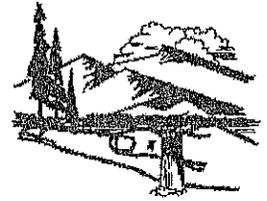




# Department of Environmental Quality



*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*

Matthew H. Mead, Governor

Todd Parfitt, Director

August 21, 2013

Mr. Bill Curtis, Manager  
J Bar 9 Ranch  
3110 Southfork Road  
Cody, WY 82414

RE: J Bar 9 Ranch, WYS-029-089  
Permit 13-251, Class V Septic System Permit  
Park County, Wyoming

Dear Mr. Curtis:

Attached please find one copy of the Class V septic system permit for the facility referenced above. Please be aware that this permit requires the installation of one down-gradient monitoring well to be installed within 6-months of the permit approval. This permit also requires semi-annual sampling and requires annual inspection and periodic pumping of the septic tanks per Section I. The report forms can be filled out using our on-line webform (Monitor Reports Link), or you may have the lab submit them using Electronic Data Deliverable (EDD) at the following site: <http://gem.wqd.apps.deq.wyoming.gov/default.aspx>. Please use the exact well names used in your permit when reporting data to avoid any miscommunications. For your convenience, copies of the inspection forms are attached, you may use the paper forms to report your inspection and monitoring activities to WDEQ.

The underground injection control program was promulgated to prevent serious problems caused by direct discharges to the groundwater. Those problems included groundwater pollution leading to contamination in domestic water wells and serious health effects caused by exposures to toxic substances and water borne pathogens. Your cooperation with our program is sincerely appreciated.

If you have any questions, please contact me at (307) 777-8275 or [nicole.twing@wyo.gov](mailto:nicole.twing@wyo.gov).

Sincerely,

Nicole Twing, P.G.  
Wyoming Department of Environmental Quality  
Project Geologist  
Water Quality Division  
NT/cm/13-0762

Enclosure: Permit





# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

June 21, 2013

Dawn Willhelm, Utility Manager  
City of Riverton  
816 North Federal  
Riverton, WY 82501

RE: Riverview Road Water and Sewer Improvements Project, Permit No. 13-252, Latitude 43.03, Longitude -108.43, Fremont County

Dear Ms. Willhelm:

This project consists of 12-inch and 14-inch water main replacements and new 8-inch and 12-inch sewer mains to serve multiple residential connections along Riverview Road between Augusta Drive and Rein Road. The above application for coverage under General Permits to Construct the extension of a public water distribution system has been reviewed in accordance with Chapter 3, Section 7; Chapter 11, Section 9; and Chapter 12, Section 14 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

James Brough, P.E.  
Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
Jedediah Smith, P.E., Sage Civil Engineering, 2824 Big Horn Ave., Cody, WY 82414

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6766  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

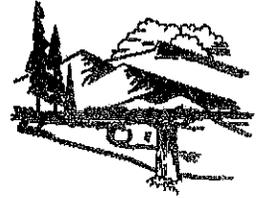
WATER QUALITY  
(307) 332-3144  
FAX 332-7726





# Department of Environmental Quality

13-253



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

At Mead, Governor

Todd Parfitt, Director

August 22, 2013

Luke Lungren  
1586 Road 13  
Worland, WY 82401

RE: Nine Iron Feedlot South Retention Pond

Dear Mr. Lungren:

Your permit application materials are being returned as per your request.

Our Records indicate that a written review was done on the following project. The specific information for your proposed project is as follows:

Facility Name: Nine Iron Feedlot South Retention Pond  
DEQ/WQD Reference Number: #13-253  
DEQ/WQD Reviewing Engineer: Hannes Stueckler, P.E.  
Date of Withdrawal: August 22, 2013

The construction, installation, or modification of any sewerage system, treatment works, disposal system including septic systems, or other facility capable of causing or contributing to pollution, or public water supply system including water mains, water wells, water services greater than 2-inch in diameter other facilities, or CAFO stormwater retention facilities without a Permit to Construct, is a violation of Wyoming State Statute 35-11-301.

If you have any questions regarding my review comments or this letter, please contact me at 307-335-6964.

Sincerely,

Hannes Stueckler, P.E.  
Assistant Northwest District Engineer

Enclosure: Permit Application Package 12-253  
xc: IPS





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 15, 2013

Mayor Dustin Upton  
Town of Upton  
P.O. Box 203  
Upton, WY 82730

RE: Colorado Avenue/Alley Sewer and Water Replacement, Upton, WY  
Application No. 13-254, Weston County

Dear Mr. Upton:

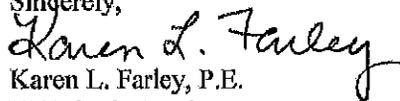
The above application for coverage under General Permits to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Water Supply Distribution Systems and Existing Sewage Collection Systems, consisting of the installation of approximately 670 lineal feet of 8 inch PVC sanitary sewer line and approximately 290 lineal feet of 6 inch PVC water line, including associated valves, flushing hydrants, sanitary sewer manholes, and services, located in the NW ¼ NE ¼ of Section 35, Township 48 North, Range 65 West, Weston County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapters 11 & 12** of the Water Quality Division Rules and Regulations, the general permits, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **December 31, 2015**.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3478.

Sincerely,



Karen L. Farley, P.E.  
NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Kenny Rathbun, P.E., 420 Cleveland Street, Sundance, WY 82729





# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

July 10, 2013

Kenneth Rathbun, P.E.  
Bearlodge Engineering  
420 Cleveland Street  
Sundance, WY 82729

RE: Colorado Avenue/Alley Sewer & Water Replacement  
Location: NE ¼, Section 35, Township 48N, Range 65W  
WDEQ Application #13-254

Dear Mr. Rathbun:

We have completed our review of the permit application submitted on June 11, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3478 should you have any questions related to these comments or the application and review process.

Sincerely,

Karen L. Farley, P.E.  
Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS  
WDEQ File



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** Colorado Avenue/Alley Sewer & Water Replacement

**LOCATION:** Upton, Wyoming

**ENGINEER:** Bearlodge Engineering

**APPLICANT:** Town of Upton

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-254**

**DATE ON PROPOSAL/PLANS/REPORT:** June 10, 2013

**DATE RECEIVED BY DEQ:** June 11, 2013

**DATE OF THIS REVIEW:** July 10, 2013

**WDEQ REVIEWER:** Karen L. Farley, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 12, Section 6(d) – Please comment on the degree of hazard of all water service connections to be connected to the proposed project including the type of backflow prevention provided.
- 2) Chapter 12, Section 14(b) – Although this is just a replacement of the existing water line, please justify the proposed pressure class by providing the pressures of the line (normal working pressures).
- 3) Chapter 12, Section 14(g) - Sheet 5 and 6 show that the new water line is going to be located too close to the sanitary sewer manholes (< 10'). Please address.
- 4) Chapter 12, Section 14(f) – Please comment on how the new main will be flushed after disinfection – there doesn't seem to be any means to accomplish this.



## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 • Casper, WY 82601 • (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

June 25, 2013

Andrew Beamer, P.E.  
City of Casper  
200 North David Street  
Casper, WY 82601

RE: Casper Fire-EMS Station #2  
Application No. 13-255, Natrona County

Dear Mr. Beamer:

The above application for coverage under General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Water Supply Distribution Systems consisting of the construction of 75 feet of 4 inch water line located in **Section 20, Township 33N, Range 79W**, Natrona County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 12** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2015.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Tom Brauer, P.E., CEPI, Inc., 6080 Enterprise Drive, Casper, WY 82609





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 16, 2013

Paul Brooks  
City of Sundance  
P.O. Box 542  
Sundance, WY 82729

RE: Croell Facility Expansion Project  
Application No. 13-256, Crook County

Dear Mr. Brooks:

The above application for coverage under General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Water Supply Distribution Systems and Existing Sewage Collection Systems, consisting of the installation of approximately 1,816 feet of 8 inch PVC sanitary sewer line including nine manholes and 2,014 feet of 8 inch PVC waterline located in the NW ¼, **Section 19, Township 51N, Range 62W**, Crook County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 11 and 12** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2015.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Kenneth Rathbun, P.E., Bearlodge Engineering, 420 Cleveland Street, Sundance, WY 82729





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

July 8, 2013

Kenneth Rathbun, P.E.  
Bearlodge Engineering  
420 Cleveland Street  
Sundance, WY 82729

RE: Croell Facility Expansion Project  
Location: NW ¼, Section 19, Township 51N, Range 62W  
WDEQ Application #13-256

Dear Mr. Rathbun:

We have completed our review of the permit application submitted on June 10, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3469 should you have any questions related to these comments or the application and review process.

Sincerely,

Jason Vreeland, P.E.  
Assistant Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS  
WDEQ File



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** Croell Facility Expansion Project

**LOCATION:** Sundance, Wyoming

**ENGINEER:** Bearlodge Engineering

**APPLICANT:** City of Sundance

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-256**

**DATE ON PROPOSAL/PLANS/REPORT:** June 6, 2013

**DATE RECEIVED BY DEQ:** June 10, 2013

**DATE OF THIS REVIEW:** July 8, 2013

**WDEQ REVIEWER:** Jason Vreeland, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 12, Section 7(a) – Please provide a revised plan set with a signed and dated seal.
- 2) Chapter 11, Section 7(b) – Please show the location of the Croell waterline on the profile on Sheet 14.
- 3) Chapter 12, Section 14(g) – The addendum notes that the HDPE pipe to be installed for the surface water crossing is to be changed to PVC. WWQRR require that the pipe shall be of special construction, having flexible watertight joints. Please address.
- 4) Was a geotechnical study conducted for this project? If so please provide or comment on the depth of seasonally high groundwater at the location of valve vaults and hydrants.



## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 3, 2013

Don Jording  
Salt Creek Water District  
P.O. Box 847  
Newcastle, WY 82701

RE: Dixon Lane Sanitary Sewer Relocation  
Application No. 13-257, Weston County

Dear Mr. Jording:

The above application for coverage under General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Sewage Collection Systems, consisting of approximately 250 feet of 8 inch sanitary sewer line and three manholes located in **Section 34, Township 45N, Range 61W**, Weston County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 11** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2015.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Ed Nowak, P.E., Camp Creek Engineering, Inc., 410 E. Grand Avenue, Suite 205, Laramie, WY 82070





# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

June 19, 2013

Joe Devlin  
HC 67 Box 2020  
Challis, ID 83226

RE: Devlin Residential Septic System  
Application No. 13-258 Carbon County

Dear Mr. Devlin:

The above application for coverage under **General Permit to Construct**, Install, Modify or Operate a **Small Wastewater Facility** consisting of a 1250 gallon, two compartment, concrete septic tank, discharging into about 200 feet of chamber type trench leachfield divided into four equal rows of at least 12 *Infiltrator* brand, standard Quick4 model chamber units each, for a 3 bedroom home, located in the SW¼ of Section 27, T13N, R91W, Carbon County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the small wastewater system in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, the condition listed below, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **June 19, 2015**.

The following project specific condition also applies:

**Septic Tank Clean-Out Riser Requirement** - Either a 6 inch diameter clean-out riser or the manway from each compartment of the septic tank must be extended to the ground surface.

This **Notice of Coverage** is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General Permits can be viewed at the following path:  
[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Please reference Application No. **13-258** in any future correspondence.

If you have any questions, please contact me at either [ron.ewald@wyo.gov](mailto:ron.ewald@wyo.gov) or by phone at (307) 777-6183.

Sincerely,

Ronald L. Ewald  
Assistant Southeast District Engineer  
Southeast District, Water & Wastewater Section  
Water Quality Division

RLE/rm/13-0545

Enclosures: Certificate of Completion form

cc: IPS, Cheyenne

Kristy Rowan, Carbon County Planning Office, Carbon Building, 215 West Buffalo Street, Suite 336, Rawlins, Wyoming 82301

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5913
--	---	---	---	--	--	---





# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 16, 2013

Steve Palmer, President  
The Gannett Group  
P.O. Box 587  
Lander, WY 82520

RE: Gannett Peak Estates Subdivision Water Line and Sewer Line Project, Permit No. 13-259, E 1/2 NE 1/4, Section 24, Township 33N, Range 99W, Fremont County

Dear Mr. Palmer:

This project consists of installing approximately 4,195 linear feet of 8-inch water main with twelve fire hydrants and approximately 712 linear feet of 6-inch sewer line, 3,443 linear feet of 8-inch sewer line and seventeen manholes. This project is divided into two phases to serve a total of 71 residential connections. The above application for coverage under General Permits to Construct the extension of a public water distribution system has been reviewed in accordance with Chapter 3, Section 7; Chapter 11, Section 9; and Chapter 12, Section 14 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

James Brough, P.E.  
Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
Diane Oress, P.E., Dowl HKM, 945 Lincoln St., Lander WY 82520  
Mickey Simmons, City of Lander, 240 Lincoln St., Lander, WY 82520

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6755  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726



WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT No. 13-260

Rock Springs Sweetwater County Airport – Water System Pump Station and Distribution System  
PWS Number WY5600749

This permit hereby authorizes the applicant:

Terry Doak  
Rock Springs Sweetwater County Airport  
P.O. Box 1987  
Rock Springs, WY 82902

to construct a pump station consisting of two booster pumps, one fire pump, a chlorination system, a tank mixer system and about 137 linear feet (LF) of 12-inch, 4005 LF of 10-inch, 3,133 LF of 8-inch, 703 LF of 6-inch PVC water main according to the procedures and conditions of the application number 13-260. The facility is located about 11 miles east of the City of Rock Springs at Lat: 41°36'02", Long: 109°03'56" in NE ¼ Section 30, T19N, R103W, in the county of Sweetwater, in the State of Wyoming. All construction, installation, or modification allowed by this permit shall be completed by July 29, 2015.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

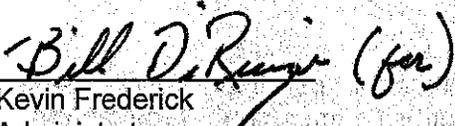
The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, or any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 3 The applicant will provide immediate oral or written notice to the Wyoming Department of Environmental Quality, Water Quality Division (WQD), Southwest District Engineer, 510 Meadowview Drive, Lander, WY 82520, 307-332-3144, FAX 307-332-3183, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
- 2 of 3 Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Southwest District a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
- 3 of 3 The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:

  
Kevin Frederick  
Administrator  
Water Quality Division

  
Todd Parfitt  
Director  
Department of Environmental Quality

8-7-13  
Date of Issuance

MDB/rm/13-0739

## STATEMENT OF BASIS

1. Permit Number: **13-260**
2. Application reviewed for compliance with the following regulations:  
Chapters 3 and 12 of the Wyoming Water Quality Rules and Regulations.
3. Does the permit comply with all applicable regulations identified above?  
Yes.
4. If Section 17 of Chapter 3 review is required indicate the basis for determining groundwater will be protected.  
Not required.
5. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Mark D. Baron, P.E., Southwest District Engineer, mark.baron@wyo.gov, and completed on July 29, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents permit conditions, and the items identified in this "Statement of Basis."

cc: Ken Walker, P.E., Uinta Engineering, 2638 Commercial Way, Rock Springs, WY 82901

**UNDERGROUND INJECTION CONTROL PROGRAM  
REVIEW COMMENTS:  
PLANS/SPECIFICATIONS/PROPOSALS/REPORTS  
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION**

Herschler Bldg., 4 West  
Cheyenne, Wyoming 82002  
307-777-7781

**PROJECT:** Application 13-262; Class I Disposal Wells

**LOCATION:** Fremont County

**APPLICANT:** Cameco Resources  
2020 Carey Avenue, Suite 600  
Cheyenne, WY 82001

**OWNER:** Ms. Miriam Whatley

**CONSULTANTS:**

**GEOLOGIST** N/A

**ENGINEER** Gene R. George & Associates  
Attn: Bonnie Percy, P.E.,  
111 West Second Street, Suite #400  
Casper, WY 82602

