based on the dissolved amount which is the amount that will pass through a 0.45 µm membrane filter prior to acidification to pH 1.5 - 2.0 with nitric acid.

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 –Option 1B discharges Outfalls 024, 055, 073, 075, 076, 081, 084, 089, 091, 092, 094, 096, 099, 100**

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.

<b><u>Parameter</u></b>	<b><u>Measurement Frequency</u></b>	<b><u>Sample Type</u></b>
<b>Total Flow (MGD)</b>	Monthly	Continuous
<b>Dissolved Iron (µg/l)</b>	Annually	Grab

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
<b>pH</b> (standard units)	Once Every Six Months	Grab
<b>Total Dissolved Solids</b> (mg/l)	Annually	Grab
<b>Specific Conductance</b> (micromhos/cm)	Once Every Six Months	Grab
<b>Chlorides</b> (mg/l)	Annually	Grab
<b>Total Recoverable Arsenic</b> (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. **Routine monitoring End of Pipe – Option 1A discharges, outfalls 001, 003-007, 009-010, 012-019, 022, 023, 025-027, 031, 033-035, 038-049, 051, 053, 054, 056, 057, 059, 061-072, 074, 077-079, 082, 087, 090, 093, 095-098**

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. Reporting 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>
<b>Chloride</b> (mg/l)	Annually	Grab
<b>pH</b> (standard units)	Once Every Six Months	Grab
<b>Specific Conductance</b> (micromhos/cm)	Once Every Six Months	Grab
<b>Total Flow</b> – (MGD)	Monthly	Continuous
<b>Total Dissolved Solids</b> (mg/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.

**d. Containment Unit Monitoring –CU1, CU3-CU7, CU9-CU10, CU12-CU19, CU22 - CU27, CU31, CU33-CU35, CU38-CU49, CU51, CU53-CU57, CU59, CU61-CU72- CU79, CU81-CU82, CU84, CU87, CU89-CU100**

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

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
<b>Total Dissolved Solids</b> (mg/l)	Annually	Grab
<b>Specific Conductance</b> (µmhos/cm)	Annually	Grab
<b>Chlorides</b> (mg/l)	Annually	Grab
<b>Total Recoverable Selenium</b> (µg/l)	Annually	Grab
<b>Sulfate</b> (mg/l)	Annually	Grab
<b>Dissolved Fluoride</b> (µg/l)	Annually	Grab
<b>pH</b> (standard units)	Annually	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): within the individual containment units, outside of the mixing zone of the outfall and the containment unit, at least 50 feet from the location that the discharge enters the containment unit. See Part I.B.12 of the permit for additional information regarding containment unit locations.

**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 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. When 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 monitoring report following issuance of this modification is due February 15<sup>th</sup>, 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 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.

A public notice is not required if the location of the established discharge point is 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 (Below) FOR A LIST OF OUTFALL AND CONTAINMENT UNIT  
LOCATIONS

