

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

STATEMENT OF BASIS

NEW

APPLICANT NAME: Yates Petroleum Corporation

MAILING ADDRESS: 105 South 4<sup>th</sup> Street  
Artesia, NM 88210

FACILITY LOCATION: Wormwood CS State, which is located in the NESW, SENW, SWNE, SENE of Section 16, Township 46 North, Range 76 West, in Campbell County. The produced water will be discharged to on-channel reservoirs (class 3B) located on unnamed ephemeral tributaries (class 3B) to Pumpkin Creek (class 3B) which is tributary to the Powder River (2ABWW). The permit establishes a total maximum daily flow limit of 0.4 MGD, and requires that the produced water being discharged from this facility originate from the Big George coal seam.

NUMBER: WY0056146

*This permit has been modified from the draft originally advertised in the December 17<sup>th</sup>, 2007 public notice. Typographical errors have been corrected to indicate that the appropriate expiration date for this permit is August 31, 2011, in order to synchronize the permitting and expiration of facilities within the Pumpkin Creek watershed.*

**General Description**

This facility is a typical coal bed methane production facility in which groundwater is pumped from a coal bearing formation resulting in the release of methane from the coal bed. The permit authorizes the discharge to the surface of groundwater produced in this way provided the effluent quality is in compliance with effluent limits that are established by this permit. In developing effluent limits, all federal and state regulations and standards have been considered and the most stringent requirements incorporated into the permit. The 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.

**Facility Description**

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

The permittee is required to contain all effluent from the outfalls in a series of on-channel reservoirs at this facility, unless prior written authorization is granted by the WYPDES program for a reservoir release, in association with use of assimilative capacity credits for the Powder River Basin. In the event that such an authorization for release is granted for this facility, the authorization letter will specify the release volume, duration and individual reservoir(s) covered. In the absence of such written authorization for release, the following containment requirements will apply at the reservoirs: the permittee will be required to contain all produced water within the on-channel reservoirs at this facility. This permit prohibits discharge of effluent from the reservoirs except during periods of time in which natural precipitation causes the reservoirs to overtop and spill. Intentional or draw-down type releases from the reservoirs will constitute a violation of this permit. Discharge from the reservoirs is limited by the permit to natural overtopping and shall not extend beyond a 48 hour period following commencement of natural overtopping. It is the responsibility of the permittee to adequately demonstrate the circumstances in which reservoir discharges occurred, if requested to do so by the WYPDES Program.

### **Whole Effluent Toxicity (WET) Testing**

WDEQ has determined that discharges from this facility have a reasonable potential to exert a toxic effect on aquatic life in the receiving stream(s). Therefore, in accordance with 40 CFR 122.44(d)(1), the permit contains a requirement to conduct annual static replacement toxicity tests on a grab sample of the discharge from the end of pipe. Each year during the life of this permit, a minimum of 20% of the discharging outfalls are to be sampled and tested for toxicity as described in Part I of the permit below. Due to the ephemeral nature of the receiving stream, WDEQ has determined that acute toxicity testing is appropriate to characterize the impact that this discharge may have on aquatic life. The tests will be conducted in accordance with the latest procedures set forth in 40 CFR 136.3 and the "Region VIII EPA NPDES Acute Test Conditions – Static Renewal Whole Effluent Toxicity Tests". In the case of conflicts in method, 40 CFR 136.3 will prevail. The permittee will conduct an acute 48-hour static test using *Daphnia magna* (water flea) and an acute 96-hour static test using *Pimephales promelas* (fathead minnow). If the results of two consecutive annual reports indicate no acute toxicity, the permittee may reduce the monitoring to annual acute toxicity testing on only one species on an alternating basis. The test procedures for alternating species shall be the same as specified above. Since this discharge will be impounded in on-channel reservoirs and is not expected to reach a perennial water body (class 2 water) on a frequent or continual basis, chronic whole effluent toxicity testing will not be required for this permit.

### **Effluent Limits and Monitoring Requirements**

**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 must remain within 6.5 and 9.0 standard units and establishes a total dissolved solids limit of 5000 mg/l, a specific conductance limit of 7500, and a dissolved fluoride limit of 4000 µg/l. These limits are required for protection of livestock and wildlife consumption, based on *Wyoming Water Quality Rules and Regulations, Chapter 1* and apply to discharge from any permitted outfall. The permit also establishes a total recoverable barium limit of 1800 µg/l and a total recoverable arsenic limit of 7 µg/l. These limits are based on Water Quality Criteria as established in the *Wyoming Water Quality Rules and Regulations, Chapter 1*, for Human Health values. In addition, the permit establishes a chloride limit of 230 mg/l, a dissolved cadmium limit of 4 µg/l, a dissolved lead limit of 4 µg/l, a dissolved copper limit of 10 µg/l, and a dissolved zinc limit of 90 µg/l, which are based on Water Quality Criteria as established in the *Wyoming Water Quality Rules and Regulations, Chapter 1*, for chronic aquatic life protection values. The limits established in this permit for metals and chlorides reflect the application of the antidegradation provisions required under the *Wyoming Water Quality Rules and Regulations, Chapter 1*. In addition, the permit establishes a dissolved iron limit of 1000 µg/l. The dissolved iron effluent limit is based upon chronic aquatic life protection for class 3B waters, and does not consider the antidegradation provisions under Chapter 1 of the *Wyoming Water Quality Rules and Regulations*, as dissolved iron has been determined to be a non-persistent pollutant, and all the outfalls being authorized for discharge in this permit are located more than one stream mile from confluence with the nearest class 2 water, in this case, the Powder River. This approach reflects current WYPDES permitting practice in regards to establishing dissolved iron

effluent limits in CBM surface discharge permits. 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:** The permit requires sampling at a designated tributary water quality monitoring station located on Pumpkin Creek, and at two mainstem water quality monitoring locations on the Powder River upstream and downstream of the confluence of Pumpkin Creek and the Powder River. Water quality monitoring stations on the Powder River must be located in the main channel of the Powder River outside of the mixing zone of Pumpkin Creek and the Powder River. Effluent samples at the designated water quality monitoring stations must be collected on a monthly basis and are to be reported semiannually. If flow occurs at the tributary water quality monitoring station (TRIB1, location listed in Table 1 of the permit) 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 associated mainstem 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 tributary water quality monitoring station. If no flow at all occurs at the tributary water quality monitoring station designated as "TRIB1" for an entire monthly monitoring period, then "no flow" is to be reported and samples need not be collected at the associated mainstem and tributary water quality monitoring stations for that monthly monitoring period.