**TITLE:** *"Underground Injection Control Permit Application for Three Class I Non-Hazardous Waste Disposal Wells, Gqs Hills Underground Disposal Facility"*

PLANS    SPECS    PROPOSAL    REPORT

**DATE ON PROPOSAL/PLANS/REPORT:** June 2013

**DATE RECEIVED BY WDEQ:** June 17, 2013

**WDEQ REVIEWER:** John A. Passehl, P.G.  
GEOLOGIST

**DATE OF THIS REVIEW:** June 27, 2013

**ACTION:** Application Incomplete; See Attached Comments

**I. WDEQ Comments:**

Specific Comments - Additional Information Required (**John Passehl: 777-5623**)

1. Please verify that all conditions and requirements of Permit 11-310 (Class V test well permit) have been completely met.
2. The purpose of Permit 11-310 was to collect real data to use for possibly converting the Class V test wells to Class I injection wells. Therefore, please use head data of the lower most USDW (W) and head data of the receiver (B) collected from both wells to revise the cone of influence calculations for each well (DDW #1, DDW #2, DDW #3) for  $t = 3,650$  days and  $9,125$  days.
3. Please revise **Exhibits 12, 13, Appendix L-1**, and the large **fold-out map** to depict the radius of influence, the radius of emplaced waste, and the minimum 1,320 feet circle for each injection well for  $t = 3,650$  days and  $9,125$  days. To make the maps less cluttered you may want to consider one map for each well for  $t = 3,650$  days and another map for each well for  $t = 9,125$  days.
4. For proposed well DDW #3 please update **Exhibit 19** of the application.
5. Please revise **Exhibit 19** (LSIP and MSIP) using an average injection rate ( $< 150$  gpm) rather than a maximum injection rate (150 gpm). It is not realistic to assume that the operator will inject with tubing friction losses greater than 200 psi.
6. If possible, it is recommended to conduct a step-rate injection test to obtain a fracture gradient from each well **now** (DDW #1 and DDW #2) and then revise **Exhibit 19** (LSIP and MSIP) as appropriate. If you choose to do this please contact me for further instructions and scheduling. Please note that conducting step-rate injection tests on each test well are currently authorized under Permit 11-310.
7. Please revise **Appendix F** to conform to revised DEQ procedures identified below:

Part I of the mechanical integrity test shall demonstrate the absence of leaks through the packer, tubing, and casing (Chapter 13, Section 9(d)(vii)(A)). Prior to operational injection and at least once every five (5) years the casing-tubing annulus of each well shall be tested at a pressure equal to the maximum permitted surface injection pressure (of each well) or 1,000 psig, whichever is greater. A pressure change of less than 10% over a thirty (30) minute test period shall be considered successful.

Part II of the mechanical integrity test shall demonstrate the absence of fluid movement behind the casing (Chapter 13, Section 9 (d)(vii)(B)) above the topmost perforation. Prior to the commencement of waste injection and at intervals of no longer than five (5) years thereafter, and more frequently if required by the Administrator, each well shall be logged using a radioactive tracer survey (or oxygen activation log) and a temperature survey. The static temperature log shall start more than two (2) hours and preferably more than twenty-four (24) hours for an active well, after injection has ceased. The results and their interpretation shall be submitted to the Administrator along with the next quarterly report.

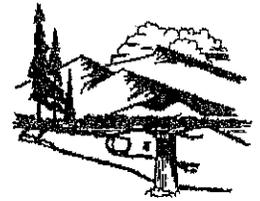
**Please note that the Part II mechanical integrity tests for both DDW #1 and DDW #2 have not been met yet.**

8. The financial assurance amount for the existing wells are deemed sufficient. Please contact Jessica Wales of this Department to ensure that your financial assurance documentation (**Appendix H**) is correctly formatted (307-777-7082). The financial assurance document that is normally prepared for the Land Quality Division mining permit will be acceptable as long as the Class I P&A costs are explicitly identified for each existing well.



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

June 27, 2013

Cameco Resources  
Attn: Ms. Miriam Whatley  
2020 Carey Avenue, Suite 600  
Cheyenne, WY 82001

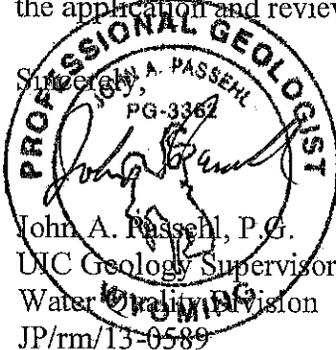
RE: Permit Application 13-262, DDW #1, DDW #2, DDW #3  
Class I Non-Hazardous Injection Wells, Fremont County

Dear Ms. Whatley:

Attached, please find comments developed by the Wyoming Department of Environmental Quality (WDEQ) with respect to the content and adequacy of the Wyoming Water Quality Rules and Regulations, Chapter 13, Class I permit application.

The WDEQ received this application on June 17, 2013 and has until August 17, 2013 to make an initial determination of completeness. Re-submittal of information by an applicant on an incomplete application will begin a new sixty (60) day review process. Pursuant to Chapter 13, Section 6 during any sixty (60) day review period where an application is determined complete, a draft permit for issuance or denial shall be prepared and a public notice provided pursuant to Chapter 13, Section 19.

Please feel free to contact me at (307) 777-5623 if you have any questions related to these comments or the application and review process.



John A. Passell, P.G.  
DUC Geology Supervisor  
Water Quality Division  
JP/rm/13-0589

Attachments: WDEQ Comments

cc: Gene R. George & Associates, Attn: Bonnie Percy, P.E., 111 West Second Street, Suite #400, Casper, WY 82602  
Wyoming Oil and Gas Conservation Commission, Attn: Mr. Tom Kropatsch, P.O. Box 2640, Casper, WY 82602  
Jessica Wales, WDEQ



STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
UNDERGROUND INJECTION CONTROL PERMIT ISSUED UNDER  
WYOMING WATER QUALITY RULES AND REGULATIONS  
CHAPTER 13

CLASS I INJECTION WELL

- New  
 Modified  
 Renewal

Permit Number: 13-262  
Previous Permit: None  
UIC Facility Number: WYS-013-00116

In compliance with the Wyoming Environmental Quality Act (W.S. 35-11-101 through 1104, specifically 301(a)(i) through 301 (a)(iv), Laws 1973, Chapter, 250, Section 1) and Wyoming Water Quality Rules and Regulations Chapter 13.

Applicant: Cameco Resources (Gas Hills ISR Facility)  
550 North Poplar Street, Suite 100  
Casper, WY 82601

Cameco Resources, hereafter referred to as the permittee, is authorized to complete, and operate existing wells **DDW #1, DDW #2**, and drill, complete, and operate proposed well **DDW #3** located in Fremont and Natrona Counties, according to the procedures and conditions of application 13-262 and requirements and conditions of this permit. Issuance of this permit does not obligate the Department of Environmental Quality to approve injection if doing so would endanger human health or the environment or if the well(s) do not comply with all the terms and conditions of this permit (Chapter 13, Section 8(e)).

This is an area permit for up to three (3) wells of the Gas Hills ISR Project. No additional wells may be constructed under this permit without prior permit modification. This permit shall become effective on the date of issuance and is valid for ten (10) years. Any proposed well not completed before expiration of this permit will not be included in a renewal or modification of this permit.

\_\_\_\_\_  
Kevin Frederick, Administrator  
Water Quality Division  
Herschler Building 4-W, 122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

\_\_\_\_\_  
Date

\_\_\_\_\_  
Todd Parfitt, Director  
Department of Environmental Quality  
Herschler Building 4-W, 122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

\_\_\_\_\_  
Date

JP/rm/13-1167

## Table of Contents

A.	Discharge Zones .....	3
B.	Well Locations and Areas of Review .....	3
C.	Groundwater Classification .....	4
D.	Authorized Operations .....	5
E.	Prohibitions .....	10
F.	Operation and Maintenance .....	10
G.	Entry and Inspection .....	11
H.	Environmental Monitoring Program for Groundwaters of the State .....	11
I.	Monitoring Requirements .....	11
J.	Sampling and Test Procedures .....	16
K.	Records and Reports .....	16
L.	Permit Conditions .....	18
M.	Mechanical Integrity .....	19
N.	Plugging and Abandonment .....	20
O.	Duties of the Permittee .....	21
P.	Financial Responsibility .....	22
Q.	Special Permit Conditions .....	23
R.	Signatories Requirement .....	23
S.	Noncompliance .....	23
T.	Permit Transfer .....	24
U.	Property Rights .....	24
V.	Severability .....	24

**A. Discharge Zones**

The injection wells are authorized to inject into the Flathead sandstone formation of the Cambrian Era within the intervals specified in **Table 1**:

**Table 1 (Discharge Zones)**

Well Name	Surface Elevation (ft)	Depth to Top of Discharge Zone (ft)	Depth to Bottom of Discharge Zone (ft)	Gross Discharge Zone Thickness (ft)	Well Depth (ft)*
<b>DDW #1 (existing)</b>	6,785	3,444	3,634	190	3,794
<b>DDW #2 (existing)</b>	6,688	5,116	5,289	173	5,389
<b>DDW #3 (proposed)</b>	6,915	4,621	4,811	190	4,811

\*All depths referenced to below ground surface (not KB).

Injection wells **DDW #1** and **DDW #2** are existing Class V test wells that are being converted to Class I injection wells with this permit. **DDW #3** is a proposed Class I injection well. Perforations in the wells shall be restricted to the Flathead sandstone. Additional perforations may be installed in the proposed wells within the intervals given above. Perforations above or below the intervals identified in **Table 1** require the prior written approval from the Administrator.

The confining zone above the discharge zone consists of approximately 565 feet of Gros Ventre Shale at the project area. The confining zone below the discharge zone consists of Precambrian granite.

**B. Well Locations and Areas of Review**

The wells authorized by this permit are located as shown in **Table 2**.

**Table 2 (Well Locations)**

Well Name	Legal Description	Latitude	Longitude
<b>DDW #1</b>	SW¼, NE¼ Section 29; T33N; R89W	42.803736	-107.527221
<b>DDW #2</b>	NE¼, NW¼ Section 3; T32N; R90W	42.779299	-107.593266
<b>DDW #3</b>	SW¼, SW¼ Section 22; T33N; R89W	42.811089	-107.500253

The Area of Review (Chapter 13, Section 5(b)(iv)(E)) is described using the public lands survey system (PLSS) to the nearest sixteenth section in **Table 3** and relates to areas of review for aquifer exemptions identified in **Table 4**.

**Table 3 (Legal Descriptions of the Areas of Review)**

Well Name	Quarter-Quarters	Section	Township/Range
<b>DDW #1</b>	SW¼, NW¼	28	T33N; R89W
	NW¼, SW¼		
	NE¼	29	T33N; R89W

Well Name	Quarter-Quarters	Section	Township/Range
	E½ of the NW¼		
	SW¼, NW¼		
	NW¼, SW¼		
	E½ of the SW¼		
	SE¼		
DDW #2	E½ of the NE¼	3	T32N; R90W
	NW¼		
	S½ of the SW¼	35	T33N; R90W
	SW¼, SE¼		
DDW #3	SE¼, NE¼	21	T33N; R89W
	SE¼		
	S½ of the NW¼	22	T33N; R89W
	SW¼		
	W½ of the SE¼		
	NW¼, NE¼	27	T33N; R89W
	NW¼		
	E½ of the NE¼	28	T33N; R89W
NW¼, NE¼			

Results of the area of review calculations (Chapter 13, Section 5(b)(iv)) are shown in Table 4. The area of review method used for determining groundwater classification is based on the minimum radius of area of review. The area of review methods used for the purposes of determining wells penetrating the injection zone are the cone of influence for DDW #1 and DDW #3 and the minimum radius of area of review for DDW #2 (Chapter 13, Section 5(b)(iv)).

Table 4 (Area of Review)

Well Name	Radius of Volume of Emplaced Waste Cylinder (ft)	Radius of Cone of Influence (ft)	Minimum Radius of Area of Review (ft)
DDW #1	1,191	2,086	1,320*
DDW #2	1,098	79	1,320*
DDW #3	1,191	2,267	1,320*

There are no wells which penetrate the confining zone within each of the Areas of Review (1/4 mile). \*Indicates areas of review requested for USEPA aquifer exemption.

### C. Groundwater Classification

Groundwater within the Flathead Formation is classified as Class VI (Unusable/Unsuitable) in accordance with Water Quality Rules and Regulations (WQRR), Chapter 8. This classification was made for the following reason(s):

- Due to excessive concentration of total dissolved solids or specific constituents (WQRR Chapter 8, Section 4 (d)(ix)(A)). Note DDW #1 has total dissolved solids of 3,010 mg/L and DDW #2 has total dissolved solids of 3,220 mg/L. Likewise DDW #1 has benzene

concentrations of 0.0716 mg/L and **DDW #2** has benzene concentrations of 0.114 mg/L. The USEPA maximum contaminant level goal (MCLG) for benzene is 0.0 mg/L. The USEPA maximum contaminant level (MCL) for benzene in drinking water is 0.005 mg/L with potential health effects of anemia, decrease in blood platelets, and increased risk of cancer.

- The depth and location of these aquifers makes the use of this water economically and technologically impractical (WQRR Chapter 8, Section 4(d)(ix)(C)).

The Class VI designation extends 1,320 feet in all directions from injection well **DDW #1**, **DDW #2**, and **DDW #3**. All waste injected over the life of this permit (Radius of Volume of Emplaced Waste Cylinder) is calculated to remain within the radii identified in **Table 4**.

#### **D. Authorized Operations**

Well Design – Injection shall be conducted through tubing which has been secured by a packer set below the top of the confining zone and within five-hundred (500) feet of the top of the authorized discharge zone (**Table 1**) and within a zone of good quality cement bond (Chapter 13, Section 9(d)(xxv)). The tubing shall be isolated from the long string casing by an annulus filled with corrosion-inhibiting fluid.

Injection Rates - The wells are allowed the maximum instantaneous injection rate shown in **Table 5** provided that the surface injection pressure limitations are not exceeded.

Injection Pressure - The injection pressure in each injection well shall be limited to the fracture pressure of the receiver except as necessary during well stimulation approved by the Administrator (Chapter 13, Section 9 (d)(ii)). Temporary limits for the proposed wells are listed in **Table 5**. The temporary limit applies until recalculation of the parameters in **Table 5** occurs, following completion of a step-rate injection test. Exceeding the limiting surface injection pressure (LSIP) in **Table 5** or creating or propagating fractures within the receiver or confining zone once waste disposal has commenced are violations of this permit and shall be reported pursuant to Section K of this permit. A kill switch shall be installed on the injection tubing and set to preclude violations of LSIP limits.

For each proposed well, the permittee shall conduct a step-rate injection test within one (1) year of well completion to determine the actual fracture pressure of the receiver (Chapter 13, Section 9 (d)(ii)). For wells which have not been constructed within one (1) year of permit issuance, a step-rate injection test shall be required before waste injection is allowed. Such tests shall be conducted using both surface and down hole pressure gauges or transducers. The down hole device shall be placed within one-hundred (100) vertical feet of the packer. For a conclusive result, at least three (3) of the injection rate steps below the fracture threshold will be collinear. Upon completion of the test, the permittee shall recalculate the maximum surface injection pressure (MSIP) and LSIP.

If the recalculated LSIP is greater than the temporary LSIP in **Table 5**, the permittee must obtain the approval of the Administrator before operating the well at a pressure above the temporary LSIP. If the recalculated LSIP is less than the temporary LSIP in **Table 5**, the permittee must

cease injection and not restart discharge until the wellhead pressure can be maintained below the recalculated LSIP. The permittee may conduct additional step-rate injection tests at its discretion to refine estimates of MSIP as injection continues. Digital data, analyses, and interpretations for the tests shall be submitted to the Administrator within thirty (30) days or with the next quarterly report after the test is done, whichever is later.