Table 1: WY0052407 Antelope Project

Out-fall	Permitting Option	Qtr/Qtr	SECTION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Groundwater Approval Required Prior to Discharge?	Reservoir Bonding to WDEQ required prior to discharge?
001	1A	NESW	19	58N	79W	44.98415732	-106.4365381	P58-79-19-11 Off-channel	YES	NO
003	1A	NESW	20	58N	79W	44.98422696	-106.4129204	P58-79-20-11 Off-channel	YES	NO
004	1A	SESW	20	58N	79W	44.98128573	-106.4099241	P58-79-20-14 Off-channel	YES	NO
005	1A	NWSE	21	58N	79W	44.98221218	-106.3868676	P58-79-21-10 Off-channel	YES	NO
006	1A	SENW	28	58N	79W	44.9744621	-106.3910777	P58-79-28-06 Off-channel	YES	NO
007	1A	NWNE	29	58N	79W	44.97706415	-106.4076331	P58-79-29-02 Off-channel	YES	NO
009	1A	SESW	29	58N	79W	44.96725436	-106.4095188	P58-79-29-14 Off-channel	YES	NO
010	1A	SENW	30	58N	79W	44.97450084	-106.4305872	P58-79-30-06 Off-channel	YES	NO
012	1A	SWNE	31	58N	79W	44.9571801	-106.4252372	P58-79-31-07 Off-channel	YES	NO
013	1A	SWSW	31	58N	79W	44.94979126	-106.435859	P58-79-31-13 Off-channel	YES	NO
014	1A	NWNE	32	58N	79W	44.96356321	-106.4077471	P58-79-32-02 Off-channel	YES	NO
015	1A	SWSW	32	58N	79W	44.95096554	-106.4189241	P58-79-32-13 Off-channel	YES	NO
016	1A	NENW	33	58N	79W	44.96143976	-106.3901889	P58-79-33-02 Off-channel	YES	NO
017	1A	NESW	33	58N	79W	44.95367515	-106.3911091	P58-79-33-11 Off-channel	YES	NO
018	1A	SESE	33	58N	79W	44.95156547	-106.384702	P58-79-33-16 Off-channel	YES	NO
019	1A	SENE	26	58N	80W	44.97243697	-106.4618319	P58-80-26-08 Off-channel	YES	NO
022	1A	SENW	22	58N	80W	44.98732941	-106.4933698	P58-80-22-06 Off-channel	YES	NO
023	1A	SWNE	22	58N	80W	44.9871261	-106.4873467	P58-80-22-07 Off-channel	YES	NO
024	1B	NWSE	22	58	80	44.98376957	-106.4890233	P58-80-22-10 On-channel	YES	NO
025	1A	NESW	23	58N	80W	44.98346419	-106.4738274	P58-80-23-11 Off-channel	YES	NO
026	1A	SWSW	23	58N	80W	44.97925006	-106.4781005	P58-80-23-13 Off-channel	YES	NO
027	1A	NWSW	24	58N	80W	44.98300299	-106.4582317	P58-80-24-12 Off-channel	YES	NO
031	1A	SWNW	27	58N	80W	44.97147617	-106.4971264	P58-80-27-05 Off-channel	YES	NO
033	1A	NESE	36	58N	80W	44.95598072	-106.4454932	P58-80-36-09 Off-channel	YES	NO
034	1A	NENE	30	58N	79W	44.97685539	-106.4242999	P58-79-30-01A Off-channel	YES	NO
035	1A	NENW	30	58N	79W	44.97643426	-106.4352228	P58-79-30-03A Off-channel	YES	NO
038	1A	SENE	30	58N	79W	44.96910167	-106.4346039	P58-79-30-08A Off-channel	YES	NO
039	1A	NESW	30	58N	79W	44.92181443	-106.4377964	P58-79-30-11 Off-channel	YES	NO
040	1A	SWSW	7	57N	79W	44.97925006	-106.4781005	P57-79-07-13A Off-channel	YES	NO
041	1A	SESE	7	57N	79W	44.92130228	-106.4217577	P57-79-07-16 Off-channel	YES	NO
042	1A	NENW	28	58N	80W	44.9742956	-106.5142321	P58-80-28-03 Off-channel	YES	NO
043	1A	SESW	21	58N	80W	44.97854173	-106.5156634	P58-80-21-14 Off-channel	YES	NO
044	1A	NWSW	20	58N	80W	44.98426506	-106.5394147	P58-80-20-12 Off-channel	YES	NO
045	1A	SESW	29	58N	80W	44.96328853	-106.5321458	P58-80-29-14 Off-channel	YES	NO
046	1A	NENW	32	58N	80W	44.96119775	-106.5324708	P58-80-32-03 Off-channel	YES	NO
047	1A	NESW	28	58N	80W	44.97025773	-106.5133884	P58-80-28-11 Off-channel	YES	NO
048	1A	NWNE	20	58N	80W	44.98928328	-106.5299319	P58-80-20-02 Off-channel	YES	NO
049	1A	NESE	19	58N	80W	44.98371563	-106.545259	P58-80-19-09A Off-channel	YES	NO
051	1A	SENW	25	58N	79W	44.97287328	-106.3303697	P58-79-25-06 Off-channel	YES	NO
053	1A	NWNE	23	58N	79W	44.99129779	-106.3483596	P58-79-23-02 Off-channel	YES	NO
054	1A	SWNE	23	58N	79W	44.98888886	-106.3454517	P58-79-23-07 Off-channel	YES	NO
055	1B	NENE	24	58N	79W	44.99348723	-106.3180958	P58-79-24-01 Off-channel	YES	YES
056	1A	NWSE	27	58N	79W	44.97036537	-106.3679555	P58-79-27-10 Off-channel	YES	NO
057	1A	SWSW	19	58N	78W	44.98217279	-106.3137649	P58-78-19-13 Off-channel	YES	NO
059	1A	NWSE	27	58N	79W	44.97248712	-106.3740238	P58-79-27-12 Off-channel	YES	NO
061	1A	NWSE	4	57N	79W	44.94074505	-106.3892368	P57-79-04-10 Off-channel	YES	NO
062	1A	NWNW	9	57N	79W	44.93233594	-106.3936199	P57-79-09-04 Off-channel	YES	NO
063	1A	SESE	8	57N	79W	44.92148203	-106.3996318	P57-79-08-16 Off-channel	YES	NO
064	1A	NENE	17	57N	79W	44.91784491	-106.3999071	P57-79-17-01 Off-channel	YES	NO
065	1A	SESW	16	57N	79W	44.90861168	-106.3910792	P57-79-16-14 Off-channel	YES	NO
066	1A	NWSW	6	57N	79W	44.93994011	-106.4378376	P57-79-06-12 Off-channel	YES	NO
067	1A	NWNE	18	57N	79W	44.91652536	-106.4242721	P57-79-18-02A Off-channel	YES	NO