The permittee must monitor all identified headcut(s) within the stream channel between their proposed outfall location(s) and the Powder River. On an annual basis, the headcut(s) must be evaluated to determine if there has been a change in either the lateral movement or the vertical drop in the identified headcuts. If the headcut has moved more than four (4) feet, either laterally or vertically, within a calendar year, unless the permittee can demonstrate to the satisfaction of the WYPDES Program that CBM produced water did not contribute to in-channel flows at the headcut within the calendar year, the permittee must submit for review and approval a mitigation plan. Within three months of approval of the mitigation plan, the plan must be implemented. If the plan is not implemented, the WYPDES Program may require the permittee to cease discharge from the outfalls until the plan is implemented. The permittee shall take all reasonable measures to prevent downstream erosion that would be attributable to the discharge of produced water. In addition, the permittee must monitor at one downstream channel stability monitoring station, CSM01, on a quarterly basis.

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.

### **Other Permit Requirements**

Documentation submitted in support of this permit by the permittee was based upon water quality representative of water quality from the Big George coal seam in the surrounding geographical area, and a total maximum daily discharge rate of 0.4 million gallons per day (MGD). Therefore, the permit requires that the produced water being discharged by this facility originate in the Big George coal seam, and establishes a total maximum daily flow limit of 0.4 MGD, which is to be calculated as the sum of all discharge from all permitted outfalls.

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 August 31, 2011. 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.

Jennifer Zygmunt  
Water Quality Division  
Department of Environmental Quality  
Drafted: December 11, 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,

Yates Petroleum Corporation,

is authorized to discharge from the wastewater treatment facilities serving the

Wormwood CS State,

which is located in the

NESW, SENW, SWNE, SENE of Section 16, Township 46 North, Range 76 West, in Campbell County,

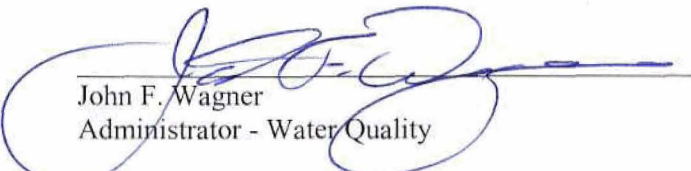
to receiving waters named

on-channel reservoirs (class 3B) located on unnamed ephemeral tributaries (class 3B) to Pumpkin Creek (class 3B) which is tributary to the Powder River (2ABWW),

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

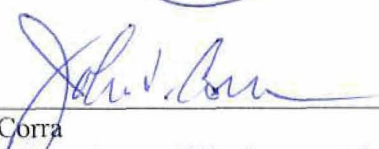
This permit shall become effective on the date of signature by the Director of the Department of Environmental Quality.

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

  
John F. Wagner  
Administrator - Water Quality

Date

2/4/08

  
John V. Corra  
Director - Department of Environmental Quality

Date

2/4/08

PART IA. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Effective immediately and lasting through August 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 outfalls serial numbers 001-005.

**1a. Such discharges shall be limited as specified below for all permitted outfalls (001-005):****Effluent Limits**

<u><b>Effluent Characteristic</b></u>	<u><b>Daily Maximum, Outfall</b></u>
<b>Chlorides, mg/l</b>	230
<b>Dissolved Iron, µg/l</b>	1000
<b>Dissolved Cadmium, µg/l</b>	4.0
<b>pH, standard units</b>	6.5 – 9.0
<b>Dissolved Lead, µg/l</b>	4.0
<b>Dissolved Copper, µg/l</b>	10.0
<b>Total Recoverable Arsenic, µg/l</b>	7
<b>Total Recoverable Barium, µg/l</b>	1800
<b>Total Dissolved Solids, mg/l</b>	5000
<b>Specific Conductance, micromohs/cm</b>	7500
<b>Dissolved Fluoride, µg/l</b>	4000
<b>Dissolved Zinc, µg/l</b>	90.0
<b>Total Flow*, MGD</b>	0.4
<b>Whole Effluent Toxicity (WET) – Acute <i>Daphnia magna</i> **</b>	Must Pass @ 100% Effluent
<b>Whole Effluent Toxicity (WET) – Acute Fathead Minnow **</b>	Must Pass @ 100% Effluent

\*Total flow volume will be calculated as the sum of all discharge from all authorized outfalls.

Note: ‘Dissolved’ value for metals refers to the amount that will pass through a 0.45 µm membrane filter prior to acidification to pH 1.5-2.0 with nitric acid.

\*\* Whole Effluent Toxicity Testing applicable as described in the Wyoming Department of Environmental Quality, Water Quality Division memo dated September 27, 2004 entitled “*Coal Bed Methane WET Testing Implementation Approach.*”

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

Information gathered from the water quality and/or channel stability monitoring stations may result in modification of the permit after a public notice and comment period 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.

Reservoir and/or discharge water is to be released, if allowed by this permit, at a rate which does not cause significant erosion to the channel or receiving lands.

This permit does not constitute authorization under 33 U.S.C 1344 (Section 404 of the Clean Water Act) for any stream dredging and/or filling operations.

This permit does not authorize discharges that contain substances in concentrations or combinations which are toxic to human, animal or aquatic life.

All facilities discharging produced water shall be clearly identified with an all-weather sign posted at a visually prominent location. The sign shall be securely mounted and maintained to prevent the sign from being knocked down by livestock or wind. In the case where multiple outfalls are authorized for discharge, a sign shall be posted to identify each outfall. Signs shall, at a minimum, convey the following information:

The name of the company, corporation, or person(s) who has obtained an individual permit for surface discharges within the Pumpkin Creek drainage,

The WYPDES permit number for the assigned permit, and the number assigned to each discharge point (outfall number),

If different from (a) above, the contact name and telephone number of the person responsible for the monitoring records associated with the permit,

The name of the facility as identified in the surface discharge permit,

A 24-hour emergency contact name and telephone number.