Annulus Pressure – The annulus between the injection tubing and the long string casing shall be filled with a corrosion-inhibiting fluid and be monitored and maintained in a way that allows reliable leak detection. The annulus pressure shall be maintained within the limits set in **Table 5**. During periods of continuous injection, the annulus pressure should be reasonably constant but large variations in pressure are allowed during startup and shutdown. The permittee shall set alarms or use daily observations to detect increases or decreases in annulus pressure and shall immediately cease injection and shut the well in when an alarm is triggered; or the permittee shall install a kill switch to stop injection if casing, tubing, packer, or well head leak. Settings for low- and high-pressure alarms shall take into account annulus pressure changes due to variations in temperature of the injected and annulus fluid.

DRAFT

**Table 5 (Maximum Injection Rates, Annulus Pressures,  
and Maximum and Limiting Surface Injection Pressures (MSIP, LSIP))**

Parameter	DDW #1	DDW #2	DDW #3
Maximum Injection Rate (bbl/day)	5,142	5,142	5,142
Maximum Injection Rate (gpm)	150	150	150
Maximum Annulus Pressure (psig)	800	800	800
Minimum Annulus Pressure (psig)	200	200	200
Estimated Fracture Gradient, $F$ (psi/ft)	0.852	0.852	0.852
Fracture Pressure, $P_f = F \cdot D_p$	2,936	4,362	3,937
Depth to Top of Formation, $D_p$ (ft) (bgs)	3,446	5,120	4,621
Temperature at Mid-Point of Perforations ( $^{\circ}$ F)	98	121	114
Maximum Total Dissolved Solids of Injectate (mg/L)	24,000	24,000	24,000
Density of Injectate, $\rho_j$ (g/cm <sup>3</sup> )	1.0036	1.0036	1.0036
Injectate Fluid Gradient (psi/ft) $grad_j = \rho_j \cdot 12 \frac{in}{ft} \cdot 16.387 \frac{cm^3}{in^3} / 453.592 \frac{g}{lb}$	0.4357	0.4357	0.4357
Hydrostatic Pressure (psi) $P_h = D_p \cdot grad_j$	1,501	2,231	2,013
Tubing Length, $T_L$ (feet)	3,270	5,095	4,521
Tubing Inside Diameter, $d$ (inches)	2.441	2.441	2.441
Tubing Friction Loss Factor, $T$ (psi/1000 ft)	30	30	30
Average Injection rate, $q$ (gpm)	100	100	100
Pressure Loss due to Tubing Friction (psi/ft) $P_d = (4.52q^{1.85}) / (c^{1.85} d^{4.8655})$	0.02957	0.02957	0.02957
Total Pressure Loss from Tubing Friction (psi) $P_L = P_d \cdot T_L$	97	151	134
$MSIP = P_f - P_h + P_L$ (psig)	1,532	2,282	2,060
$LSIP = 0.9 \cdot MSIP$ (psig)	1,379*	2,054*	1,854

\*Applies for the first year after permit issuance or until a new LSIP has been approved after the step-rate injection test for **DDW #1** and **DDW #2**. If **DDW #3** is not drilled within one (1) year of permit issuance a step-rate injection test is required before waste injection. For this application  $c =$  Hazen-Williams design coefficient for steel piping of 145.

Permitted Wastes - Wastes to be injected include liquid waste generated by uranium mining using in-situ leaching at the Gas Hills ISR mine facilities, including operation bleed streams, yellowcake wash water, sand filter and ion exchange wash water, on-site laboratory waste water, reverse osmosis brine, groundwater restoration and groundwater sweep solutions, plant washdown water, wash waters used in cleaning or servicing the waste disposal system equipment, and storm water at the mine facilities. Permitted wastes also include fluids produced during the drilling, completion, testing, or stimulation of wells or test holes related to mining operations at the Gas Hills mine facilities; or during the workover or abandonment of any such well; and drilling equipment wash water.

North American Industry Classification System (NAICS) – 212291

The radionuclide-bearing waste produced at this facility by in-situ uranium mining has been defined by the Atomic Energy Act as Section 11e.(2) byproduct material and is regulated by the Nuclear Regulatory Commission (NRC) under Title 10 Code of Federal Regulations Part 40. It is not “solid waste” according to Title 40 Code of Federal Regulations Part 261.4(a)4 and is consequently not hazardous waste. Because Wyoming is a “non-agreement” state, the NRC retains jurisdiction over in-situ mining wastes and the permittee shall not use the injection wells for disposal of 11e.(2) byproduct material without the proper NRC license.

Waste disposal is prohibited until the requirements for financial assurance (Section P) have been met. The permittee shall obtain written authorization from the Administrator prior to waste disposal. Permission to discharge other non-hazardous waste may be authorized through a permit modification (Chapter 13, Section 8(d)(v)). Additional monitoring may be required for additional waste types.

The expected concentrations for selected chemical species in the waste are listed in **Table 6**.

**Table 6 (Water Quality of the Discharge)**

Constituents	Units	Maximum	Minimum
Sodium	mg/L	36,000	25
Calcium	mg/L	1,000	150
Potassium	mg/L	10,000	10
Magnesium	mg/L	100	50
Bicarbonate	mg/L	3,000	150
Sulfate	mg/L	20,000	1130
Chloride	mg/L	55,000	150
pH	s.u.	9.0	6.0
Total Dissolved Solids (TDS)	mg/L	24,000	5,000
Uranium	mg/L	4,000	50
<sup>226</sup> Radium	pCi/L	500	5

Permitted Corrosion Inhibitors, Anti-Scalants, and Biocides - Corrosion inhibitors, anti-scalants, and biocides may be used with the prior written approval of the Water Quality Division.

New Well Construction - The permittee shall obtain written acceptance of financial assurance from the Administrator prior to injection into any of the proposed wells.

Any well stimulation activities require prior approval by the Administrator.

Injection into a well may not begin until:

1. Well construction is complete (Chapter 13, Section 9(d)(xxix)); and
2. The permittee has submitted a well completion and testing report and the "Notification of Construction Completion of Injection Well" (available on the WQD - UIC Program website - <http://deq.state.wy.us/wqd/groundwater/uicprogram/index.asp>) for a newly constructed or modified well; and
3. The permittee has provided the Administrator with sufficient notice to allow for inspection of the well (Chapter 13, Section 9(d)(xxiv)); and
4. Mechanical integrity of the well has been proven or demonstrated to the satisfaction of the Administrator; and
5. The permittee has demonstrated financial assurance (Chapter 13, Section 17(a)); and
6. The permittee has received written approval from the Administrator to begin injection; and
7. As required by Chapter 26, Section 9, for existing well **DDW #1** the permittee must demonstrate cement bond integrity between the 7 inch production casing and the well borehole for the following intervals (as derived from the CBL conducted on August 6, 2010 and submitted with the application) 125 feet to 1,580 feet, 2,050 feet to 2,330 feet, 2,640 feet to 2,880 feet; and
8. As required by Chapter 26, Section 9, for existing well **DDW #2** the permittee must demonstrate cement bond integrity between the 7 inch production casing and the well borehole and the 10.75 inch surface casing and the well borehole by conducting another more comprehensive cement bond log from land surface to total depth as described below (the daily drilling report submitted with the application did not indicate cement returns to the surface for either the surface or production casing); and
9. Cement Bond logs (CBL) shall use pad type tools with acoustic directional transmitters and receivers that are sensitive to microannulus and can identify channels in the cement annulus (cement to pipe and cement to formation) that could result in poor hydraulic seal. CBL output tracks shall include as a minimum: gamma, amplitude, CBL waveform, and cement image. CBLs shall be conducted no sooner than seventy-two (72) hours from the last cement job to ensure adequate cement curing. Also, include a cement design on a well schematic showing depth of fill for lead and tail cement (with compressive strength curves) for all stages; and

10. A well workover report shall be developed and submitted each time a well is re-entered.

#### **E. Prohibitions**

**This permit does not allow for the injection of any hazardous waste** as defined in 40 Code of Federal Regulations (CFR) 261.3 or in Wyoming Solid Waste Management Rules and Regulations, Chapter 2. Injection of any substance defined as a hazardous waste, whether hazardous by listing or by characteristic is a violation of this permit.

No person shall conduct any authorized injection activity in a manner that results in a violation of any permit condition or representations made in the application (Chapter 13, Section 18(b)(i)).

No person shall conduct any authorized injection activity in a manner that results in a movement of fluids out of the receiver (Chapter 13, Section 18(b)(ii)).

No zone or interval other than the discharge zone shall be used as a receiver for the discharge (Chapter 13, Section 18(b)(ii)(A)).

No uncased hole may be used as a conduit for the discharge, excepting that portion of a hole in the discharge zone (Chapter 13, Section 18(b)(ii)(B)).

No annular space between the wall of the hole and the outer casing may be used as a conduit for discharge, excepting in that portion of a hole in the discharge zone (Chapter 13, Section 18(b)(ii)(C)). The annular space may receive fluids used in cementing casing during the cementing process.

No person shall construct, install, modify, or improve an authorized injection facility except in compliance with this permit (Chapter 13, Section 18(b)(iii)).

#### **F. Operation and Maintenance**

Each injection well shall be constructed, operated, and maintained to prevent movement of fluid from the well into any USDW (Chapter 13, Section 11(a)).

The permittee shall operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes mechanical integrity of the well, effective performance, adequate funding, operator staffing and training, and laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit (Chapter 13, Section 9 (d)(vi)).

The permittee is required to operate in accordance with statements, representations, and procedures presented in the complete permit application and supporting documents as accepted and approved by the Administrator. If such procedures conflict with those in this permit, the conditions in this permit shall take precedence (Chapter 13, Section 18(b)(i)).

Measuring and recording devices shall be tested and calibrated at a frequency sufficient to ensure accurate and precise measurements. A record of the date of the most recent calibration or maintenance shall be retained at the well site.

**G. Entry and Inspection**

The permittee shall allow the Administrator, or an authorized representative of the Administrator (upon presentation of credentials and during normal working hours) to enter the premises where a regulated facility is located, or where records are kept under the conditions of this permit; to inspect and photograph the discharge and related facilities and equipment; to review and copy reports and records required by this permit; to collect fluid samples for analysis; to measure and record pressures and water levels; to observe and record data from monitoring equipment; and to perform any other function authorized by law or regulation (Chapter 13, Section 9 (d)(xii)).

Inspectors shall not be required by the permittee to sign any waiver of liability.

**H. Environmental Monitoring Program for Groundwaters of the State**

The permittee shall furnish the Administrator any information necessary to establish a monitoring program if requested to do so (Chapter 13, Section 9 (d)(xiii)).

No groundwater monitoring program under this permit, other than that described in Section I, is required because of the reduction in risk of pollution due to the depth and confinement of the receiver (Chapter 13, Section 13(a)(ii)).

**I. Monitoring Requirements**

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall retain records of all monitoring information (Chapter 13, Section 9 (d)(xiv)) including all calibration and maintenance records and all original chart recordings for a period of three (3) years after closure of the facility (Chapter 13, Section 15 (g)), at which time the permittee shall notify the Administrator and either deliver the records to WQD or discard them as directed by the Administrator.
3. Records of monitoring information shall include:
  - a. The date, exact place, and time of sampling or measurements;
  - b. The name(s) of individual(s) who performed the sampling or measurements;
  - c. The types of sample containers used, methods of preservation, and holding times;
  - d. The date(s) analyses were performed;
  - e. The name(s) of individual(s) who performed the analyses;
  - f. The analytical techniques or methods used;

- g. The results and precision of such analyses.
4. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
  5. The Permittee shall retain all records concerning the nature and composition of injected fluids until five (5) years after completion of any specified plugging and abandonment procedures. The Administrator may require the owner/Permittee to deliver the records to the Administrator at the conclusion of the retention period.
  6. The Permittee shall report any noncompliance which may endanger health or the environment within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. The report should include:
    - a. Any monitoring or other information which indicates that any contaminant may cause an endangerment to a usable groundwater of the state;
    - b. Any noncompliance with a permit condition or malfunction of the discharge (injection) system which may cause fluid migration into or between usable ground waters of the state;
    - c. A written submission shall be provided within five (5) days of the time the Permittee becomes aware of the circumstances. This written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  7. The Permittee shall report all instances of noncompliance not reported otherwise, at the time monitoring reports are submitted.
  8. 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 thirty (30) days following each schedule date.
  9. If the permittee determines that the authorized discharge zones within members and/or formations identified in **Section A** of this permit are inadequate and additional discharge zones are required, a permit modification will be required. The permit modification request shall be supported by data approved by the Administrator.
  10. The Permittee shall notify the Department fifteen (15) days prior to spudding any injection well so that a joint field inspection may be coordinated between both parties during well construction.
  11. The Permittee shall notify the Department thirty (30) days prior to conducting the two-part mechanical integrity tests.

12. For each new well or newly perforated zone within an existing well, the permittee shall collect a baseline groundwater quality sample from each aquifer or formation within the new discharge zones (Chapter 13, Section 13(a)) and submit results for all the analytes and parameters in WDEQ-WQRR Chapter 8, Table I and for the entire suite of volatile/semi-volatile organic compounds listed in EPA Methods 8260 and 8270, or other method acceptable to the Administrator prior to waste injection. The methods and procedures for sample collection and analysis must be approved by the Water Quality Division prior to sampling.
13. For each new well the permittee shall collect at least two (2) measurements of hydraulic head (or fluid density and pressure) within each aquifer or formation within the new discharge zones.
14. For new well **DDW #3** the permittee shall collect at least two (2) measurements of hydraulic head (or fluid density and pressure) within the Madison Formation and the Gallatin Formation above the confining zone (Gros Ventre Shale).
15. The baseline temperature survey shall be logged from the base of the conductor casing to the total depth of the well prior to any injection or other tests.
16. The Permittee shall measure and record times and injection rates during step-rate and pressure fall-off tests as approved by the Department.
17. If the permittee determines that the authorized discharge zones within members and/or formations identified in Section A of this permit are inadequate (and additional discharge zones are requested) then a permit modification will be required. The permit modification request shall be supported by data approved by the Administrator.
18. The Permittee shall conduct a radioactive tracer, spinner, or other test to estimate the proportion of injected fluid accepted within each perforated interval in the Flathead sandstone.
19. A report describing the drilling, construction, cementing, and testing of the permitted well shall be submitted to the Administrator prior to authorization to inject. The mailing address is UIC Program Supervisor, DEQ – Water Quality Division, Herschler Building – 4W, 1220 W 25th St., Cheyenne, WY 82002
20. Operational Monitoring (Chapter 13, Section 13(b)(ii)):

Injection Pressure - The permittee shall monitor the injection pressure continuously and record the readings on a strip chart recorder, a circular chart recorder, or electronically (Chapter 13, Section 13(i)).

Injection Rate and Volume - The permittee shall monitor the injection rate continuously and record the rates and volumes on a strip chart recorder, circular chart recorder, or electronically (Chapter 13, Section 13(i)).

Annulus Pressure - The permittee shall continuously monitor the pressure of the casing - tubing annulus and record the pressures on a strip chart recorder, a circular chart recorder, or electronically (Chapter 13, Section 13(i)).

Discharge Zone Reservoir Pressure, Reservoir Boundaries or Anomalies, Permeability, and Skin Factor - The permittee shall shut-in each well covered by this permit annually for a period of time long enough to observe a valid pressure fall-off curve (Ch13, Sec13(e)). The minimum duration of injection and fall-off shall be longer than wellbore storage and skin effects and sufficient for persuasive analysis and accurate estimates of permeability. Tests shall be analyzed by the permittee using commonly accepted methods to obtain hydraulic conductivity or permeability, transmissivity, and skin factor and to identify reservoir boundaries (including flow in fractures) and other anomalies such as partial penetration or layering. The test method chosen should be justified by a review of relevant assumptions and actual well and aquifer conditions. Along with the analysis and interpretation, the permittee shall submit plots of injection rate, pressure, and the pressure derivative versus time on appropriate graphs. If the method used differs from previous methods used for the same well, the analyst should discuss the comparability of the results.