Table 1: WY0052407 Antelope Project

Out-fall	Permitting Option	Qtr/Qtr	SECTION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Groundwater Approval Required Prior to Discharge?	Reservoir Bonding to WDEQ required prior to discharge?
068	1A	NWNE	18	57N	79W	44.91602861	-106.4265984	P57-79-18-02B Off-channel	YES	NO
069	1A	NWSE	18	57N	79W	44.90841852	-106.4290486	P57-79-18-10 Off-channel	YES	NO
070	1A	SWSE	18	57N	79W	44.90537051	-106.4255386	P57-79-18-15A Off-channel	YES	NO
071	1A	SWSE	18	57N	79W	44.90509826	-106.4275641	P57-79-18-15B Off-channel	YES	NO
072	1A	SWNE	13	57N	80W	44.9155339	-106.4475158	P57-80-13-07 Off-channel	YES	NO
073	1B	NWNW	20	58	80	44.98899911	-106.5406875	P58-80-20-04 On-channel	YES	NO
074	1A	NESW	34	58N	80W	44.95215584	-106.4927314	P58-80-34-11 Off-channel	YES	NO
075	1B	NENW	3	57N	80W	44.94533145	-106.494485	57-80-03-03 On-channel reservoir tributary to Waddle Creek	YES	YES
076	1B	SWNW	3	57N	80W	44.942603	-106.50011	57-80-03-05 On-channel reservoir tributary to Waddle Creek	YES	YES
077	1A	NESW	10	57N	80W	44.9233189	-106.4934385	P57-80-10-11 Off-channel	YES	NO
078	1A	SESE	15	57N	80W	44.90612194	-106.4831138	P57-80-15-16 Off-channel	YES	NO
079	1A	NWNW	4	57N	80W	44.92304208	-106.4939348	P57-80-04-04 Off-channel	YES	NO
081	1B	NWSE	8	57N	79W	44.92545685	-106.4076008	P57-79-08-10 On-channel reservoir tributary to unnamed ephemeral tributary to Middle Prong Hanging Woman Creek	YES	NO
082	1A	SWSW	6	57N	79W	44.9348324	-106.4362568	P57-79-06-13 Off-channel	YES	NO
084	1B	NWNE	24	58N	81W	44.99183108	-106.5726974	Heinz-WY-R-24 On-channel reservoir tributary to Muller Draw	YES	NO
087	1A	SENE	17	58N	79W	44.91431982	-106.4009	P57-79-17-08 Off-channel	YES	NO
089	1B	NWSE	1	57N	80W	44.9411818	-106.4472489	P57-80-01-10 On-channel reservoir tributary to Roundup Draw	YES	NO
090	1A	NESW	1	57N	80W	44.9402041	-106.4503828	P57-80-01-11A Off-channel	YES	NO
091	1B	NESW	1	57N	80W	44.93907113	-106.4540409	P57-80-01-11B On-channel reservoir tributary to Roundup Draw	YES	NO
092	1B	NESW	11	57N	80W	44.9289794	-106.4709767	Roundup Draw On-channel reservoir tributary to Roundup Draw	YES	NO
093	1A	NENE	10	57N	80W	44.93162169	-106.4836961	P57-80-10-01 Off-channel	YES	NO
094	1B	NESW	10	57N	80W	44.92792102	-106.49301	Upper Weltner Prong On-channel reservoir tributary to Waddle Creek	YES	NO
095	1A	SENE	12	57N	80W	44.92991244	-106.4457527	P57-80-12-08 Off-channel	YES	NO
096	1B	SESW	12	57N	80W	44.92084051	-106.4555206	P57-80-12-14 On-channel reservoir tributary to unnamed ephemeral tributary to West Prong Hanging Woman Creek	YES	NO
097	1A	SWNE	14	57N	80W	44.91567716	-106.4676618	P57-80-14-07A Off-channel	YES	NO
098	1A	SWNE	14	57N	80W	44.91246501	-106.4677491	P57-80-14-07B Off-channel	YES	NO
099	1B	SENW	13	57N	80W	44.91682448	-106.4605179	Tiner David Draw On-channel reservoir tributary to Tiner David Drw	YES	NO
100	1B	NENE	35	58N	80W	44.96047394	-106.4656778	Upper Antelope On-channel reservoir tributary to Antelope Draw	YES	NO
CU1	N/A	NESW	19	58N	79W	44.98319618	-106.4358009	Containment Unit monitoring station, 001	N/A	N/A
CU3	N/A	NESW	20	58N	79W	44.98501076	-106.413716	Containment Unit monitoring station, 003	N/A	N/A