This facility has a total combined daily maximum flow rate of 0.4 million gallons per day (MGD), to be calculated as the sum of all discharges from all permitted outfalls. The produced water being discharged at this facility will originate from the Big George coal seams.

The effluent limits established in Part I of this permit describe the minimum limitations that apply to the discharge from this facility. Based upon such factors as discharge volume, the WYPDES Programs' parallel Powder River assimilative capacity process, and the number of assimilative capacity credits available to each operator at any given time, more stringent effluent limitations may apply upon modification of this permit.

Prior to commencement of surface discharge under this permit, the permittee is required to obtain approval from the Groundwater Division of the WQD for either a groundwater protection waiver or the installation of a groundwater monitoring network for all discharges to any type of containment unit that has not previously been utilized for the containment of CBM produced water, as per Part I.C of this permit.

Operators failing to comply with the effluent limits and requirements of this permit will be considered to be in violation of this permit, and will be subject to appropriate enforcement action from the Water Quality Division.

The permittee must monitor all identified headcut(s) within the stream channel between their proposed outfall location(s) and the Powder River. On an annual basis, the headcut(s) must be evaluated to determine if there has been a change in either the lateral movement or the vertical drop in the identified headcuts. If the headcut has moved more than four (4) feet, either laterally or vertically, within a calendar year, unless the permittee can demonstrate to the satisfaction of the WYPDES Program that CBM produced water did not contribute to in-channel flows at the headcut within the calendar year, the permittee must submit for review and approval a mitigation plan. Within three months of approval of the mitigation plan, the plan must be implemented. If the plan is not implemented, the WYPDES Program may require the permittee to cease discharge from the outfalls authorized by the permit until the plan is implemented. The permittee shall take all reasonable measures to prevent downstream erosion that would be attributable to the discharge of produced water.

Water shall not be discharged in a diffuse manner such that damage to land and/or vegetation occurs.

Discharges of produced water will not contain substances that will settle to form sludge, bank or bottom deposits in quantities sufficient to result in significant aesthetic degradation, significant degradation of habitat for aquatic life or adversely affect public water supplies, agricultural or industrial use, plant life or wildlife.

Discharges may not result in visible hydrocarbon sheen on the receiving water.

All water quality samples collected by the WQD and permittee shall be taken from the free fall of water from the last treatment unit which is located out of the natural drainage. The sample must not be mixed with waters of any other surface water or with water from another discharge point.

The permittee is required to contain all effluent from the outfalls within the on-channel reservoirs at this facility, unless prior written authorization is granted by the WYPDES program for a reservoir release, in association with use of assimilative capacity credits for the Powder River Basin. In the event that such an authorization for release is granted for this facility, the authorization letter will specify the release volume, duration and individual reservoir(s) covered. In the absence of such written authorization for release, the following containment requirements will apply at the reservoirs: the permittee will be required to contain all produced water within the on-channel reservoirs during "dry" operating conditions. This permit prohibits discharge of effluent from the reservoirs except during periods of time in which natural precipitation causes the reservoirs to overtop and spill. Intentional or



draw-down type releases from the will constitute a violation of this permit. Discharge from the reservoirs is limited by the permit to natural overtopping and shall not extend beyond a 48 hour period following commencement of natural overtopping. It is the responsibility of the permittee to adequately demonstrate the circumstances in which reservoir discharges occurred, if requested to do so by the WYPDES Program.

## **2. Headcut Monitoring and Mitigation:**

The permittee must monitor identified headcuts measuring two or more feet from the top of the headcut to the channel bottom, located between the outfall(s) and the Powder River. On an annual basis, these headcut(s) must be evaluated by the permittee to determine if there has been a change in either the lateral movement, or the vertical drop in the identified headcuts. Movement of headcuts will be determined using a stationary marker in the field, placed by the permittee at the initial location of the headcut. If the headcut has moved more than four (4) feet, either laterally or vertically, within a calendar year, the permittee must submit for review and approval a mitigation plan. Within three months of approval of the mitigation plan, the plan must be implemented. If the plan is not implemented, WQD may require the permittee to cease discharge from the outfalls authorized by the permit until the plan is implemented. In addition to the minimum annual headcut monitoring requirements noted above for the permittee, moving headcuts may also be reported to WQD at any time, and by any party.

Headcuts which are already being mitigated in conjunction with separate BLM requirements will not require a mitigation plan to be submitted in association with this permit. In addition, if an operator demonstrates that their effluent has not reached a particular downstream headcut area, then the operator will not be required to submit a mitigation plan for that headcut. In the absence of such a demonstration from the operator, WDEQ will assume that the effluent is contributing to the headcut. If a downstream headcut is located on private property and is not contributing to a water quality violation or impairment, the upstream discharger(s) may be released from obligation to monitor and/or mitigate that headcut in the event that a written waiver is submitted to WDEQ from the affected landowner. The written waiver must identify on a map the specific headcut in question, and list the latitude, longitude, quarter/quarter, section, township, and range. The written waiver must also be signed by the affected landowner. In the absence of such a written waiver from affected downstream landowner(s), the permittee is responsible for monitoring and/or mitigation of all downstream headcuts between the outfall(s) and the Powder River as specified above.

## **3. Whole Effluent Toxicity (WET) Limits and Testing Requirements (All Outfalls)**

Effective immediately, there shall be no acute toxicity in any effluent from the authorized discharge. Acute toxicity limits are established in this permit to protect the quality of the receiving streams.