Digital data, results, analyses, and interpretations for the fall-off test shall be submitted to the Administrator at the address in paragraph 6 within one (1) month or with the next quarterly report after the test is done, whichever is later (Chapter 13, Section 15 (f)). These data shall include pressures starting with the introduction of the pressure-measuring device into the well (or for at least one (1) hour prior to test start for a permanently installed down hole device); and injection rates starting at least twice the fall-off period before the start of the fall-off test.

Cone of Influence - The results of each pressure fall-off test shall be used to update the cone of influence calculation for each discharge zone (Table 4). These annual updates shall account for historical injection and remaining project life. The permittee shall provide a map showing the updated Cone of influence and all wells which penetrate the confining zone within the old and new radii of influence.

If the updated cone of influence encompasses wells not previously identified as within the area of review, construction and plugging and abandonment records for those wells shall be submitted to the Administrator.

For each potentially endangering well which lies within the updated cone of influence, the permittee shall calculate the expected hydraulic head increase at the end of the permit life (10 years) due to all disposal wells close enough to significantly affect hydraulic head at the well location. For those wells in which  $[\rho_m \cdot H_m / \rho_i] \leq H_i$  (where  $H_m$  is the hydraulic head in a borehole filled with mud of known density, or with 9.0 pound/gallon mud if mud density is unknown,  $H_i$  is the final expected hydraulic head in the injection zone,  $\rho_m$  is the density of the mud, and  $\rho_i$  is the density of the fluid in the injection zone; i.e., "W/G  $\leq$  B", Chapter 13, Sec5(b)(iv)(A)), the permittee shall also calculate how long injection could continue at the permittee's proposed rate, or at the maximum monthly injection rate during the prior year, before  $[\rho_m \cdot H_m / \rho_i] = H_i$  at the well location. If any calculated time is less than one (1) year, the permittee shall cease injection,

reduce the injection rate(s) to new limits approved by the Administrator, or submit a corrective action plan to prevent movement of fluid into any USDW through a potentially endangering well. Upon approval by the Administrator, this plan shall be incorporated as a permit condition (Chapter 13, Section 5(b)(x)).

Cone of influence calculations and figures shall be submitted to the Administrator at the address in paragraph K.6 within thirty (30) days of the annual pressure fall-off test or with the next quarterly report after the test is done, whichever is later (Chapter 13, Section 15(f)).

Physical and Chemical Properties of the Injectate - The permittee shall monitor the quality of the injectate quarterly (Chapter 13, Section 15 (c)(v)), and when significant process changes occur, and when operating changes may significantly alter the waste stream (Chapter 13, Section 13(h)). The samples must be representative of the waste as it enters the disposal wells. If any group of wells receives waste from the same pipe exiting the uranium processing plant or waste collection area, a single sample may be collected for that group from that pipe rather than at individual well locations. **Table 7** lists the analytes and parameters to be analyzed quarterly. WQD may approve alternate methods to those in **Table 7** upon receipt of a written request describing the procedures, precision, and accuracy of the proposed method and a comparison of the proposed method with that in **Table 7**.

The first three (3) parameters in **Table 7** shall be measured at the sample site unless other methods are approved by the Administrator. Specific conductance shall be reported for the actual sample temperature and the equivalent value at a temperature of 25° C. The other analyses shall be performed by an EPA-certified laboratory.

**Table 7 (Analyte and Parameter List for Quarterly Analyses of Injectate)**

Sampling Schedule	Analyte or Parameter	EPA Analytical Method	CAS Number
Quarterly January 1 – March 31 April 1 – June 30 July 1 – Sept 30 October 1 – December 31	pH	SM4500-H <sup>+</sup> B	None
	Specific Conductance at 25°C	120.1 or SM2510 B	None
	Temperature	SM2550 B	None
	Specific Gravity	none listed	None
	Total Dissolved Solids	160.1 or SM2540 C	None
	Bicarbonate	SM2320 B	71-52-3
	Carbonate	SM2320 B	3812-32-6
	Chloride, Total	300.0 or 300.1	16887-00-6
	Sulfate, Total	300.0, 300.1, or 375.2	14808-79-8
	Hydrogen Sulfide	SM4500-S2-D, SM4500-S2-G	7783-06-4
	Arsenic, Total	206.5, 200.7, or 200.8	7440-38-2
	Selenium, Total	200.7 or 200.8	7782-49-2
	Vanadium, Total	200.7 or 200.8	7440-62-2
	Uranium, Total	908.1 or 200.8	7440-61-1
<sup>226</sup> Radium (picoCuries/liter)	903.1	7440-14-4	

Note: **Table 7** Methods preceded by "SM" are standard methods.

Limiting Concentrations of Injectate - Upper control limits for this permit are listed in **Table 8**. pH has both upper and lower control limits and concentrations must remain within the range indicated in **Table 8**. Exceedances of these values are a violation of this permit and require notification under Section K of this permit.

**Table 8 (Control Limits for Injected Waste)**

Analyte or Parameter	Lower and Upper Control Limits
pH	$2.0 \leq \text{pH} \leq 12.5$ s.u.

**J. Sampling and Test Procedures**

The following units are to be used where applicable: pounds (mass) per square inch for pressure with gauge or absolute pressure noted (psig or psia); standard oil field barrels (bbl, equivalent to 42 gallons) for fluid volume; standard oil field barrels per day (bbl/day) for fluid flow rates; milligrams per liter (mg/L) for analyte concentrations other than pH in standard logarithmic units (s.u.) or radium, radioactive strontium isotopes, and gross alpha particle radioactivity in picocuries per liter (pCi/L). The permittee may report equivalent quantities in other units in addition to those above.

Procedures and methods for sample collection and analyses shall be implemented by the permittee to ensure that the samples are representative of the ground water, water, or wastes being sampled (Chapter 13, Section 14(a)).

A trip blank of distilled water shall be collected for each quarterly sampling date and a duplicate sample shall be collected at least once per year. Blank and duplicate results and chain-of-custody forms shall be included in the quarterly reports.

Procedures for mechanical integrity tests are described in Section M.

Procedures for pressure fall-off tests are described under Operational Monitoring in Section I.

Procedures for step-rate injection tests are described under Injection Pressure in Section D.

**K. Records and Reports**

1. Record Retention - The permittee shall retain copies of all reports required by this permit, and records of all data used to complete the application for this permit until the permit expires. As described in Section I.2, monitoring records shall be retained for three (3) years after well closure (Chapter 13, Section 15(g)).
2. Electronic Data Deliverable (EDD) Reporting - The permittee shall use EDD reporting if required by the Administrator.
3. Compliance Schedule Reports - If a compliance schedule is required by the Administrator, reports of compliance or noncompliance with, or any progress reports on,

interim and final requirements contained in any such schedule shall be submitted no later than thirty (30) days following each schedule date (Chapter 13, Section 9 (d)(xx)).

4. Noncompliance Event Reports – See Section S.
5. Other Noncompliance Reports - The permittee shall report all instances of noncompliance not reported otherwise and submit the information listed for the written report in Section S with the next quarterly report (Chapter 13, Section 9 (d)(xxii)).
6. Quarterly Reports - Quarterly reports shall be submitted to the Administrator no later than thirty (30) days after the end of each calendar quarter ((Chapter 13, Section 15 (a) and 15(c)). The mailing address is: UIC Program Supervisor, DEQ – Water Quality Division, Herschler Building – 4W, 122 W. 25<sup>th</sup> St., Cheyenne, WY 82002. The quarterly results shall also be submitted online at <https://gem.wqd.apps.deq.wyoming.gov/Default.aspx>, within forty-five (45) days of the end of quarter. The written quarterly report for each well shall include the following information:
  - a. The minimum, volume-weighted average, and maximum instantaneous injection rates for each well for each month of the quarter. The page showing the maximum injection rates shall also show the maximum permitted injection rate for comparison.
  - b. The minimum, average, and maximum daily injection pressures for each well for each month of the quarter (Chapter 13, Section 15 (c)(i)). The table or graph showing the maximum injection pressures shall also show the maximum permitted injection pressure for comparison and the pressures at which any alarms or kill switches are activated.
  - c. The total injection volume in barrels for each well for each month of the quarter, the total for the quarter, and the total cumulative volume of waste injected to date (Chapter 13, Section 15 (c)(iv)).
  - d. The maximum and minimum annulus pressures for each month of the quarter. The table or graph showing the annulus pressures shall also show the pressures at which any alarms or kill switches are activated.
  - e. Any quarterly analytical results required by Section I of this permit (Chapter 13, Section 15 (c)(v)). Sample collection dates should allow ample time to receive analytical results prior to reporting deadlines.
  - f. Any permit exceedances within the quarter.
  - g. Any events that triggered alarms or shutdowns and the responses taken during the quarter shall be fully described (Chapter 13, Section 15 (c)(iii)).

- h. Any well tests conducted more than thirty (30) days before the end of the quarter (e.g. mechanical integrity, pressure fall-off, or step-rate injection) (Chapter 13, Section 15 (f)) and reports of well workovers (Chapter 13, Section (c)(vi)). See also K.8.
7. Annual Reports - Annual reports shall be submitted to the Administrator at the same address as the quarterly reports. They are due no later than thirty (30) days after the end of each calendar year (Chapter 13, Section 15 (c)). The annual report for each well shall include the following information in addition to that required for the quarterly report:
- a. A graphical representation of the injection pressures and volumes for the previous five (5) year's operation and a digital file (e.g. .csv, .txt, .xls, .xlsx) containing these data. The graph shall have calendar dates as the abscissa and pressure and volume as the ordinates.
  - b. Graphical representations of the quality of the injected waste over time and a digital file (e.g., .csv, .txt, .xls, .xlsx) containing these data. The graphs shall show the injectate quality for the previous five (5) year's operation and shall be prepared on scales appropriate to the variation observed.
8. Well Tests – Reports of well tests conducted less than thirty (30) days before the end of a calendar quarter shall be submitted within thirty (30) days of test completion (Chapter 13, Section 15 (f)). Otherwise, they shall be submitted with the next quarterly report (see paragraph K.6.h).
9. Reports for Aborted Operations - A comprehensive report for any aborted or curtailed operation, which results in the complete termination of discharge or associated activity, shall be submitted to the Administrator within thirty (30) days of termination in lieu of an annual report (Chapter 13, Section 15 (d)).
10. Reports of Plugging and Abandonment – A report of plugging and abandonment (Section N) shall be submitted within thirty (30) days after a well is plugged (Chapter 13, Section 9 (d)(xxvii)).
11. Well Completion Report – A report of well construction, completion, and testing and “Notification of Construction Completion of Injection Well” shall be submitted prior to injection into a new or modified well (see New Well Construction in Section D).
12. Step-rate Injection Test Report - A step-rate injection test is required within one (1) year of permit issuance (Chapter 13, Section 9(d)(ii)) or at the time of well completion and prior to waste injection.

#### **L. Permit Conditions**

This permit is issued for a period of ten (10) years (Chapter 13, Section 9 (a)). If the permittee wishes to continue injection after the expiration date of this permit, he should apply to the

Administrator at least four (4) months prior to the expiration date of this permit (Chapter 13, Section 9 (d)(iii)).

It shall not be a defense for the 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 the permit (Chapter 13, Section 9 (d)(iv)).

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 law or regulation.

The filing of a request by the permittee, or at the instigation of the Administrator, for permit modification, revocation, or termination, or the notification of planned changes or anticipated noncompliance shall not stay any condition of this permit (Chapter 13, Section 9(d)(ix)).

After notice and opportunity for a hearing, the Administrator may modify or revoke a permit, in whole or in part, during its term for cause. Causes include, but are not limited to, the following:

1. Noncompliance with terms or conditions of this permit (Chapter 13, Section 8(e)(i));
2. Failure in the application or during the issuance process to disclose fully all relevant facts, or misrepresenting any relevant facts at any time (Chapter 13, Section 8(e)(ii)); or
3. Failure of the casing, cement, or the confining layer; or
4. A determination that the activity endangers human health or the environment and can only be regulated to acceptable levels by a permit modification or termination (Chapter 13, Section 8(e)(iii)).

Permits will be automatically terminated after closure and release of financial responsibility by the Administrator (Chapter 13, Section 8(i)).

This permit will be reviewed by WQD at least once every five (5) years, and may be reviewed more frequently (Chapter 13, Section 9(b)). Permits that do not satisfy the review criteria are subject to modification, revocation and reissuance, or termination (Chapter 13, Section 9(c)).

The conditions in this permit supersede any application content (Chapter 13, Section 18(b)(i)).

#### **M. Mechanical Integrity**

Mechanical integrity shall be maintained continuously and tested at intervals of no longer than five (5) years. The test used to determine mechanical integrity shall be a two part test approved by the Administrator (Chapter 13, Section 9 (d)(vii)). The two parts shall be conducted no more than three (3) months apart unless prior approval is obtained from the Administrator.

Part I of the mechanical integrity test shall demonstrate the absence of leaks through the packer, tubing, and casing (Chapter 13, Section 9(d)(vii)(A)). Prior to operational injection and at least

once every five (5) years the casing-tubing annulus of each well shall be tested at a pressure equal to the maximum permitted surface injection pressure (of each well) or 1,000 psig, whichever is greater. A pressure change of less than 10% over a thirty (30) minute test period shall be considered successful.

Part II of the mechanical integrity test shall demonstrate the absence of fluid movement behind the casing (Chapter 13, Section 9 (d)(vii)(B)) above the top perforation. Prior to the commencement of waste injection and at intervals of no longer than five (5) years thereafter, and more frequently if required by the Administrator, each well shall be logged using a radioactive tracer survey (or oxygen activation log) and a temperature survey. The static temperature log shall start more than two (2) hours and preferably more than twenty-four (24) hours for an active well, after injection has ceased. The results and their interpretation shall be submitted to the Administrator along with the next quarterly report.

Other types of pressure tests may be substituted for Part I of the mechanical integrity test if they satisfy Chapter 13, Section 9(d)(vii) and are first approved by the Administrator.

Other types of logs may be substituted for Part II of the mechanical integrity test if they satisfy Chapter 13, Section 9 (d)(vii) and are first approved by the Administrator.

WQD shall be notified a minimum of thirty (30) days prior to a mechanical integrity test.

Data, results, analyses, and interpretations for the tests shall be submitted to the Administrator at the address in paragraph K.6 within thirty (30) days or with the next quarterly report after the test is done, whichever is later (Chapter 13, Section 13(f)).

In the case of a failed mechanical integrity test in a well that has begun waste disposal, the well shall be immediately shut-in (Chapter 13, Section 9 (d) (viii)). The Administrator shall be notified by telephone at (307) 777-7781 within twenty-four (24) hours of the test and a written report shall be submitted within seven (7) days. Injection shall not resume until the well has been repaired, a complete mechanical integrity test has been passed, and written permission to resume operation has been obtained from the Administrator.

**Injection into any zone not within the discharge zones identified in Table 1 is a violation of this permit.** The operator shall immediately cease injection and prepare and submit to the Administrator an estimate of the volume and quality of all wastewaters that were injected outside of the discharge zone. In the case where any aquifer meeting the standards for Class I through IV(A) under WQRR, Chapter 8, has been contaminated due to out of zone injection, the operator shall prepare and implement a plan to recover these solutions. Injection shall not resume until the well has been repaired, a complete mechanical integrity test has been passed, and written permission to resume operation has been obtained from the Administrator.

#### **N. Plugging and Abandonment**

Any well under this permit shall be plugged and abandoned within six (6) months after:

- Permit expiration (unless application for a new permit has been made and has not been denied by the Administrator) or termination;
- Final cessation of injection activities; or
- The permittee has removed equipment required for the proper operation and monitoring of the well (except for temporary removal during well maintenance).