Table 1: WY0052407 Antelope Project

Out-fall	Permitting Option	Qtr/Qtr	SECTION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Groundwater Approval Required Prior to Discharge?	Reservoir Bonding to WDEQ required prior to discharge?
CU4	N/A	SESW	20	58N	79W	44.98122075	-106.4109183	Containment Unit monitoring station, 004	N/A	N/A
CU5	N/A	NWSE	21	58N	79W	44.9838088	-106.3865746	Containment Unit monitoring station, 005	N/A	N/A
CU6	N/A	SESW	28	58N	79W	44.97386463	-106.3902042	Containment Unit monitoring station, 006	N/A	N/A
CU7	N/A	NWNE	29	58N	79W	44.97838026	-106.4091243	Containment Unit monitoring station, 007	N/A	N/A
CU9	N/A	SESW	29	58N	79W	44.96716639	-106.4086671	Containment Unit monitoring station, 009	N/A	N/A
CU10	N/A	SESW	30	58N	79W	44.97404482	-106.4315256	Containment Unit monitoring station, 010	N/A	N/A
CU12	N/A	SWNE	31	58N	79W	44.95700252	-106.4261414	Containment Unit monitoring station, 012	N/A	N/A
CU13	N/A	SWSW	31	58N	79W	44.94989058	-106.4348267	Containment Unit monitoring station, 013	N/A	N/A
CU14	N/A	NWNE	32	58N	79W	44.96308623	-106.4077866	Containment Unit monitoring station, 014	N/A	N/A
CU15	N/A	SWSW	32	58N	79W	44.95115583	-106.4183625	Containment Unit monitoring station, 015	N/A	N/A
CU16	N/A	NENW	33	58N	79W	44.96108993	-106.3893576	Containment Unit monitoring station, 016	N/A	N/A
CU17	N/A	NESW	33	58N	79W	44.95459673	-106.3899761	Containment Unit monitoring station, 017	N/A	N/A
CU18	N/A	SESE	33	58N	79W	44.95179879	-106.3838275	Containment Unit monitoring station, 018	N/A	N/A
CU19	N/A	SENE	26	58N	80W	44.97319605	-106.4620421	Containment Unit monitoring station, 019	N/A	N/A
CU22	N/A	SESW	22	58N	80W	44.98751303	-106.4927922	Containment Unit monitoring station, 022	N/A	N/A
CU23	N/A	SWNE	22	58N	80W	44.98747787	-106.4865533	Containment Unit monitoring station, 023	N/A	N/A
CU24	N/A	NWSE	22	58N	80W	44.98466249	-106.48909360	Containment unit monitoring station, 024		
CU25	N/A	NESW	23	58N	80W	44.98328153	-106.4742631	Containment Unit monitoring station, 025	N/A	N/A
CU26	N/A	SWSW	23	58N	80W	44.97946179	-106.4777677	Containment Unit monitoring station, 026	N/A	N/A
CU27	N/A	NWSW	24	58N	80W	44.98283123	-106.4574303	Containment Unit monitoring station, 027	N/A	N/A
CU31	N/A	SWNW	27	58N	80W	44.97176198	-106.4983895	Containment Unit monitoring station, 031	N/A	N/A
CU33	N/A	NESE	36	58N	80W	44.9560994	-106.4442637	Containment Unit monitoring station, 033	N/A	N/A
CU34	N/A	NENE	30	58N	79W	44.97704089	-106.4248791	Containment Unit monitoring station, 034	N/A	N/A
CU35	N/A	NENW	30	58N	79W	44.97664908	-106.4348312	Containment Unit monitoring station, 035	N/A	N/A
CU38	N/A	SENE	30	58N	79W	44.97145776	-106.4233568	Containment Unit monitoring station, 038	N/A	N/A