## **4. Whole Effluent Testing: Acute**

Upon issuance of this permit, the permittee shall, at least once annually, conduct acute static replacement toxicity tests on a grab sample of discharges having established acute WET testing requirements. At a minimum, 20 percent of all discharging outfalls are to be sampled and tested annually for acute whole effluent toxicity (WET). Each year, a different 20 percent minimum portion of the discharging outfalls is to be sampled and tested for acute whole effluent toxicity. Consecutive yearly samples may not be collected from the same outfall unless that outfall is the only discharging outfall that complies with the criteria listed above. The permittee may select the outfall(s) that will be sampled each year unless the WYPDES Program specifically identifies which outfalls must be sampled. The permittee must also provide written notification

to the WYPDES Program at least two weeks prior to WET-related sampling. The written notification will specify which outfall(s) are discharging and which outfalls will be selected and sampled for the WET test.

The replacement static toxicity tests shall be conducted in accordance with the procedures set forth in 40 CFR 136.3 and the “*Region VIII EPA NPDES Acute Test Conditions Static Renewal Whole Effluent Toxicity Tests*” (October, 2002 version). In the case of conflicts in method, 40 CFR 136.3 will prevail. The permittee shall conduct an acute 48-hour static toxicity test using *Daphnia magna* and an acute 96 hour static toxicity test using *Pimephales promelas*. All tests will be conducted utilizing a multi-dilution series consisting of at least five (5) concentrations and a control as defined below:

- 100% effluent
- 85% effluent
- 67% effluent
- 50% effluent
- 25% effluent
- control (or 0% effluent)

All tests will be conducted utilizing a minimum of 5 replicates for each test. In the event of inconclusive test results, the WYPDES Program reserves the right to require the permittee to perform additional tests at alternate dilutions and/or replicates. The operator will provide the WYPDES Program with all information regarding all initiated tests, regardless of whether the tests were carried to completion or not, upon request by the WYPDES Program.

Acute toxicity occurs when 50 percent or more mortality is observed for either species at any effluent concentration at any outfall. If acute toxicity occurs at any outfall during a sampling period, then WYPDES Program will assume that all unsampled (untested) outfalls exhibit similar acute toxicity characteristics as well.

If more than 10 percent control mortality occurs, the test is not valid. The test shall be repeated until satisfactory control survival is achieved.

If acute toxicity occurs, an additional test on the failing outfall(s) shall be initiated within two (2) weeks of the date of when the permittee learned of the test failure. The permittee may elect to retest only one of the failing outfalls; however, the WYPDES Program will apply the results of the retest to all outfalls in question. If only one species fails, retesting may be limited to this species. Should acute toxicity occur in the second test, the Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE) process described below shall be implemented on a schedule established by the DEQ.

Annual test results shall be reported on a Discharge Monitoring Report (DMR) that shall be submitted by February 15<sup>th</sup> of each year. The format for the report shall be consistent with the October, 2002 version of the “*Region VIII Guidance for Acute Whole Effluent Reporting*”, and shall include all chemical and physical data as specified.

If the results of two consecutive annual reports indicate no acute toxicity for all sampled outfalls, the permittee may reduce the monitoring to annual acute toxicity testing on only one species on an alternating basis. The test procedures for alternating species shall be the same as specified above.

##### **5. Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE)**

Should toxicity be detected in an operator’s discharge, a TIE-TRE shall be undertaken by the operator to establish the cause of the toxicity, locate the source(s) of the toxicity, and develop controls and/or treatment

for the toxicity. Failure to initiate or conduct an adequate TIE-TRE, or delays in the implementation of such test, shall not be considered a justification for noncompliance with the whole effluent toxicity limits contained in this permit. A TRE plan must be submitted to the permitting authority within 45 days of confirmation of effluent toxicity.

If acceptable to the WYPDES Program, and if in conformance with current regulations, this permit may be reopened and modified to incorporate TRE conclusions relating to additional numerical limitations, a modified compliance schedule, and/or modified whole effluent protocol.

#### **6. Routine monitoring End of Pipe – (001-005)**

For the duration of this permit, at a minimum, samples for the constituents described below shall be collected at the indicated frequencies. Reporting will be based on quarterly time frames, from January through March, from April through June, from July through September, and from October through December. Discharge monitoring reports for outfall sampling will be due on a quarterly basis, by the 28<sup>th</sup> day of the month following the previous monitoring period (for example, the DMR's for the January through March monitoring period will be due by April 28<sup>th</sup>, etc.)

<b><u>Parameter</u></b>	<b><u>Measurement Frequency</u></b>	<b><u>Sample Type</u></b>
<b>Total Alkalinity</b> (mg/l as CaCO <sub>3</sub> )	Once Every Three Months	Grab
<b>Bicarbonate</b> (mg/l)	Once Every Three Months	Grab
<b>Dissolved Cadmium</b> (µg/l)*	Annually	Grab
<b>Dissolved Calcium</b> (mg/l)	Monthly	Grab
<b>Chloride</b> (mg/l)	Annually	Grab
<b>Dissolved Copper</b> (µg/l)*	Annually	Grab
<b>Dissolved Fluoride</b> (µg/l)	Annually	Grab
<b>Dissolved Iron</b> (µg/l)	Once Every Three Months	Grab
<b>Dissolved Lead</b> (µg/l)*	Annually	Grab
<b>Dissolved Magnesium</b> (mg/l)	Monthly	Grab
<b>pH</b> (standard units)	Once Every Three Months	Grab
<b>Total Radium 226</b> (pCi/l)	Annually	Grab
<b>Dissolved Sodium</b> (mg/l)	Monthly	Grab
<b>Total Dissolved Solids</b>	Monthly	Grab
<b>Sodium Adsorption Ratio</b> (calculated as unadjusted for bicarbonate ratio)	Monthly	Calculated
<b>Specific Conductance</b> (micromhos/cm)	Monthly	Grab

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
<b>Total Recoverable Arsenic</b> (µg/l)	Annually	Grab
<b>Total Recoverable Barium</b> (µg/l)	Annually	Grab
<b>Whole Effluent Toxicity (WET) – Acute <i>Daphnia magna</i> *</b>	Annually	Grab
<b>Whole Effluent Toxicity (WET) – Acute Fathead Minnow *</b>	Annually	Grab
<b>Total Flow – (MGD)</b>	Monthly	Continuous
<b>Temperature</b> , degrees Celsius	Once Every Three Months	Grab
<b>Dissolved Zinc</b> , (µg/l)*	Annually	Grab

\* Sampling for all the constituents listed above is required to occur within 60 days of commencement of discharge from the outfall. Full results are to be reported to the WYPDES Program during the next quarterly reporting period.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s) – at all outfalls prior to any dilution or admixture with any other waters.