The permittee shall notify the Administrator of plans to convert or abandon a well at least ninety (90) days prior to the start of any conversion or abandonment activity (Chapter 13, Section 9 (d) (xxvi)). The permittee shall follow the plugging and abandonment procedure described in the original application or subsequently prescribed by the Administrator. The procedure shall include well plugging, abandonment, surface reclamation and seeding of the well site, closure of related surge ponds, and removal or purging and plugging of any underground piping. Well plugging shall meet the requirements of Wyoming Water Quality Rules and Regulations Chapter 26, Section 6 for sealing the well annulus and of Chapter 26, Section 9 for sealing within casing. In no case shall the procedure be less stringent than that required by USEPA for Class I non-hazardous waste disposal wells at the time of abandonment (Title 40 CFR Part 146.10).

Within thirty (30) days after plugging and abandonment of any wells covered by this permit, the permittee shall submit a plugging and abandonment report, detailing the compliance with the plugging and abandonment procedures outlined in the original permit application, and describing any deviation from the original plan (Chapter 13, Section 9 (d)(xxvii)).

**O. Duties of the Permittee**

Duty to Comply - The permittee shall comply with all conditions of this permit (Chapter 13, Section 9(d)(i)), all rules and regulations of the Department of Environmental Quality, and all applicable state and federal laws. Nothing in this permit relieves the permittee of any duties under applicable regulations.

Duty to Mitigate - The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit (Chapter 13, Section 9(d)(v)).

Duty to Give Notice of Changes - The permittee shall give advance notice to the Administrator as soon as possible of any planned physical alteration or additions, other than authorized operation and maintenance, to the permitted facility and receive authorization prior to implementing the proposed alteration or addition (Chapter 13, Section 9(d)(xvi)).

Duty to Warn of Noncompliance - The permittee shall give advance notice to the Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements (Chapter 13, Section 9(d)(xvii)).

Duty to Provide Information for Permit Modification - The permittee shall furnish the Administrator 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. (Chapter 13, Section 9(d)(xi)).

Duty to Provide Records - The permittee shall furnish the Administrator, upon request, copies of records required to be kept by this permit (Chapter 13, Section 9(d)(xi)).

Duty to Amend Permit - Any modification that will result in a violation of any permit condition shall be reported to the Administrator through the submission of a new or amended permit application and shall not be implemented until a new or modified permit has been issued (Chapter 13, Section 9 (d)(xvii)).

Duty to Correct - The permittee shall report all instances where it becomes aware that it failed to submit any relevant facts in the permit application, or where it submitted incorrect information in a permit application or in any report to the Administrator, and shall promptly submit such facts or information (Chapter 13, Section 9(d)(xxiii)).

Duty to Monitor - Monitoring results shall be obtained and reported at the intervals specified elsewhere in this permit (Chapter 13, Section 9(d)(xix)).

Duty to Test - Test results shall be obtained and reported at the intervals specified elsewhere in this permit.

Duty to Provide Current Contact Information - The permittee shall report any changes to physical or mailing address, phone, or email and any changes of the personnel responsible for complying with this permit to WQD within one (1) month of the change.

**P. Financial Responsibility**

The permittee is required to maintain financial assurance in a form approved by the Administrator to close, plug and abandon the injection well operation, and reclaim the surface facilities in a manner prescribed by the Administrator (Chapter 13, Section 17(a)).

The obligation to maintain financial assurance survives the termination of the permit or the cessation of injection (Chapter 13, Section 17(c)).

If the institution issuing the financial instrument files for bankruptcy or loses its authority to issue financial instruments, the permittee shall notify the Administrator within two (2) weeks and obtain other financial assurance within two (2) months. If the permittee is named as debtor in any voluntary or involuntary bankruptcy proceeding, it must notify the Administrator within two (2) weeks.

The financial assurance instrument for reclamation and restoration of the Gas Hills mine facilities shall include for plugging and abandonment (upon completion of each well but prior to the start of injection) as a minimum: **DDW #1: \$53,500, DDW #2 \$62,100, DDW #3 \$62,700.** The financial assurance for these injection wells shall be covered in the Land Quality Division financial assurance document. The permittee may alternatively submit a separate financial assurance instrument only for the proposed wells to be constructed to the Administrator for approval. In that case, injection shall not proceed prior to written acceptance by the Administrator. This financial instrument shall be maintained as long as any of the wells are covered under this permit.

The financial assurance amount shall be updated each calendar year on the anniversary date of the annual report that is submitted in accordance with Land Quality Division rules and regulations. Annual financial responsibility document updates shall be submitted to the Administrator no later than February 14<sup>th</sup> of each year.

**Q. Special Permit Conditions**

In addition to the conditions required of all permits, the Administrator may establish specific conditions so as to prevent the migration of fluids into USDWs (Chapter 13, Section 9(e)).

**R. Signatories Requirement**

All reports filed in conjunction with this permit shall contain the following certification (Chapter 13, Section 9(d)(xv)):

"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." (Chapter 13, Section 5(c)(xv)).

All reports required by this permit and other requested information shall be signed by a responsible officer as described in WQRR Chapter 13, Section 5(b)(xiv);

or

By a duly authorized representative. A person is a duly authorized representative only if:

1. The authorization is made in writing by one of the prescribed principals;
2. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
3. The written authorization is submitted to the Administrator.

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Administrator prior to, or together with, any reports or information to be signed by the new authorized representative.

**S. Noncompliance**

Any permit noncompliance constitutes a violation of WQRR Chapter 13 and is grounds for enforcement action, permit termination, revocation, or modification (Chapter 13, Section 9 (d)(i)). Confirmed noncompliance resulting in a migration of injected fluid outside the discharge zone shall be reported to the Administrator at (307) 777-7781 within twenty-four (24) hours from the time the permittee becomes aware of the circumstances and a written report shall be provided within five (5) days (Chapter 13, Section 9 (d)(xxi)).

The oral report shall include:

- a. Any monitoring or other information which indicates that any contaminant may cause an endangerment to a useable groundwater of the State.
- b. Any noncompliance with a permit condition or malfunction of the discharge (injection) system which may cause fluid migration into or between useable groundwaters of the State.

The written report shall include:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. If the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance (Chapter 13, Section 9(d)(xxi)).

**T. Permit Transfer**

Any transfer of this permit shall be accomplished by the submission of the proper forms for permit transfer to the Administrator. Transfer of this permit must first be approved by the Administrator and no transfer shall be approved unless the proposed permittee agrees to correct any and all noncompliance issues (Chapter 13, Section 9 (d)(xvii) and Chapter 13, Section 8(k)).

The permittee is alone responsible for the operation of the facility covered by this permit. Operation of this facility by another entity is a violation of this permit unless a transfer of this permit has first been accomplished.

**U. Property Rights**

This permit does not convey any property rights or any exclusive privileges. This permit does not authorize any injury to private property or any invasion of personal rights, or any infringement of federal, state, or local laws or regulations (Chapter 13, Section 9(d)(x)).

The State of Wyoming recently passed Wyoming statute §34-1-152 and amended Wyoming statute §34-1-202, regarding the ownership of pore space within the subsurface. The Permittee shall consider how these laws may apply to their injection of material into the subsurface.

**V. Severability**

The provisions of this permit are severable, and if any provision of the 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.

**Abbreviations:**

- USEPA – United States Environmental Protection Agency (EPA)
- USDW – underground source of drinking water (Classes I, II, III, IV(A), Special(A))
- WDEQ – Wyoming Department of Environmental Quality
- WQD – Water Quality Division of WDEQ

**END OF PERMIT**

**DRAFT**

STATEMENT OF BASIS FOR A UIC PERMIT

I. General information.

- A. UIC Permit Number: **13-262**
- B. Facilities Covered: Cameco Resources – Gas Hills injection wells DDW #1, DDW #2, and DDW #3.
- C. Class of Facility: Class I Non-Hazardous (Wyoming Water Quality Rules and Regulations, Chapter 13)

II. Application reviewed for compliance with the following regulations. (*Indicate yes or no for each section*).

- |               |     |               |     |
|---------------|-----|---------------|-----|
| A. Chapter 8  | Yes | D. Chapter 12 | No  |
| B. Chapter 9  | No  | E. Chapter 13 | Yes |
| C. Chapter 11 | Yes | F. Chapter 16 | No  |

III. Basis for issuing a permit (Indicate yes or no for each section).

- A. Review of application package indicates proposed facility will be in compliance with applicable regulations identified in Section II.

Yes

- B. Permit based on deviation from applicable regulations in accordance with approved policy statement. .

No

IV. Facilities not specifically covered by regulations. (Indicate the section number of the regulations and briefly summarize the regulation).

Not Applicable

V. Application requires review to determine groundwater impacts in accordance with Wyoming Water Quality Rules and Regulations, Chapter 3, Section 17. Note that sediment ponds, public water supplies, sewerage systems, and small wastewater systems are exempt from the requirements of Section 17. (Indicate either applicable or not applicable. If not applicable delete all of section VI from the Statement of Basis).

Applicable. A groundwater review has been conducted to insure that no groundwater will be impacted by this system.

VI. Documentation of Statement of Basis.

- A. The archive file for this permit will include adequate documentation of all sections of this Statement of Basis.

VII. Applicant and Public Participation.

- A. The applicant has been provided with a draft permit prior to the permit being issued.
- B. A Public Notice has been issued with a public notice period starting December 12, 2013 and ending on January 10<sup>th</sup>, 2014 (30 day notice as required by Wyoming Water Quality Rules and Regulations, Chapter 13). This notice was published in the Gillette News Register on or before the start of the public comment period.

Certification.

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Wyoming Water Quality Rules and Regulations, Chapter 13, Section 5. This review was performed by John Passehl, Geology Supervisor and completed on August 26, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis".

## STATE OF WYOMING PUBLIC NOTICE

THE PURPOSE OF THIS NOTICE IS TO INDICATE THE STATE OF WYOMING'S INTENTION TO ISSUE AN UNDERGROUND INJECTION CONTROL PERMIT AND TO CLASSIFY THE RECEIVING GROUNDWATER OF THE STATE IN THE VICINITY OF THE PERMITTED INJECTION UNDER THE WYOMING ENVIRONMENTAL QUALITY ACT (35-11-101 ET. SEQ. WYOMING STATUTES 1957, CUMULATIVE SUPPLEMENT 1973), AND DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER QUALITY RULES AND REGULATIONS CHAPTERS 8, 11 AND 13. THIS PERMIT WILL ALLOW THE DISPOSAL OF A MAXIMUM OF 2,400 BARRELS PER DAY OF INDUSTRIAL WASTEWATER INTO EACH OF THREE (3) INJECTION WELLS.

PERMIT NUMBER: **13-262**; PERMITTEE NAME: Cameco Resources, 2020 Carey Avenue, Suite 600, Cheyenne, WY 82001; PHONE: (307) 316-7600; FACILITY NAME AND LOCATION: Gas Hills injection facility is located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties, Wyoming.

The State of Wyoming intends to issue a permit for this facility.

Injection wells **DDW #1** and **DDW #2** are existing Class V test wells that are being converted to Class I injection wells with this permit. **DDW #3** is a proposed Class I injection well. All three (3) wells will inject industrial wastes associated with uranium mining activities into the Flathead Formation. The three (3) wells covered by this permit will inject at depths between 3,444 and 5,289 feet below ground surface. The waste will contain significant amounts of total dissolved solids and other non-hazardous contaminants.

The proposed permit requires that the permittee monitor the injection continuously and submit periodic reports. Underground Injection Control regulations require that each permitted injection well be reviewed at least every five (5) years in addition to the normal review done quarterly. The proposed permit also requires annual pressure falloff tests required to be done on all wells as required by federal and state rules.

The groundwater within the injection zone of the Flathead formation (within a 1,320 foot radius of each of the three (3) wells) is Class VI (unusable or unsuitable for use) because the groundwater in the formation has excessive concentrations of total dissolved solids or specific constituents and the depth and location of these aquifers makes the use of this water economically and technologically impractical.

Other determinations have been made by the State of Wyoming relative to conditions to be imposed on the permit. These conditions will assure that useable water of the State will be protected and applicable provisions of State statutes and regulations will be followed.

Financial assurance is required for this facility, and it will be posted prior to injection into any of the three (3) proposed wells.

PUBLIC COMMENTS on the proposed operation, the proposed groundwater classification, and the State's intent should be submitted in writing and addressed to: John Passehl, P.G., Wyoming Department of Environmental Quality, Water Quality Division, Herschler Building 4W, 122 West 25<sup>th</sup> Street, Cheyenne, WY 82002 or by FAX to (307) 777-5973. Comments submitted by email will not be considered. All written comments received prior to 5:00 P.M, January 10<sup>th</sup>, 2014, in the Cheyenne office will be considered.

Any person may request in writing (prior to the end of the public comment period) that a public hearing be held. Requests should indicate the name and full mailing address of the individual requesting a hearing, the interest that individual has in the project, and the grounds for holding a public hearing.

If a hearing is not warranted, the final permit will be issued at the end of the public comment period.

**Public Notice 13-262**

Publish on or before December 12<sup>th</sup>, 2013, in the Gillette News Record



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Christian J. Vanderhoef, P.E.  
Gene R. George & Associates, Inc.  
111 West Second, Street, Suite #400  
P.O. Box 2775  
Casper, WY 82602

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Mr. Vanderhoef:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1**, **DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Mr. Larry Claypool  
BLM – WY State Office  
5353 Yellowstone Road  
Cheyenne, Wyoming 82009

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Mr. Claypool:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1, DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Mr. David Chase  
BLM – WY State Office  
2987 Prospector Drive  
Casper, Wyoming 82604

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Mr. Chase:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1, DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Groundwaters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify groundwaters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

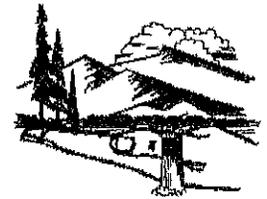
John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality



*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*

Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Ms Jeanie Wolford  
Cameco Resources  
550 North Poplar Street, Suite 100  
Casper, WY 82601

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Ms. Wolford:

You have submitted an application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1**, **DDW #2**, and drill, complete, and operate proposed well **DDW #3**. These wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review the draft permit to ensure it meets your needs. Any significant changes that you may propose may require modification to the draft permit and a new public notice period.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167

Attachments: Draft Permit 13-262





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Mr. Douglas Minter  
USEPA, Region VIII  
1595 Wynkoop Street  
Denver, Colorado 80202-1129

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Mr. Minter:

In accordance with the Memorandum of Agreement between the Wyoming Department of Environmental Quality (WDEQ) and the United States Environmental Protection Agency (USEPA), the purpose of this letter is to inform USEPA that WDEQ has determined that application 13-262 from Cameco Resources for a Class I area permit is complete and technically adequate. Draft permit 13-262 is to complete, and operate existing wells **DDW #1**, **DDW #2**, and drill, complete, and operate proposed well **DDW #3** at the Gas Hills facility. A location map for the project area (**Figure 1**) illustrating the Gas Hills facility is contained within the **Supplemental Information (SI) sheet** attached to this letter, as is a location map for the Class I injection wells (**Figure 2**).

The discharge zone for the Class I disposal wells is comprised of the Flathead formation. Perforations for the proposed wells will be from approximately 3,444 to 5,289 feet below ground surface (bgs).

Groundwater within the receiving formations underlying the Gas Hills Project area is classified as Class VI (Unusable/Unsuitable) in accordance with Water Quality Rules and Regulations (WQRR), Chapter 8. There are no potential Underground Sources of Drinking Water (USDWs) beneath the discharge zone.

The Area of Review (AOR) for each well is based on the minimum radius which is the largest of the three potential AOR methods: minimum radius of ¼ mile; radius of emplaced waste, or; radius of influence as provided for in Water Quality Rules and Regulations, Chapter 13, Section 5(b)(iv)(C). The AORs for each disposal well are contained within **Table 1** of the SI sheet.