CU39	N/A	NESW	30	58N	79W	44.96930263	-106.4345102	Containment Unit monitoring station, 039	N/A	N/A

Table 1: WY0052407 Antelope Project

Out-fall	Permitting Option	Qtr/Qtr	SECTION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Groundwater Approval Required Prior to Discharge?	Reservoir Bonding to WDEQ required prior to discharge?
CU40	N/A	SWSW	7	57N	79W	44.92182061	-106.4374398	Containment Unit monitoring station, 040	N/A	N/A
CU41	N/A	SESE	7	57N	79W	44.92101353	-106.4217452	Containment Unit monitoring station, 041	N/A	N/A
CU42	N/A	NENW	28	58N	80W	44.9745854	-106.5137238	Containment Unit monitoring station, 042	N/A	N/A
CU43	N/A	NWNE	21	58N	88W	44.9789989	-106.5140756	Containment Unit monitoring station, 043	N/A	N/A
CU44	N/A	NWSW	20	58N	80W	44.9836031	-106.5402475	Containment Unit monitoring station, 044	N/A	N/A
CU45	N/A	SWSE	29	58N	80W	44.9628141	-106.5321075	Containment Unit monitoring station, 045	N/A	N/A
CU46	N/A	NENW	32	58N	80W	44.9607873	-106.5327895	Containment Unit monitoring station, 046	N/A	N/A
CU47	N/A	NESW	28	58N	80W	44.96954728	-106.51282	Containment Unit monitoring station, 047	N/A	N/A
CU48	N/A	NENW	20	58N	80W	44.98881388	-106.5306303	Containment Unit monitoring station, 048	N/A	N/A
CU49	N/A	NWNE	19	58N	80W	44.98366043	-106.5438577	Containment Unit monitoring station, 049	N/A	N/A
CU51	N/A	NESW	25	58N	79W	44.97290267	-106.3309356	Containment Unit monitoring station, 051	N/A	N/A
CU53	N/A	NWNE	23	58N	79W	44.99135749	-106.3487346	Containment Unit monitoring station, 053	N/A	N/A
CU54	N/A	SWNE	23	58N	79W	44.98901215	-106.3447553	Containment Unit monitoring station, 054	N/A	N/A
CU55	N/A	NENE	24	58N	79W	44.99353858	-106.3189432	Containment Unit monitoring station, 055	N/A	N/A
CU56	N/A	NWSE	27	58N	79W	44.96960205	-106.3666951	Containment Unit monitoring station, 056	N/A	N/A
CU57	N/A	SWSW	19	58N	78W	44.98175905	-106.3125304	Containment Unit monitoring station, 057	N/A	N/A
CU59	N/A	SWNW	27	58N	79W	44.47222265	-106.3747564	Containment Unit monitoring station, 059	N/A	N/A
CU61	N/A	NWSE	4	57N	79W	44.94010762	-106.3890623	Containment Unit monitoring station, 061	N/A	N/A
CU62	N/A	NWNW	9	57N	79W	44.93230679	-106.3947191	Containment Unit monitoring station, 062	N/A	N/A
CU63	N/A	SESE	8	57N	79W	44.92089043	-106.4001727	Containment Unit monitoring station, 063	N/A	N/A
CU64	N/A	NENE	17	57N	79W	44.91746376	-106.4005323	Containment Unit monitoring station, 064	N/A	N/A
CU65	N/A	SESW	16	57N	79W	44.90816161	-106.3901901	Containment Unit monitoring station, 065	N/A	N/A
CU66	N/A	NWSW	6	57N	79W	44.93927743	-106.4383617	Containment Unit monitoring station, 066	N/A	N/A
CU67	N/A	NWNE	18	57N	79W	44.917037	-106.4242222	Containment Unit monitoring station, 067	N/A	N/A
CU68	N/A	NWNE	18	57N	79W	44.91590294	-106.4275623	Containment Unit monitoring station, 068	N/A	N/A