#### **7. Routine Monitoring And Reporting, Channel Stability Monitoring Station – CSM01**

For the duration of this permit, stream flow shall be measured at the channel stability monitoring station(s) listed in Table 1, on a monthly basis. Reporting will be based on quarterly time frames, from January through March, from April through June, from July through September, and from October through December. Reports must be submitted on a quarterly basis to the WDEQ. All quarterly reports associated with channel stability monitoring must be submitted within 15 days of completion of the monitoring period. For instance, the report associated with the January-March monitoring period must be submitted by April 15.

<u>Parameter</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
<b>Total Flow – (MGD)</b>	Monthly	Instantaneous Maximum

Measurements taken in compliance with the monitoring requirements specified above shall be taken at the following location(s) – at the applicable channel stability monitoring stations identified in Table 1 of this permit.

#### **8. Routine Monitoring And Reporting, Tributary and Mainstem Water Quality Monitoring Stations – TRIB1, UPR, DPR**

For the duration of this permit, samples for the constituents described below shall be collected at the indicated frequencies. In the event that more than one sample is collected during any particular monitoring period, the permittee is required to report all sample data. Reporting will be based on quarterly time frames, from January through March, from April through June, from July through

September, and from October through December each calendar year. Reports must be submitted on a quarterly basis to the WDEQ. All quarterly reports associated with tributary and mainstem monitoring must be submitted within 15 days of completion of the monitoring period. For instance, the report associated with the January-March monitoring period must be submitted by April 15.

<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 Sodium (mg/l)</b>	Monthly	Grab
<b>Dissolved Calcium (mg/l)</b>	Monthly	Grab
<b>Dissolved Magnesium (mg/l)</b>	Monthly	Grab
<b>Specific Conductance, micromhos/cm</b>	Monthly	Grab
<b>Alkalinity (mg/l as CaCO<sub>3</sub>)</b>	Monthly	Grab
<b>Bicarbonate (mg/l)</b>	Monthly	Grab
<b>Sodium Adsorption Ratio (calculated as unadjusted ratio)</b>	Monthly	Calculated
<b>pH (standard units)</b>	Monthly	Grab
<b>Temperature (degrees F)**</b>	Monthly	Continuous
<b>Sulfate (mg/l)</b>	Monthly	Grab

\*Flow measurement is not required at UPR and DPR stations. For station TRIB1, total flow will be measured continuously and the data will be compiled by the permittee in order to report in the quarterly submitted DMRs a monthly average value (average of all flow readings for a given month) as well as a daily maximum value (highest single flow reading for that month).

\*\* Temperature at the established water quality monitoring stations will be measured continuously and the data will be compiled by the permittee in order to report the following values in the quarterly submitted DMRs:

monthly average value (average of all temperature readings for a given month),  
daily maximum value (highest single temperature reading for that month),  
daily minimum value (lowest single temperature reading for that month)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s) – at the applicable tributary and mainstem monitoring stations identified in Table 1 of the permit.

## **B. MONITORING AND REPORTING REQUIREMENTS**

## 1. Representative Sampling

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

## 2. Reporting

Results of routine end of pipe, channel stability, and water quality station monitoring during the previous monitoring period shall be summarized and reported as specified in the table below, using WQD's electronic Discharge Monitoring Report (eDMR) system. If the discharge is intermittent, the date the discharge began and ended must be included. Whole effluent toxicity (biomonitoring) results must also be reported in hard copy form on the most recent version of EPA Region VIII's Guidance for Whole Effluent Reporting. The table below provides a summary of recurring due dates for reporting associated with this permit. This schedule will last for the full duration of the permit term:

### Summary of Reporting Dates

Monitoring Type	Reporting Period	DMR submittal dates ("postmark by" dates)
Outfall 001-005 (end-of-pipe)	Quarterly (Once Every Three Months)	April 28 <sup>th</sup> (Jan-Mar report period) July 28 <sup>th</sup> (Apr-Jun report period) October 28 <sup>th</sup> (Jul-Sep report period) January 28 <sup>th</sup> (Oct-Dec report period) <b>First DMR due by April 28, 2008.</b>
CSM01	Quarterly (Once Every Three Months)	April 15 <sup>th</sup> (Jan-Mar report period) July 15 <sup>th</sup> (Apr-Jun report period) October 15 <sup>th</sup> (Jul-Sep report period) January 15 <sup>th</sup> (Oct-Dec report period) <b>First DMR due by April 15, 2008.</b>
TRIB1, UPR, DPR	Quarterly (Once Every Three Months)	April 15 <sup>th</sup> (Jan-Mar report period) July 15 <sup>th</sup> (Apr-Jun report period) October 15 <sup>th</sup> (Jul-Sep report period) January 15 <sup>th</sup> (Oct-Dec report period) <b>First DMR due by April 15, 2008.</b>

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.

Additional correspondence related to this permit shall be identified according to the assigned permit number, and submitted to:

**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.** "Acute value" means the one hour average concentration. The EPA has determined that this value, if not exceeded more than once every three years on average, should not result in unacceptable effects on freshwater aquatic organisms and their uses. Acute values represent a response to a stimulus severe enough to induce a rapid reaction, typically within 96 hours or less.
- b.** "Aquatic life" means fish, invertebrates, amphibians, and other flora and fauna which inhabit waters of the state at some stage in their life cycles. Aquatic life does not include insect pests or exotic species which may be considered to be undesirable by the Wyoming Game and Fish and Wildlife Service within their appropriate jurisdictions and identified human pathogens.
- c.** "Assimilative capacity" means the increment of water quality in terms of concentration, during the appropriate critical condition(s) that is better than the applicable numeric criterion. The concept of assimilative capacity has no meaning in relation to pollutants that are limited only by narrative criteria.
- d.** "Average annual runoff" means the average value of annual runoff amounts calculated for a whole hydrologic cycle of record that represents average hydrologic conditions for a specified area.
- e.** "Bank full channel" means the active stream channel during the bank full discharge.
- f.** "Bank full channel depth" means the maximum depth of a channel within a riffle segment when flowing at a bank full discharge.
- g.** "Bank full channel width" means the top surface width of a stream channel when flowing at a bank full discharge.
- h.** "Bank full cross-sectional area" means the cross-sectional area of the bank full channel measured perpendicular to the stream flow.
- i.** "Bank full discharge" means the most effective stream flow for moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that results in the average morphological characteristics of channels.
- j.** "Bank full mean depth" means the mean depth of the bank full channel measured perpendicular to the stream flow.
- k.** "Bank full stage" means the elevation of the water surface during bank full discharge.