Water quality within the receiving formation has tested greater than 3,000 mg/L total dissolved solids (TDS). The permit will require water quality testing of the Flathead formation for proposed well DDW #3 to confirm the TDS concentration. Aquifer exemptions are proposed in case sample results indicate TDS between 3,000 mg/L and 10,000 mg/L. The basis to support the proposed aquifer exemptions is described further in the SI sheet.

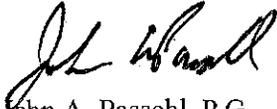
The public comment period is thirty (30) days and comments will be forwarded to USEPA as they become available. Please review the draft permit and the basis for the groundwater classification contained in this letter and send your interim response within forty-five (45) days to John Passehl at the return address above.



The application material and draft permit are available for USEPA review on the GEM web site (<https://gem.wqd.apps.deq.wyoming.gov>).

Thank you.

Sincerely,



John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13/1167

Attachment: Supplemental Information Sheet for Cameco Resources Gas Hills Project

cc: Ms. Jeanie Wolford, Cameco Resources, 550 North Poplar Street, Suite 100, Casper, WY 82601

Mr. Christian J. Vanderhoef, P.E., Gene R. George & Associates, Inc., 111 West Second, Street, Suite #400, P.O. Box 2775, Casper, WY 82602

Nancy Nuttbrock, Administrator, Land Quality Division, Cheyenne  
Kevin Frederick, P.G., Groundwater Section Manager, Cheyenne



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Mr. Rick Huber  
Wyoming Game and Fish Department  
5400 Bishop Blvd.  
Cheyenne, WY 82002

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Mr. Huber:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1**, **DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Mr. Tom Kropatsch  
Wyoming Oil and Gas Conservation Commission  
P.O. Box 2640  
Casper, Wyoming 82602

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Mr. Kropatsch:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1**, **DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Shannon Anderson  
Powder River Basin Resource Council  
934 N. Main Street  
Sheridan, WY 82801

RE: Cameco Resources, Gas Hills Facility  
Draft Permit 13-262, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Ms. Anderson:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1, DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Lisa Lindemann  
Wyoming State Engineer's Office  
122 West 25th Street  
Cheyenne, Wyoming 82002

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Ms. Lindemann:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1, DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

December 9, 2013

Ms. Sara Needles  
State Historic Preservation Office  
2301 Central Avenue  
Barrett Building, 3<sup>rd</sup> Floor  
Cheyenne, WY 82002

RE: Cameco Resources, Gas Hills Facility  
Draft Permit **13-262**, Class I Injection Wells DDW #1, DDW #2, DDW #3  
Facility Number WYS-013-00116 Fremont and Natrona Counties, Wyoming

Dear Ms. Needles:

The above referenced company has submitted a permit application for a Class I underground injection control permit to complete, and operate existing wells **DDW #1**, **DDW #2**, and drill, complete, and operate proposed well **DDW #3**. The wells are located in Sections 22 and 29 of Township 33 North, Range 89 West, and in Section 3 of Township 32 North, Range 90 West all of the 6<sup>th</sup> Principal Meridian, in Fremont and Natrona Counties.

This application is for disposal into the Flathead Formation which is underlain by Precambrian granite. Ground waters in the receiving aquifer have excessive concentrations of total dissolved solids or specific constituents and occur at depths and in locations that make use of the water economically and technologically impractical. The Department proposes to classify ground waters in the discharge zone in the vicinity of each well as Class VI (unsuitable for use).

The permit application, draft permit, and public notices are available for review on the GEM website <https://gem.wqd.apps.deq.wyoming.gov/default.aspx>

Please review this application and submit any comments within the next thirty (30) days.

Thank you for your cooperation.

Sincerely,

John A. Passehl, P.G.  
UIC Geology Supervisor  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-5623  
[john.passehl@wyo.gov](mailto:john.passehl@wyo.gov)

JP/rm/13-1167



## SUPPLEMENTAL INFORMATION

### Gas Hills ISR Project Fremont and Natrona Counties, Wyoming UIC Permit No. 13-262 December 2013

#### General Information

History: Cameco Resources requests authorization to complete, operate, and convert two (2) existing Class V test wells (**DDW #1, DDW #2**) into Class I injection wells, and requests authorization to drill, complete, and operate proposed Class I injection well **DDW #3**. These three (3) injection wells would service the In-situ Recovery (ISR) project at the Gas Hills facility located in Fremont and Natrona Counties for disposal of wastes associated with uranium mining activities. The Gas Hills ISR project is currently in the process of obtaining a permit to mine from the WDEQ Land Quality Division. No injection activities will be approved until the project has an approved permit to mine.

Location: A location map for the project area illustrating the Gas Hills mining area and a location map for the existing and proposed Class I injection wells is attached (**Figure 1**).

Proposed Action: The applicant is requesting to permit this facility for disposal of non-hazardous wastes. Wastes to be injected include liquid waste generated by in-situ leaching of uranium, and from groundwater restoration within mined units.

Description of the Discharge Zone: The discharge zone comprises the Flathead sandstones. Perforations will range from 3,444 - 5,289 feet below ground surface.

Confining Zone: The discharge zone is confined above by the Gros Ventre Shale which is approximately 600 feet thick in the vicinity of the Gas Hills Project. The discharge zone is confined below by the Precambrian Granite. A map showing the thickness of the upper confining unit is attached (**Figure 2**).

Life of Permit: 10 Years. (New Permit)

Area of Review (AoR): The areas of review method used for the purposes of ground water classification and aquifer exemption is based on the minimum radius of area of review. The area of review methods used for the purposes of determining wells penetrating the injection zone are the cone of influence for **DDW #1** and **DDW #3** and the minimum radius of area of review for **DDW #2** (see **Table 1**). A map showing the extent of the wells AoR's with relation to the aquifer exemption request is attached (**Figure 3**). The basis for determining the AORs are found in Wyoming Water Quality Rules and Regulations, Chapter 13, Section 5(b)(iv)(C)).

**Table 1: Areas of Review for the Disposal Wells**

Well Name	Radius of Emplaced Waste Cylinder (ft)	Radius of Cone of Influence (ft)	Minimum Radius of Area of Review (ft)
<b>DDW #1</b>	1,191	2,086	1,320

<b>DDW #2</b>	1,098	79	1,320
<b>DDW #3</b>	1,191	2,267	1,320

There are no wells penetrating the receiving zones within the AOR for any of the three (3) injection wells.

Evaluation of Water Quality within the Discharge Zone: Water quality samples were obtained for the discharge zones (Flathead formation) from test wells **DDW #1** and **DDW #2**. The data are presented in **Exhibit 9** and **Exhibit 10** of the permittee's June 17, 2013 Class I injection well application (13-262). The WDEQ believes that the Flathead formation qualifies for a USEPA Region 8 aquifer exemption based upon the criteria identified below.

**Flathead Ss:** Formation water samples obtained from **DDW #1** and **DDW #2** have total dissolved solids concentrations from 3,010 mg/L and 3,220 mg/L, and benzene concentrations of 0.0716 mg/L and 0.114 mg/L respectively.

Current or potential mineral, hydrocarbon or geothermal producing on a commercial scale: The Flathead sandstone does not contain hydrocarbons within the immediate area of this facility.

WDEQ Groundwater Classification: Groundwater within the Flathead Formation is classified as Class VI (Unusable/Unsuitable) in accordance with Water Quality Rules and Regulations (WQRR), Chapter 8. This classification was made for the following reason(s):

- Due to excessive concentration of total dissolved solids or specific constituents (WQRR Chapter 8, Section 4 (d)(ix)(A)). Note **DDW #1** has total dissolved solids of 3,010 mg/L and **DDW #2** has total dissolved solids of 3,220 mg/L. Likewise **DDW #1** has benzene concentrations of 0.0716 mg/L and **DDW #2** has benzene concentrations of 0.114 mg/L. The USEPA maximum contaminant level goal (MCLG) for benzene is 0.0 mg/L. The USEPA maximum contaminant level (MCL) for benzene in drinking water is 0.005 mg/L with potential health effects of anemia, decrease in blood platelets, and increased risk of cancer.
- The depth and location of these aquifers makes the use of this water economically and technologically impractical (WQRR Chapter 8, Section 4(d)(ix)(C));

The Class VI designation extends 1,320 feet in all directions from injection well **DDW #1**, **DDW #2**, and **DDW #3**. All waste injected over the life of this permit (Radius of Emplaced Waste Cylinder) is calculated to remain within these radii as indicated in **Table 4** of the permit.

Evaluation of Water Quality below the Discharge Zone: Water bearing units beneath the Flathead formation are non-existent (i.e. Precambrian granite).

**Proposed Aquifer Exemption for the Flathead aquifer:**

Pursuant to 40 CFR §146.4 criteria for exempted aquifers:

The Flathead aquifer underlying the facility may be determined to be an "exempted aquifer" if it meets the following criteria:

- (a) It does not currently serve as a source of drinking water; and
- (b) It cannot now and will not in the future serve as a source of drinking water because:
  - (2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;
  - (3) It is so contaminated that it would be economically or technologically impractical to render the water fit for human consumption;
- (c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/L and it is not reasonably expected to supply a public water system.

WDEQ proposes that the Flathead aquifer underlying the facility meets the criteria for an aquifer exemption in 40 CFR §146.4 and be determined to be an exempted aquifer. The basis for aquifer exemption is described in more detail below.

**The Flathead aquifer does not currently serve as a source of drinking water:** The SEO database was searched for Townships 32 through 33 North and Ranges 89 through 91 West, an area extending approximately 2.5 miles from any of the proposed wells. No permitted wells listed as domestic use were found to be completed into the Flathead formation.

**The Flathead aquifer cannot and will not in the future serve as a source of drinking water because they are situated at a depth and location which makes recovery of water for drinking water purposes economically or technologically impractical**

Water Supply Potential: Based on recharge/sustainability, water quality, and yield, the Flathead sandstone has questionable water supply potential.

Distance from Population Centers: The Gas Hills ISR project is located in a sparsely populated, rural part of the Wind River Basin where the major land use activities are ranching, petroleum production, and uranium mining. The nearest population centers are listed in **Table 2**. Because of the distances in **Table 2** it would be uneconomical to develop water supplies in the Gas Hills area for off-site communities unless the water supply potential was outstanding. In addition, there doesn't seem to be any need for additional water supplies for the communities listed.

**Table 2: Distance from Population Centers**

<b>Community</b>	<b>2010 Population*</b>	<b>Distance from Gas Hills Creek Project</b>	<b>Direction from Gas Hills Project</b>
Jeffrey City	not in census	24 miles	Southwest
Riverton	10,615	44 miles	Northwest
Shoshoni	not in census	40 miles	Northwest
Casper	55,316	64 miles	East

\*2010 population is based on 2010 census figures.

Remoteness:

Access to the Gas Hills ISR project area is adequate. State Highway 136 (Gas Hills Road) passes within about 2.5 miles of the project area and is accessible to the northwest via Dry Creek Road. The distances indicated in **Table 2** above would discourage future suburban development in the

Gas Hills area as there are abundant opportunities for development closer to Riverton or Casper. Without a major increase in water demand, water wells to deep aquifers at Gas Hills will remain uneconomical.

Alternate Sources of Water Supply:

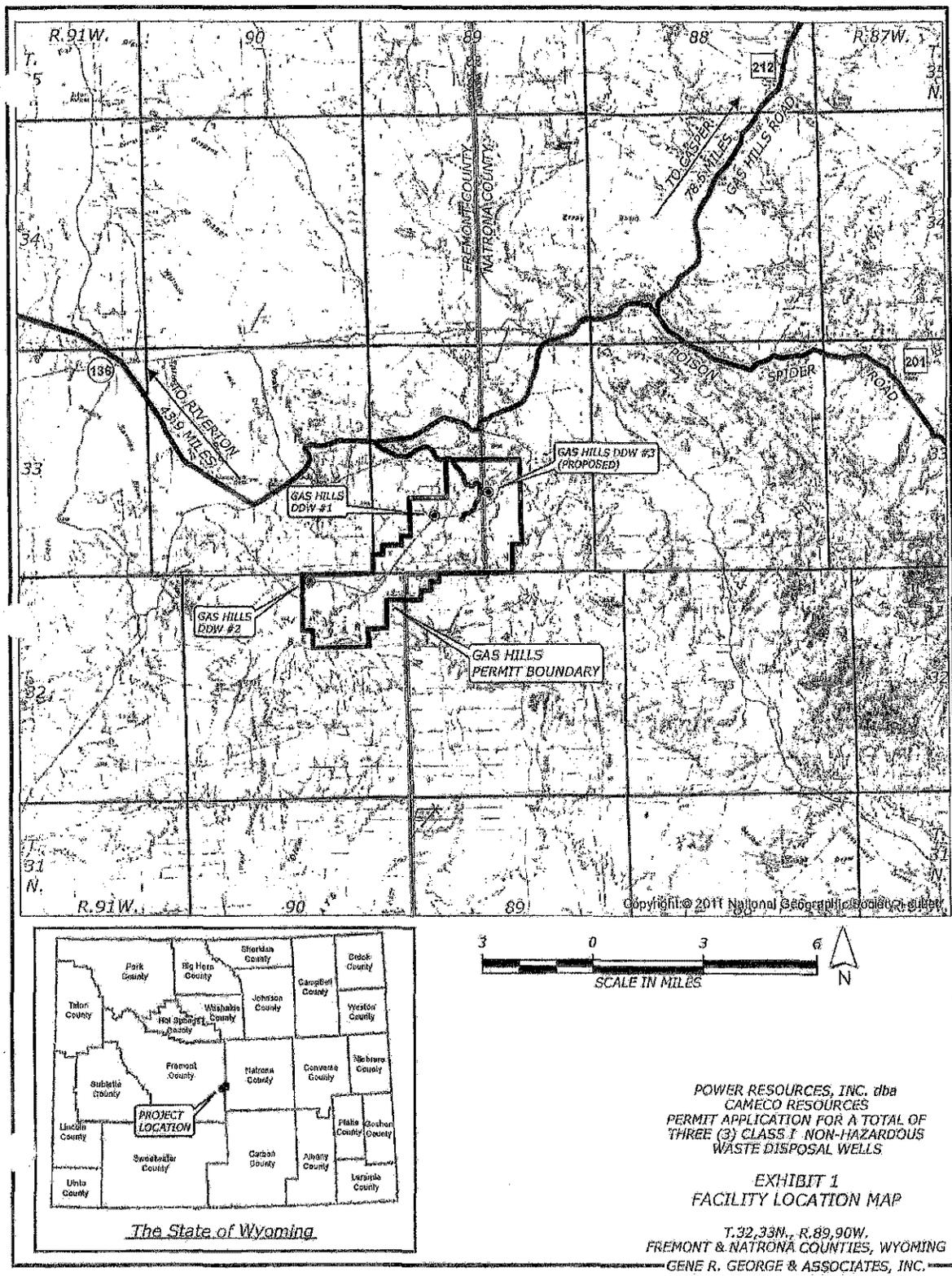
The Wind River formation is the most areally extensive water bearing unit that occurs at the surface near this facility (Plafcan, et.al. 1995). Water in the Wind River formation occurs under unconfined and semi-confined conditions. In the Gas Hills area wells are used for irrigation, industrial, and domestic use. Some wells have been reported to produce up to 3,000 gallons/minute (Plafcan, et.al. 1995). Six (6) Wind River Formation water wells (with depths ranging from 84 feet to 338 feet deep) were tested by the USGS near Township 33 North, Range 90 West and averaged total dissolved solids of 896 mg/L (Plafcan, et.al. 1995). Thus, the good water quality and prolific water quantity of the Wind River formation precludes deeper and more expensive development of the Flathead formation (with much poorer water quality and questionable quantity).