Table 1: WY0052407 Antelope Project

Out-fall	Permitting Option	Qtr/Qtr	SECTION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Groundwater Approval Required Prior to Discharge?	Reservoir Bonding to WDEQ required prior to discharge?
CU69	N/A	NWSE	18	57N	79W	44.90945837	-106.4290903	Containment Unit monitoring station, 069	N/A	N/A
CU70	N/A	SWSE	18	57N	79W	44.90559425	-106.4245544	Containment Unit monitoring station, 070	N/A	N/A
CU71	N/A	SWSE	18	57N	79W	44.9054338	-106.4271522	Containment Unit monitoring station, 071	N/A	N/A
CU72	N/A	SWNE	13	57N	80W	44.91523848	-106.4467074	Containment Unit monitoring station, 072	N/A	N/A
CU73	N/A	NWNW	20	58N	80W	44.98895771	-106.53980070	Containment Unit monitoring station, 073	N/A	N/A
CU74	N/A	NESW	34	58N	80W	44.95272132	-106.4927444	Containment Unit monitoring station, 074	N/A	N/A
CU75	N/A	NENW	3	57N	80W	44.946661	-106.4939245	Containment Unit monitoring station, 075	N/A	N/A
CU76	N/A	SWNW	3	57N	80W	44.94253138	-106.4987803	Containment Unit monitoring station, 076	N/A	N/A
CU77	N/A	NESW	10	57N	80W	44.92331189	-106.4934385	Containment Unit monitoring station, 077	N/A	N/A
CU78	N/A	SESE	15	57N	80W	44.90593721	-106.4825179	Containment Unit monitoring station, 078	N/A	N/A
CU79	N/A	SWNE	4	57N	80W	44.9476448	-106.5166105	Containment Unit monitoring station, 079	N/A	N/A
CU81	N/A	NWSE	8	57N	79W	44.9249753	-106.4071574	Containment Unit monitoring station, 081	N/A	N/A
CU82	N/A	SWSW	6	57N	79W	44.93434782	-106.4366567	Containment Unit monitoring station, 082	N/A	N/A
CU84	N/A	NWNE	24	57N	81W	44.99219913	-106.572934	Containment Unit monitoring station, 084	N/A	N/A
CU87	N/A	SENE	17	57N	79W	44.91377132	-106.4014048	Containment Unit monitoring station, 087	N/A	N/A
CU89	N/A	NWSE	1	57N	80W	44.94065538	-106.4480004	Containment Unit monitoring station, 089	N/A	N/A
CU90	N/A	NESW	1	57N	80W	44.9395959	-106.4508372	Containment Unit monitoring station, 090	N/A	N/A
CU91	N/A	NESW	1	57N	80W	44.93857162	-106.4545623	Containment Unit monitoring station, 091	N/A	N/A
CU92	N/A	SWNE	11	57N	80W	44.92727479	-106.4714542	Containment Unit monitoring station, 092	N/A	N/A
CU93	N/A	NENE	10	57N	80W	44.93205765	-106.4840654	Containment Unit monitoring station, 093	N/A	N/A
CU94	N/A	NENW	10	57N	80W	44.92957584	-106.4940684	Containment Unit monitoring station, 094	N/A	N/A
CU95	N/A	SWNE	12	57N	80W	44.92944759	-106.445924	Containment Unit monitoring station, 095	N/A	N/A
CU96	N/A	SESE	12	57N	80W	44.92063929	-106.4544071	Containment Unit monitoring station, 096	N/A	N/A
CU97	N/A	SWNE	14	57N	80W	44.9156305	-106.468294	Containment Unit monitoring station, 097	N/A	N/A