- l.** “Bank full width” means the width of the bank full channel measured perpendicular to the stream flow.
- m.** “Bank stability” means the ability of a stream bank to counteract erosion or gravity forces.
- n.** “Chronic value” means the four day average concentration. The EPA has determined that this value, if not exceeded more than once every three years on average, should not result in unacceptable effects on freshwater aquatic organisms and their uses. Chronic values represent a response to a continuous, long-term stimulus.
- o.** 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.
- p.** “Credible data” means scientifically valid chemical, physical and biological monitoring data collected under an accepted sampling and analysis plan, including quality control, quality assurance procedures, and available historic data.
- q.** “Cut Bank” means a vertical, eroding bank typically occurring in the outside of a bend or a meander in a stream.
- r.** The "daily maximum" shall be determined by the analysis of a single grab or composite sample.
- s.** “Designated uses” means those uses specified in water quality standards for each water body or segment whether or not they are being attained.
- t.** A “discharge” means any addition of any pollution or wastes to any waters of the state.
- u.** “Erosion” means the wearing away of rock or soil by the gradual detachment of soil or rock fragments by water, wind, ice, and other mechanical, chemical, or biological forces.
- v.** “Erosional features” means any morphological feature created by erosional forces.
- w.** “Effluent limitations” means any restriction established by the state or by the administrator of the Environmental Protection Agency on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into waters of the state, including schedules of compliance.
- x.** “Existing use” means those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.
- y.** “Full containment reservoir” means a reservoir capable of containing all estimated CBM discharges in addition to storm water runoff equal to or greater than that produced by a 50 year, 24 hour precipitation event.. 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.



- z.** A “headcut” is the erosional process by which a nick point migrates progressively upstream
- aa.** “Historic data” means scientifically valid data that is more than 5 years old, or qualitative information that adds some factual information on the historic conditions of a water body. This historic qualitative information may include photographs, journals, and factual testimony of persons who have lived near or relied upon the water body, and old records on water use and conditions.
- bb.** An "instantaneous" measurement for monitoring requirements is defined as a single reading, measurement, or observation.
- cc.** “Main stem” means the major channel of a river or stream as shown on the latest and most detailed records of the Wyoming State Engineer.
- dd.** "MGD", for monitoring requirements, is defined as million gallons per day.
- ee.** “Mitigation” means all actions to avoid, minimize, restore, and compensate for ecological functions or wetland values lost.
- ff.** "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.
- gg.** A “nick point” is a sudden steepening of the gradient of a river bed, usually where it flows over resistant strata. It is produced by an intersection of new and old graded profiles of a river when a previous base level has been altered.
- hh.** “Point source” means any discernable, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.
- ii.** 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.
- jj.** “Pollution” means any contamination or other alteration of the physical, chemical, or biological properties of any water of the state, including changes in temperature, taste, color, turbidity, or odor of the waters or any discharge of any acid or toxic material, chemical or chemical compound, whether it be liquid, gaseous, solid, radioactive or other substance, including wastes, into any water of the state which creates a nuisance or renders any waters harmful, detrimental, or injurious to public health, safety, or welfare, to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wildlife, or aquatic life, or which degrades the water for its intended use, or adversely affects the environment. This term does not mean water gas, or other material which is injected into a well to facilitate production of oil, gas, or water, derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the state,

and if the state determines that such injection or disposal well will not result in the degradation of ground or surface water resources.

- kk.** A “stream bank” is a feature that defines the channel sides and contains stream flow within the channel; this is the portion of the channel bank that is between the toe of the bank slope and the bank full elevation. The banks are distinct from the streambed, which is normally wetted and provides a substrate that supports aquatic organisms. The top of bank is the point where an abrupt change in slope is evident, and where the stream is generally able to overflow the banks and enter the adjacent floodplain during flows at or exceeding the average annual high water.
- ll.** A “stream channel” is a long narrow depression shaped by the concentrated flow of a stream and covered continuously or periodically by water.
- mm.** “Surface waters of the state” means all perennial, intermittent, and ephemeral defined drainages, lakes, reservoirs, and wetlands which are not man-made retention ponds used for the treatment of municipal, agricultural, or industrial wastes; and all other bodies of surface water, either public or private which are wholly or partially within the boundaries of the state. Nothing in this definition is intended to expand the scope of the Environmental Quality Act, as limited in W.S. 35-11-1104.
- nn.** “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.1.1.
- oo.** “Turbidity” is a measure of the content of suspended matter that interferes with the passage of light through the water or in which visual depth is restricted. Suspended sediments are only one component of turbidity.
- qq.** “Use attainability analysis” means a structured scientific assessment of the factors affecting the attainment of a use. The factors may include physical, chemical, biological, and economic factors as described in Section 33, *Chapter 1 of the Wyoming Water Quality Rules and Regulations*.
- rr.** 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.

#### **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, water quality monitoring station and channel stability monitoring station. This sign shall, as a minimum, convey the following information:

- a. The name of the company, corporation, person(s) who holds the WYPDES 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 and/or station name and/or number as identified by the 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 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.

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 in the new 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, Section 16.13.1. The permittee shall provide written notification of the establishment of each discharge point in accordance with Part I, Section 16.11. above.