The Wind River aquifer system provides an economic source of good quality water for current and future residents in the Gas Hills area. It is present at the surface throughout the Wind River Basin (Plafcan, et.al. 1995). In the area of Gas Hills, the Wind River formation is over 300 feet thick and represents a large water resource.

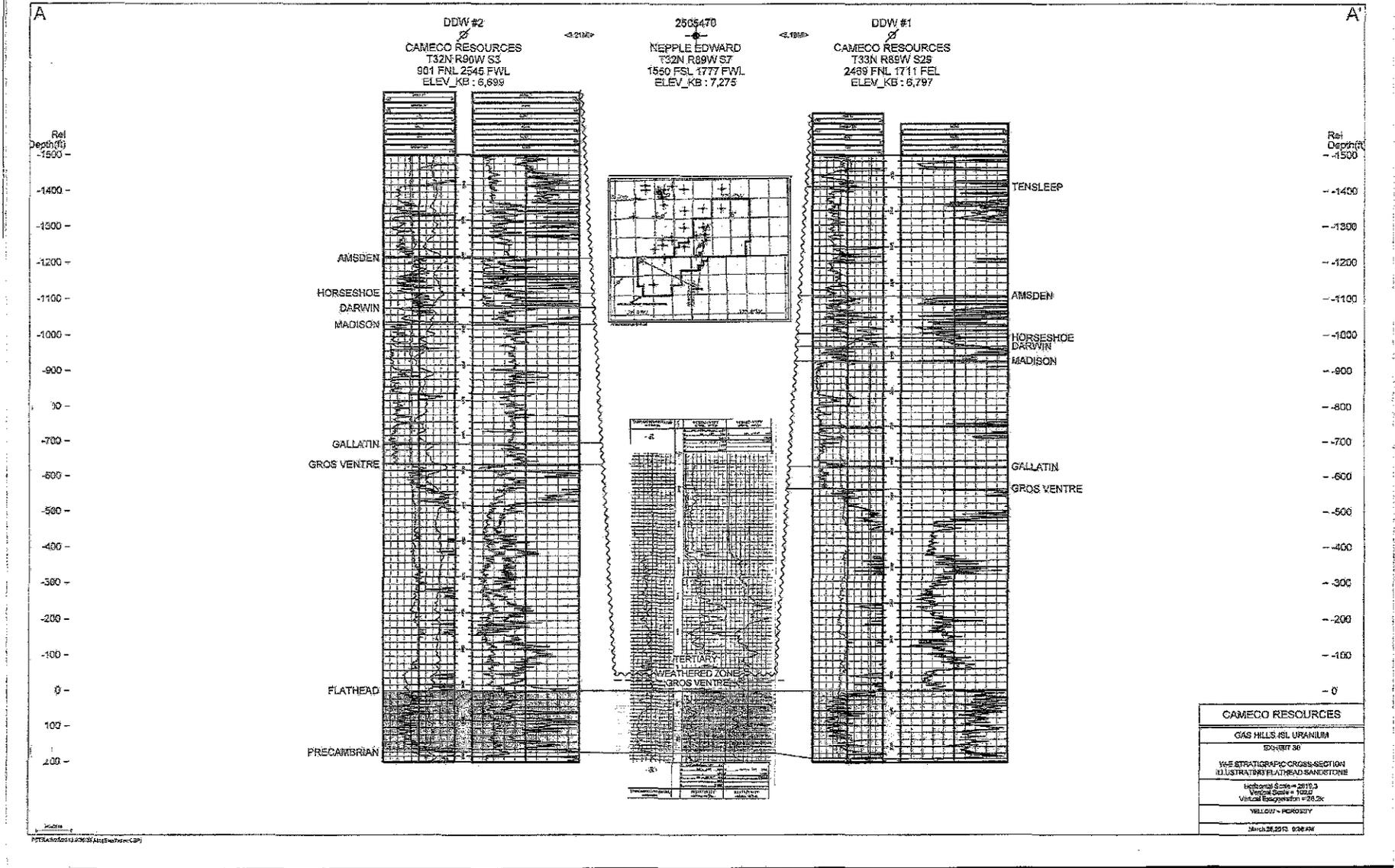
Cost to develop water supplies in the Flathead:

Well Costs: A regression analysis of Wyoming Water Development Commission (WWDC) cost data for public water supply wells with depths of 200-4,250 feet indicates that it would cost approximately \$454,000 (in 2009 dollars) to drill and complete an 800 foot deep well in the Wind River aquifer, or about \$1.9 million for a Flathead well at 3,500 feet deep.

Treatment Costs: Water from aquifers below the Wind River aquifer system would require treatment to meet EPA drinking water standards. Even minor treatment adds substantially to costs. For example, it was estimated that a centralized reverse osmosis facility to reduce uranium in a 250 gallon/minute water supply for the town of Manville, WY would have a capital cost of \$690,000 (in 2009 dollars) and a 30-year operating cost of \$1,830,000 (in 2009 dollars) (Olsson Associates and AVI, P.C., 2008). The total annualized treatment cost would amount to more than \$2,500 per gallon of capacity, or \$0.64 per 1,000 gallons per year. For an average daily consumption of 175 gallons per capita per day (Manville's actual consumption is unusual and much higher than this), this minimal treatment for Manville's water would add about \$65 to the cost of water per tap per year. Manville residents paid \$180 per tap per year for unlimited use in 2007. Total dissolved solids for the Manville water is 390 mg/L. The capital and operating costs to treat a 347 gallon/minute supply with total dissolved solids up to 3,000 mg/L would be at least twice as much (HDR, 2000).



**Figure 1**



**Figure 2**



## References

- HDR, 2000, Desalination for Texas water supply: Texas Water Development Board, Contracted Reports No. 2000483328. ([http://www.twdb.state.tx.us/RWPG/rpgm\\_rpts/2000483328.pdf](http://www.twdb.state.tx.us/RWPG/rpgm_rpts/2000483328.pdf))
- Olsson Associates and AVI, P.C., 2008, Manville source water supply study, Level II study, Final Report: Wyoming Water Development Commission, Technical Report.
- Plafcan, M, Miller-Eddy, C., Ritz, G. and Holland, John. 1995, Water Resources Investigations Report 95-4095.
- U.S. Environmental Protection Agency. 2013. Benzene TEACH Chemical Summary. [http://www.epa.gov/teach/chem\\_summ/BENZ\\_summary.pdf](http://www.epa.gov/teach/chem_summ/BENZ_summary.pdf)
- U.S. Environmental Protection Agency. 1998. Carcinogenic Effects of Benzene: An Update.”
- U.S. Environmental Protection Agency. 2002. Toxicological Review of Benzene (Noncancer Effects).



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

June 28, 2013

### City of Laramie

Attn: Dave Derragon, Assistant City Manager  
P.O. Box C  
Laramie, Wyoming 82073

RE: Emergency Sewer Repair in the intersection of 3<sup>rd</sup> Street and Hancock Street,  
Application No. 13-263, Albany County

Dear Mr. Derragon:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Public Sewage Collection Systems** consisting of a emergency replacement of approximately 120 LF of 8-inch sanitary sewer located in the Northwest ¼ of the Southwest ¼ of **Section 28, T16N, R73W, Albany County**, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the water distribution system in accordance with **Chapter 11, Section 9** of the Water Quality Division Rules and Regulations, in accordance with the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in **Part V, Section O** of the general permit. Additionally, the following project specific conditions also apply:

All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **June 27, 2015**.

This Notice of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Please reference Application No. 13-263 in any future correspondence.

If you have any questions, please contact me at either [seth.tourney@wyo.gov](mailto:seth.tourney@wyo.gov) or by phone at (307) 777-7088.

Sincerely,

Seth Tourney, P.E.  
Southeast District Engineer  
Water Quality Division  
SWT/rm/13-0591.

Enclosures: Certificate of Completion form

cc: IPS

Cal Van Zee, City of Laramie, P.O. Box C, Laramie, Wyoming 82073

Larry Ketcham, City of Laramie, P.O. Box C, Laramie, Wyoming 82073

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7359 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-264

REFERENCE PERMIT NO. N/A

Powder River Mobile Home Park Sanitary Sewer System Upgrade

This permit hereby authorizes the applicant:

Rita Simons  
Karl M. Johnson Foundation  
P.O. Box 7  
Jackson, WY 83001

to construct, install or modify the existing Powder River Mobile Home Park sanitary sewer system consisting of the construction of approximately 1,450 feet of 4 inch force main and upgrades to the existing lift station according to the procedures and conditions of the application number 13-264. The facility is located in the NE ¼ of Section 23, Township 50 North, Range 72 West, further located in Gillette, Wyoming. All construction, installation, or modification allowed by this permit shall be completed by December 31, 2015.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable permit conditions or other operational requirements. Compliance with all applicable standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

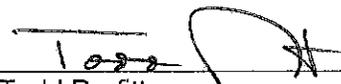
The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 4            The applicant will provide immediate oral or written notice to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601, Phone 307-473-3465, FAX 307-473-3458, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
  
- 2 of 4            Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
  
- 3 of 4            Within thirty days of completion of construction of the authorized facility, the Engineer of Record will submit two (2) complete copies of the Operation and Maintenance Manuals to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY 82601.
  
- 4 of 4            The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:

  
\_\_\_\_\_  
Kevin Frederick  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Todd Parfitt  
Director  
Department of Environmental Quality

9-25-13  
Date of Issuance

JRV/rm/13-0913

cc: Owen Lindblom, P.E., HDR Engineering, Inc., P.O. Box 457, Gillette, WY 82717  
Heath VonEye, P.E., City of Gillette, P.O. Box 3003, Gillette, WY 82717

## STATEMENT OF BASIS

1. Permit Number: 13-264
2. Application reviewed for compliance with the following applicable regulations :  
  
CHAPTER 3 AND CHAPTER 11 OF THE WYOMING WATER QUALITY RULES AND REGULATIONS
3. Does the permit comply with all applicable regulations identified above?  
  
YES
4. Facilities include components not specifically covered or differing from applicable regulations and approval is based upon a deviation in accordance with Section 5.  
  
N/A
5. A review to determine groundwater impacts in accordance with Section 17, Chapter 3 is not required.
6. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Jason Vreeland, P.E., and completed on September 24, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis."



# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

July 11, 2013

Owen Lindblom, P.E.  
HDR Engineering, Inc.  
P.O. Box 457  
Gillette, WY 82717

RE: Powder River Mobile Home Park – Sanitary Sewer Upgrades  
Location: NW ¼, Section 23, Township 50N, Range 72W  
WDEQ Application #13-264

Dear Mr. Lindblom:

We have completed our review of the permit application submitted on June 18, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3469 should you have any questions related to these comments or the application and review process.

Sincerely,

Jason Vreeland, P.E.  
Assistant Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS  
WDEQ File  
Heath VonEye, P.E., City of Gillette, P.O. Box 3003, Gillette, WY 82717



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** Powder River Mobile Home Park – Sanitary Sewer Upgrades  
**LOCATION:** Gillette, Wyoming  
**ENGINEER:** HDR Engineering  
**APPLICANT:** Karl M. Johnson Foundation

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-264**

**DATE ON PROPOSAL/PLANS/REPORT:** June 13, 2013

**DATE RECEIVED BY DEQ:** June 18, 2013

**DATE OF THIS REVIEW:** July 11, 2013

**WDEQ REVIEWER:** Jason Vreeland, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 11, Section 10(a) – Please clarify the pump type. The design report indicates that a 10 hp Meyers Model 4VHS, 460 Volt pump will be installed. The manufacturer’s specifications provide performance curves for an 8.5” and 9” impeller. Please specify which is applicable. Also, WWQRR Chapter 11, Section 10(c) requires electrical equipment to be suitable for Class 1, Division 1, Groups C and D hazardous environments. The Meyers 4VHS doesn’t appear to satisfy this requirement but this feature is available on the Meyers 4VHSX. Please address.

- 2) Chapter 11, Section 10(e) – The design report indicates that a portable generator will be available for backup power. WDEQ will not require the generator to be permanently installed at this site. However, you must demonstrate that an adequate portable generator will be available and that there is sufficient storage capacity to allow for notification and placing the pumping station back in service.
- 3) The force main doesn't appear to have a cleanout at the 45 degree bend at station 100+36. Please comment on how this section of pipe is to be accessed.
- 4) Chapter 11, Section 7(b) – Section f on pages 6-7 of the design report refer to drawings showing that the pump is able to be removed without entering. It doesn't appear that we were provided with a drawing showing this. Please provide a detail of the wetwell.
- 5) The existing well as shown on the original permit provided by the City of Gillette shows that the wetwell doesn't have hopper walls angled at no less than 1.75 to 1 and the influent line appears to direct flow through two 90 degree elbows so that flow enters at the bottom of the well. Please comment on if the wetwell will be modified to accommodate hopper walls and if the influent piping will be modified as shown on plan sheet DT-1 removing the 90 degree elbows.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-265

INDIAN HILLS PUMPS AND PIPING

This permit hereby authorizes the applicant:

City of Laramie  
P.O. Box C  
Laramie, WY 82073

to construct, install or modify three (3) 25-hp booster pumps according to the procedures and conditions of the application number 13-265. The facility is located in SE 1/4 of Section 26, T16N R73W; Albany County, in the State of Wyoming. All construction, installation, or modification allowed by this permit shall be completed September 25, 2016.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

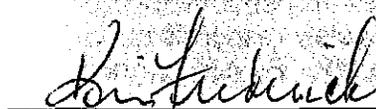
The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

1. The applicant will provide immediate oral or written notice to the Southeast District, Water Quality Division, Herschler Building 4 West, Cheyenne, WY, 82002, Phone 307-777-7088, FAX 307-777-7610, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
2. As future growth expansion occurs for the City of Laramie, the capabilities for Imperial Heights Pump Station shall be evaluated to ensure that alternative power source requirements for the Indian Hills Pump Station are in accordance with Chapter 12 of the Water Quality Rules and Regulations.
3. The operation of the Indian Hills Pump Station shall ensure that at least 35 psi is maintained on the suction lines to the pump station.
4. Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Southeast District, Water Quality Division, Herschler Building 4 West, Cheyenne, WY, 82002 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
5. The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

Date of Issuance 10-11-13

SWT/rm/13-1000

## STATEMENT OF BASIS

1. Permit Number:           **13-265**
2. This application was reviewed for compliance with the applicable regulations ;  
Chapters 3, 12
3. Does the permit comply with all applicable regulations identified above?  
Yes
4. A review to determine groundwater impacts in accordance with Section 17, Chapter 3 was not required.  
  
Public water supplies are exempted from review by Chapter 3, Section 17.
5. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

### CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Seth Tourney, Southeast District Engineer, Water and Wastewater Section, Wyoming Department of Environmental Quality /Water Quality Division, and completed on October 11, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis."



# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 3, 2013

Cole D. Smith  
2549 Highway 16  
Ten Sleep, WY 82442

RE: Ten Sleep Brewing Evaporation Pond, Permit No. 13-266, NW ¼, SE ¼, Section 24, Township 47 N, Range 89 W, Washakie County

Dear Mr. Smith:

This project consists of installing a sand/oil interceptor and an evaporation pond to retain wash down water from a brewery floor. This project also includes a small septic system that serves the domestic wastewater at the brewer. The above application for coverage under General Permits to Construct the extension of a public water distribution system has been reviewed in accordance with Chapter 3, Section 7; and Chapter 25 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

James Brough, P.E.  
Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
William Bridges, P.E., Pryor Mountain Engineering, P.O. Box 671, Cowley, WY 82420  
David Anderson, Washakie County, 1001 Big Horn Ave., Suite 104, Worland, WY 82401





# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 31, 2013

**United Western Corporation**  
Attn: Frank M. Cole, President  
2220 Dell Range Blvd, Suite 100  
Cheyenne, Wyoming 82009

RE: The Bluffs 7<sup>th</sup> Filing – Water & Sewer Improvements: **Re-Issue**,  
Application No. **13-267**, Reference Expired Permit No. 08-595, **Laramie County**

Dear Mr. Cole:

The above application for coverage under **General Permit to Construct**, Install, Modify or Operate Extensions to or Modifications of Existing Public **Water Supply Distribution System** consisting of approximately 2174 feet of 8" PVC water main, 10 gate valves, and 5 new fire hydrants, and Existing **Sewage Collection System** consisting of approximately 2055 feet of 8" PVC SDR-35 sewer main, and 13 new manholes, located in the NW¼ of Section 21, T14N, R66W, Laramie County in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the water distribution system in accordance with **Chapter 12, Section 14** of the Water Quality Division Rules and Regulations, the sewage collection system in accordance with, **Chapter 11, Section 9** of the Water Quality Division Rules and Regulations, and both systems in accordance with the general permits, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permits. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by July 31, 2015.