Table 1: WY0052407 Antelope Project

Out-fall	Permitting Option	Qtr/Qtr	SEC-TION	TWP (N)	RNG (W)	LATITUDE	LONGITUDE	Drainage / Description	Groundwater Approval Required Prior to Discharge?	Reservoir Bonding to WDEQ required prior to discharge?
CU98	N/A	SWNE	14	57N	80W	44.91230807	-106.4681977	Containment Unit monitoring station, 098	N/A	N/A
CU99	N/A	SENE	13	57N	80W	44.912219	-106.452774	Containment Unit monitoring station, 099	N/A	N/A
CU100	N/A	NENE	35	58N	80W	44.96054301	-106.4664336	Containment Unit monitoring station, 100	N/A	N/A
FM1	N/A	SWSE	35	58N	80W	44.951171	-106.490969	Flow monitoring station, 075	N/A	N/A
FM2	N/A	NENW	3	57N	80W	44.944913	-106.494646	Flow monitoring station, 076	N/A	N/A
FM3	N/A	NESE	8	57N	79W	44.92733272	-106.4022064	Flow monitoring station, 081	N/A	N/A
FM4	N/A	NENE	24	58N	81W	44.993816	-106.568291	Flow monitoring station, 084	N/A	N/A
FM5	N/A	SENE	1	57N	80W	44.94172544	-106.4419689	Flow monitoring station, 089	N/A	N/A
FM6	N/A	NWSE	1	57N	80W	44.93796365	-106.4486	Flow monitoring station, 091	N/A	N/A
FM7	N/A	NWNE	12	57N	80W	44.91885738	-106.4486905	Flow monitoring station, 096	N/A	N/A
FM8	N/A	NWNW	36	58N	80W	44.961662	-106.460129	Flow monitoring station, 100	N/A	N/A
FM9	N/A	NESW	11	57N	80W	44.9322	-106.467994	Flow monitoring station, 092	N/A	N/A
FM10	N/A	NESW	10	57N	80W	44.933866	-106.496199	Flow monitoring station, 094	N/A	N/A
FM11	N/A	SENE	13	57N	80W	44.913	-106.446561	Flow monitoring station, 099	N/A	N/A
FM12	N/A	NENE	24	58N	79W	44.992352	-106.320076	Flow monitoring station, 055	N/A	N/A
FM13	N/A	SENE	22	58N	80W	44.988676	-106.491513	Flow monitoring station, 024	N/A	N/A
FM14	N/A	SWNE	20	58N	80W	44.986202	-106.535576	Flow monitoring station, 073	N/A	N/A

Requests for modification of the permit 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 table below 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.

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.