**Table 1: WY0056146 Wormwood CS State**

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	NESW	16	46	76	43.958477	-106.004108	Powder River (ZABWW) via unnamed ephemeral tributary to Pumpkin Creek (3B) via on channel reservoir "Turkey" (3B)	YES	YES
002	SENW	16	46	76	43.961192	-106.002865	Powder River (ZABWW) via unnamed ephemeral tributary to Pumpkin Creek (3B) via on channel reservoir "Strike" (3B)	YES	YES
003	SWNE	16	46	76	43.963285	-105.998870	Powder River (ZABWW) via unnamed ephemeral tributary to Pumpkin Creek (3B) via on channel reservoir "Alley" (3B)	YES	YES
004	SENE	16	46	76	43.962574	-105.99323	Powder River (ZABWW) via unnamed ephemeral tributary to Pumpkin Creek (3B) via on channel reservoir "Spare" (3B)	YES	YES
005	SENE	16	46	76	43.962463	-105.990197	Powder River (ZABWW) via unnamed ephemeral tributary to Pumpkin Creek (3B) via on channel reservoir "Back-Up" (3B)	YES	YES
CSM01	SESW	19	47	77	44.024583	-106.160278	Channel Stability Monitoring station number 1, located on lower Pumpkin Creek, near mouth	N/A	N/A
TRIB1	NESW	19	47	77	44.029316	-106.162455	Tributary monitoring station located at mouth of Pumpkin Creek	N/A	N/A
UPR	NWNE	25	47	78	44.024034	-106.176463	Upstream Powder River monitoring station (above Pumpkin Creek)	N/A	N/A
DPR	SENE	24	47	78	44.033150	-106.174003	Downstream Powder River monitoring station (below Pumpkin Creek)	N/A	N/A

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

- a. The new outfall location is within 2640 feet of the established outfall location.
- b. The new outfall location is within the Pumpkin Creek sub-basin of the Powder River drainage.
- c. There is no change in the affected landowners.
- d. Notification of the change in outfall location must be provided to the WYPDES Permitting Section on a form provided by the WYPDES Program 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 WYPDES Program.

## 12. **Channel Stability Monitoring Locations and Water Quality Monitoring Station Locations**

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

LOCATION INFORMATION FOR CHANNEL STABILITY MONITORING AND WATER QUALITY MONITORING STATIONS MAY BE FOUND IN TABLE 1.

## 13. **Permit Modifications**

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 *Chapter 2 of the Wyoming Water Quality Rules and Regulations*, permit 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.

If the requested modification does not satisfy the definition of a minor modification as defined in *Chapter 2, Section 3 of the Wyoming Water Quality Rules and Regulations*, permit modifications will be required to be advertised in a public notice. A major modification may consist of, but is not limited to, any of the following – addition of new discharge points, relocating a discharge point such that the relocation does not meet the criteria described in Part I.B.11. below, request for less stringent effluent limitations, a request for less frequent monitoring and/or reporting, an increase in discharge volume, or a change in operating conditions such that existing effluent limitations and requirements no longer provide sufficient protection of state and/or federal water quality standards (for example, addition of a new effluent stream).

## C. **RESERVOIR / IMPOUNDMENT AND RESERVOIR BONDING REQUIREMENTS**

### 1. **Groundwater Monitoring Beneath Impoundments**

Table 1 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*", dated June 14, 2004. 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 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 Performance Bonding of On-Channel Reservoirs That Store Coalbed Natural Gas Produced Water*". The 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 impoundment subject to WDEQ bonding requirements 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.

PART II

A. MANAGEMENT REQUIREMENTS

1. Changes

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

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

2. Noncompliance Notification

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

The written submission shall contain:

- (1) A description of the noncompliance and its cause;
  - (2) The period of noncompliance, including exact dates and times;
  - (3) The estimated time noncompliance is expected to continue if it has not been corrected; and
  - (4) Steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.
- d. The following occurrences of unanticipated noncompliance shall be reported by telephone to the Water Quality Division, Watershed Management Section, NPDES Program (307) 777-7781 as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances.
- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
  - (2) Any upset which exceeds any effluent limitation in the permit; or

- (3) Violation of a maximum daily discharge limitation for any toxic pollutants or hazardous substances, or any pollutants specifically identified as the method to control a toxic pollutant or hazardous substance listed in the permit.
- e. The administrator of the Water Quality Division may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Quality Division, NPDES Program (307) 777-7781.
- f. Reports shall be submitted to the Wyoming Department of Environmental Quality at the address in Part I under Reporting and to the Planning and Targeting Program, 8ENF-PT, Office of Enforcement, Compliance, and Environmental Justice, U.S. EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129.
- g. The permittee shall report all instances of noncompliance that have not been specifically addressed in any part of this permit at the time the monitoring reports are due.

### 3. Facilities Operation

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

### 4. Adverse Impact

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

### 5. Bypass of Treatment Facilities

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



- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.A.2.
- d. Prohibition of bypass.
- (1) Bypass is prohibited and the administrator of the Water Quality Division may take enforcement action against a permittee for a bypass, unless:
    - (a) The bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
    - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - (c) The permittee submitted notices as required under paragraph c. of this section.
- e. The administrator of the Water Quality Division may approve an anticipated bypass, after considering its adverse effects, if the administrator determines that it will meet the three conditions listed above in paragraph d. (1) of this section.

#### 6. Upset Conditions

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

7. Removed Substances

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

8. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with a schedule of compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities; or
- b. If such alternative power source as described in paragraph a. above is not in existence and no date for its implementation appears in Part I, take such precautions as are necessary to maintain and operate the facility under its control in a manner that will minimize upsets and insure stable operation until power is restored.

9. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal act and the Wyoming Environmental Quality Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give the administrator of the Water Quality Division advance notice of any planned changes at the permitted facility or of any activity which may result in permit noncompliance.

10. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

11. Signatory Requirements

All applications, reports or information submitted to the administrator of the Water Quality Division shall be signed and certified.

- a. All permit applications shall be signed as follows:
  - (1) For a corporation: by a responsible corporate officer;
  - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
  - (3) For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected official.
- b. All reports required by the permit and other information requested by the administrator of the Water Quality Division shall be signed by a person described above or by a duly

authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above and submitted to the administrator of the Water Quality Division; and
  - (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
- c. If an authorization under paragraph II.A.11.b. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph II.A.11.b must be submitted to the administrator of the Water Quality Division prior to or together with any reports, information or applications to be signed by an authorized representative.
- d. Any person signing a document under this section shall make the following certification:

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

## B. RESPONSIBILITIES

### 1. Inspection and Entry

If requested, the permittee shall provide written certification from the surface landowner(s), if different than the permittee, that the administrator or the administrator's authorized agent has access to all physical locations associated with this permit including well heads, discharge points, reservoirs, monitoring locations, and any waters of the state.

The permittee shall allow the administrator of the Water Quality Division or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the federal act, any substances or parameters at any location.

### 2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the regional administrator of the Environmental Protection Agency and the administrator of the Water Quality Division. The administrator of the Water Quality Division shall then provide written notification to the new owner or controller of the date in which they assume legal responsibility of the permit. The permit may be modified or revoked and reissued to change the name of the permittee and incorporate such other requirements as described in the federal act.

### 3. Availability of Reports

Except for data determined to be confidential under Section 308 of the federal act, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Wyoming Department of Environmental Quality and the regional administrator of the Environmental Protection Agency. As required by the federal act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the federal act.

### 4. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the federal act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

## 5. Changes in Discharge of Toxic Substances

Notification shall be provided to the administrator of the Water Quality Division as soon as the permittee knows of, or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (1) One hundred micrograms per liter (100 µg/l);
  - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
  - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21 (g) (7); or
  - (4) The level established by the director of the Environmental Protection Agency in accordance with 40 CFR 122.44 (f).
  
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21 (g) (7); or
  - (4) The level established by the director of the Environmental Protection Agency in accordance with 40 CFR 122.44 (f).

## 6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. As long as the conditions related to the provisions of "Bypass of Treatment Facilities" (Part II.A.5), "Upset Conditions" (Part II.A.6), and "Power Failures" (Part II.A.8) are satisfied then they shall not be considered as noncompliance.

## 7. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the federal act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state or federal law or regulation. In addition, issuance of this permit does not substitute for any other permits required under the Clean Water Act or any other federal, state, or local law.

10. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights nor any infringement of federal, state or local laws or regulations.

11. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

12. Duty to Provide Information

The permittee shall furnish to the administrator of the Water Quality Division, within a reasonable time, any information which the administrator may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the administrator, upon request, copies of records required by this permit to be kept.

13. Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the administrator of the Water Quality Division, it shall promptly submit such facts or information.

14. Permit Action

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

15. Permit Fees

Once this permit has been issued, the permittee will be assessed a \$100.00 per-year permit fee by the Water Quality Division. The fee year runs from January 1<sup>st</sup> through December 31<sup>st</sup>. This permit fee will continue to be assessed for as long as the permit is active,

regardless of whether discharge actually occurs. This fee is not pro-rated. If the permit is active during any portion of the fee year, the full fee will be billed to the permittee for that fee year. In the event that this permit is transferred from one permittee to another, each party will be billed the full permit fee for the fee year in which the permit transfer was finalized.

PART III

A. OTHER REQUIREMENTS

1. Flow Measurement

At the request of the administrator of the Water Quality Division, the permittee must be able to show proof of the accuracy of any flow measuring device used in obtaining data submitted in the monitoring report. The flow measuring device must indicate values of within plus or minus ten (10) percent of the actual flow being measured.

2. 208(b) Plans

This permit may be modified, suspended or revoked to comply with the provisions of any 208(b) plan certified by the Governor of the State of Wyoming.

3. Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations (and compliance schedule, if necessary) or other appropriate requirements if one or more of the following events occurs:

- a. The state water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit;
- b. A total maximum daily load (TMDL) and/or watershed management plan is developed and approved by the state and/or the Environmental Protection Agency which specifies a wasteload allocation for incorporation in this permit;
- c. A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit;
- d. Downstream impairment is observed and the permitted facility is contributing to the impairment;
- e. The limits established by the permit no longer attain and/or maintain applicable water quality standards;
- f. The permit does not control or limit a pollutant that has the potential to cause or contribute to a violation of a state water quality standard.
- g. If new applicable effluent guidelines and/or standards have been promulgated and the standards are more stringent than the effluent limits established by the permit.
- h. In order to protect water quality standards in neighboring states, effluent limits may be incorporated into this permit or existing limits may be modified to ensure that the appropriate criteria, water quality standards and assimilative capacity are attained.



- i. If new, additional or more stringent permit conditions are necessary for control of erosion downstream of the discharges to ensure protection of water quality standards.

#### 4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. If necessary to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b) (2) (C) and (D), 304 (b) (2) and 307 (a) (2) of the federal act, if the effluent standard or limitation so issued or approved:
  - (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
  - (2) Controls any pollutant not limited in the permit.

#### 5. Toxicity Limitation - Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include a new compliance date, additional or modified numerical limitations, a new or different compliance schedule, a change in the whole effluent protocol or any other conditions related to the control of toxicants if one or more of the following events occur:

- a. Toxicity was detected late in the life of the permit near or past the deadline for compliance;
- b. The TRE results indicate that compliance with the toxic limits will require an implementation schedule past the date for compliance and the permit issuing authority agrees with the conclusion;
- c. The TRE results indicate that the toxicant(s) represent pollutant(s) that may be controlled with specific numerical limits and the permit issuing authority agrees that numerical controls are the most appropriate course of action;
- d. Following the implementation of numerical controls on toxicants, the permit issuing authority agrees that a modified whole effluent protocol is necessary to compensate for those toxicants that are controlled numerically;
- e. The TRE reveals other unique conditions or characteristics which, in the opinion of the permit issuing authority, justify the incorporation of unanticipated special conditions in the permit.

6. Severability

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit, shall not be affected thereby.

7. Penalties for Falsification of Reports

The federal act provides that any person who knowingly makes any false statement, representation or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance 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.