This Notice of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General permits can be viewed at the following path:  
[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Please reference Application No. **13-267** in any future correspondence.

If you have any questions, please contact Seth Tourney at either [seth.tourney@wyo.gov](mailto:seth.tourney@wyo.gov) or by phone at (307) 777-6088.

Sincerely,

Ronald L. Ewald  
Assistant Southeast District Engineer  
Water Quality Division  
RLE/rm/13-0719

Enclosures: Certificate of Completion form

cc: IPS, Cheyenne

Kelly W. Hafner, BenchMark Engineers, P.C. 1920 Thomes Avenue, Ste 620, Cheyenne, WY 82001

Herman Noe, CBOPU, Engineering Manager, 2406 Snyder Avenue, Cheyenne, WY 82001

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
UNDERGROUND INJECTION CONTROL PERMIT ISSUED UNDER  
WYOMING WATER QUALITY RULES AND REGULATIONS  
CHAPTER 16

CLASS V INJECTION WELL (AREA PERMIT)

( ) New  
(X) Modified

Permit Number **13-268**  
Previous Permit(s): 12-002  
UIC Facility Number WYS-005-00590  
State Subclass 5F2

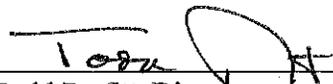
In compliance with the Wyoming Environmental Quality act (W.S. 35-11-101 through 1104, specifically 301(a)(i) through 301 (a)(iv), Laws 1973, Ch. 250, Section 1) and Wyoming Water Quality Rules and Regulations, Chapter 16.

Applicant: Ciris Energy Inc.  
9155 East Nichols Ave., Suite 200  
Centennial, CO 80112  
(303) 649-2000

Ciris Energy Inc., hereafter referred to as the Permittee, is authorized to operate 4 (four) injection wells located in Section 13, Township 45 North, Range 75 West of the 6<sup>th</sup> Principal Meridian, Campbell County (referred to as the "Antelope Facility") for the restoration or enhancement of microbial conversion of hydrocarbon substrates to methane gas from coal according to the procedures and conditions of application 13-268, which represents a major modification of permit 12-002, including the requirements and other conditions of this permit. The permit will become effective on the date of signature by the Water Quality Director, and is valid for ten (10) years, the permittee is authorized to inject only during the first 5 (five) years of the permit term.

  
\_\_\_\_\_  
Kevin Frederick, Administrator  
Water Quality Division  
Herschler Building, 122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002  
(307)-777-7781

October 14, 2013  
Date

  
\_\_\_\_\_  
Todd Parfitt, Director  
Department of Environmental Quality  
Herschler Building, 122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

10/14/2013  
Date

KS/rm/13-0993

## Table of Contents

A.	Discharge Zone .....	3
B.	Injection/Production Well Locations and Area of Review .....	3
C.	Water Supply Wells Within the Area of Review .....	4
D.	Groundwater Classification .....	4
E.	Authorized Operations .....	5
F.	Hazardous Waste .....	6
G.	Proper Operation and Maintenance .....	6
H.	Entry and Inspection .....	7
I.	Environmental Monitoring Program for Groundwaters of the State .....	7
K.	Test Procedures .....	19
L.	Records and Reports .....	19
M.	Permit Actions .....	19
N.	Mechanical Integrity .....	20
O.	Abandonment or Conversion to Water Wells.....	20
P.	Duties of the Permittee.....	21
Q.	Signatories Requirement.....	21
R.	Noncompliance .....	22
S.	Permit Transfer .....	22
T.	Property Rights .....	22
U.	Severability .....	22

**A. Discharge Zone**

The injection will occur in the Big George coal seam. The project consists of 4 (four) injection wells surrounded by 13 production wells. Project wells are identified in Table 1 as follows:

**Table 1 (Perforated Zones - Injection Wells)**

Well Name	Perforated Zones (Feet)	Porosity (%)	Coal Thickness (Feet)	Maximum Injection Rate (bbls/day) <sup>1</sup>	Maximum Surface Injection Pressure (psig) <sup>1</sup>	Coal Seam	Depth to Top of Big George Coal Seam (Feet)
Antelope 6J	1173-1193	1.5	76	2,500	220	Big George	1169
Antelope 7J	1200-1220	1.5	84	2,500	220	Big George	1196
Antelope 10J	1150-1170	1.5	71	2,500	220	Big George	1146
Antelope 11J	1159-1179	1.5	78	2,500	220	Big George	1155

<sup>1</sup> Maximum limits are not to be exceeded during any injection period. Additional perforation zones may be extended within the Big George coal seam.

**B. Injection/Production Well Locations and Area of Review**

The injection/production wells in the project are identified in Table 2 as follows:

**Table 2 (Injection/Production Wells - Public Land Survey Locations)**

Well Name	Well Type	Quarter/Quarter	Section	Township (N)	Range (W)	Latitude	Longitude
Groves 13-13	Producer	NWSW	13	45	75	43.871671	-105.825644
Antelope 2P	Producer	NENW	13	45	75	43.872364	-105.824971
Antelope 3P	Producer	NWNE	13	45	75	43.872410	-105.822917
Antelope 4P	Producer	NENE	13	45	75	43.872457	-105.820858
Antelope 5P	Producer	SWNW	13	45	75	43.870701	-105.826992
Antelope 8P	Producer	SENE	13	45	75	43.870731	-105.821211
Antelope 9P	Producer	NWSW	13	45	75	43.869086	-105.826957
Antelope 12P	Producer	NESE	13	45	75	43.869439	-105.820993
Antelope 13P	Producer	SWSW	13	45	75	43.867469	-105.826924
Antelope 14P	Producer	SESW	13	45	75	43.867516	-105.824869
Antelope 15P	Producer	SWSE	13	45	75	43.867554	-105.822452
Groves 24-13	Producer	SESW	13	45	75	43.868056	-105.820709
Antelope 17P	Producer	NESW	13	45	75	43.869859	-105.824036
Antelope 6J	Injector	NWSW	13	45	75	43.870830	-105.825190
Antelope 7J	Injector	NESW	13	45	75	43.870971	-105.822853
Antelope 10J	Injector	SWSW	13	45	75	43.869056	-105.825006
Antelope 11J	Injector	SESW	13	45	75	43.868885	-105.822728

**Table 3 (Area of Review – Public Land Survey Locations)**

Section (1/4, 1/4)	Section	Township	Range
SWSWSW	7	45N	74W
W 1/2 of the NWNW, NWSW, SWNW, and SWSW	18	45N	74W
NWNWNW	19	45N	74W
SESESE	11	45N	75W
S 1/2 of the SESE, SESW, SWSE, and SWSW	12	45N	75W
All	13	45N	75W
E 1/2 of the NENE, NESE, and the SENE	14	45N	75W
N 1/2 of the NENE, NENW, and the NWNE	24	45N	75W

**C. Water Supply Wells Within the Area of Review**

**Table 4 (State Engineer Office (SEO) Wells Within Project Area – Public Land Survey Locations)**

SEO Permit Number	Township (N)	Range (W)	Section	QTRQTR	Latitude	Longitude	Uses*
P117069W	45	75	13	NWSW	43.8718	-105.8256	CBM
P117072W	45	75	13	SESW	43.86819	-105.8207	CBM
P138044W	45	74	18	SWNW	43.87584	-105.8062	STO, CBM
P138063W	45	75	14	SENE	43.87549	-105.8307	STO, CBM
P138930W	45	75	13	NWNW	43.87926	-105.8258	STO, CBM
P138931W	45	75	13	SENE	43.87561	-105.8208	STO, CBM
P138932W	45	75	13	NWSE	43.87201	-105.8159	STO, CBM
P138933W	45	75	13	SENE	43.87578	-105.8111	STO, CBM
P138934W	45	75	13	SESE	43.86845	-105.811	STO, CBM
P138936W	45	75	13	NWNE	43.87938	-105.816	STO, CBM
P138938W	45	75	12	SESE	43.8831	-105.8111	STO, CBM
P153717W	45	75	12	SWSW	43.88297	-105.8259	CBM

\* CBM= Coal Bed Methane Well, STO=Stock Well

Note: The wells identified in Table 4 are permitted and authorized by the Wyoming State Engineer's Office (SEO).

**D. Groundwater Classification**

The groundwater in the Big George coal seam of the Fort Union Formation is classified as Class III (Livestock) by use and quality according to *Wyoming Water Quality Rules and Regulations, Chapter 8*. This classification is assigned because there are numerous permitted stock wells within the area of review. In addition, groundwater analyses from the Big George coal seam are indicative of Class III groundwater. Since the groundwater is classified as Class III, the water quality of groundwater within the Big George coal seam shall not exceed the permit limits established in **Table 5** and **Table 7**.

### **E. Authorized Operations**

There are seventeen (17) wells at this facility, which are completed into the Big George coal seam. Thirteen (13) of the wells have been identified as "producing" wells, and four (4) have been identified as "injection" wells (see Table 2). This permit only allows injection into the four (4) wells identified in Table 1. The injection wells are located in the center of the facility, and are ringed by production wells. This permit prohibits injection into a well identified as a producing well in Table 2 without express prior written consent by the Administrator.

This permit is valid for ten (10) years. Injection may occur only during the first five (5) years of the permit. After the cessation of injection operations, the Permittee shall perform post-injection monitoring and reporting for the remainder of the permit term. Should the first year of post-injection monitoring and reporting reveal no statistically significant change to groundwater water quality as determined by the Administrator, the permittee may petition the Administrator to reduce post-injection monitoring, modify the monitoring schedule, or to renew the permit.

An amendment mixture comprised of vitamins and minerals, multi-nutrients, cell vitality enhancers, tracers, and produced water (i.e. "injectate") will be added periodically. The amendment mixture is designed to support and encourage native microbes to produce methane.

The amendments shall only consist of those vitamins and minerals, multi-nutrients, tracers, and cell vitality enhancers as confidentially identified and provided to the Department, and only in concentrations or volumes equal to or less than those confidentially identified and provided to the Department as a requirement of the permit application. The permittee may only inject the amendments identified in the confidential submittal titled "Ciris Energy, Inc. Trade Secrets Antelope Project UIC Permit 12-002 (reassigned permit number 13-268) Major Modification Information" dated May 7, 2013. The permittee may not exceed the amendment concentrations identified in the confidential submittal titled "Ciris Energy, Inc. Trade Secrets Antelope Project UIC Permit 13-268 Major Modification Information" dated May 7, 2013. Should the permittee desire to utilize injectate additives not identified in the confidential submittal titled "Ciris Energy, Inc. Trade Secrets Antelope Project UIC Permit 13-268 Major Modification Information" dated May 7, 2013, or to inject amendments at concentrations greater than those identified in the confidential submittal titled "Ciris Energy, Inc. Trade Secrets Antelope Project UIC Permit 13-268 Major Modification Information" dated May 7, 2013, the permittee must apply for and obtain a modification to the permit prior to adding additional amendments or increasing amendment concentrations.

The Permittee shall report all amendments added to the amendment mixture, the amounts or volumes added, determine their concentrations within the injectate, and sample the injectate.

The Permittee may not add any other chemical compound, microorganisms, anti-scalants, biocides, algacides, or other amendments to the injectate without applying for a modification to this permit and obtaining authorization from the Administrator.

In the event the permittee exceeds any injectate or groundwater permit limitation, the permittee must immediately cease operations and determine the cause of the exceedance. Should the exceedance be proven to the Administrator's satisfaction not to be the direct result of the permittee's injection activities, the permittee may be allowed to resume operations. However, the permittee may not resume operations

in the event of shutdown due to permit limit exceedances without the express written consent of the Administrator.

Should a well shut in due to exceedances be re-worked or otherwise altered in an attempt to meet permit limits, the well may be brought back on-line and pumped only as long as necessary to collect a representative sample.

The Permittee is authorized to inject at a "maximum sustainable total water production" rate of 10,000 barrels per day (BPD). For operation and maintenance considerations, such as conducting mechanical integrity tests or well workovers, the Permittee may inject more than the indicated maximum injection rate indicated on **Table 1** on a temporary basis with prior written approval from the Administrator.

The Permittee is authorized to inject at the maximum surface pressures as indicated in **Table 1**.

Wells covered under this permit may not be removed from the requirements of the permit without prior approval from the Department. The Permittee shall notify the Administrator thirty (30) days in advance of any planned alteration, conversion, or abandonment of the wells covered by this permit.

The Permittee shall notify the Administrator in writing at the earliest opportunity, and verbally no less than 48 (forty-eight) hours prior to conducting workovers on any well Listed in **Table 2** of this permit so that a field inspection may be coordinated. Emergency operations can be performed as needed in the event such operations are needed to prevent loss of life or environmental damage. However, such operations may not occur if they will result in a violation of any permit limit or requirement.

An approved **Sampling and Analysis Plan (SAP)** that describes all injectate and groundwater sampling locations, sampling frequency, sampling constituents and parameters, equipment and procedures associated with sample collection, laboratory analysis, equipment decontamination, Quality Assurance/Quality Control, sample custody, data reporting, etc. from all sampled wells is required prior to commencement of injection.

The Permittee shall conduct an injection pressure falloff test for at least one of the injection wells identified in **Table 1** within the first year of operation.

Under no circumstances may the Permittee modify any requirements of this permit without express written approval from the Administrator.

#### **F. Hazardous Waste**

This permit does not allow for the injection of any hazardous waste as defined in 40 CFR 261.3 and in Wyoming Solid Waste Management Rules and Regulations, Chapter 2. Injection of any substance defined as a hazardous waste, whether hazardous by listing or by characteristic, is a violation of this permit.

#### **G. Proper Operation and Maintenance**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit. The Permittee shall operate and maintain all facilities and systems of treatment and control which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes mechanical integrity of the wells,

effective performance, adequate funding, Permittee staffing and training, and laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

The injection wells covered by this permit shall meet all construction requirements outlined in Wyoming Water Quality Rules and Regulations, Chapter 16, Section 10(p) with the exception of water disinfection.

The Permittee is required to operate in accordance with statements, representations and procedures presented in the complete permit application and supporting documents as accepted and approved by the Administrator. Any modifications which will result in a violation of permit conditions shall be reported by submission of a new or amended permit application and shall not be implemented until a new or modified permit has been issued. Injection into a well may not begin until construction is complete and the permit is approved.

#### **H. Entry and Inspection**

The Permittee shall allow the Administrator (upon presentation of credentials and during normal working hours) to enter the premises where a regulated facility is located, or where records are kept under the conditions of this permit and inspect and photograph the discharge and related facilities, review and copy reports and records required by this permit, collect fluid samples for analysis, measure and record water levels, and perform any other function authorized by law or regulation.

#### **I. Environmental Monitoring Program for Groundwaters of the State**

Groundwater within the facility is classified as Class III by use and chemistry.

Limits also apply to the injectate (See Section J.4.).

##### **a. General Requirements:**

1. The Permittee shall use electronic data deliverable (EDD) reporting when required by the Administrator.
2. Records of monitoring information shall include:
  - i. The date, exact place, and time of sampling or measurements;
  - ii. The initials or name(s) of the individual(s) who performed the sampling or measurements;
  - iii. The date(s) analyses were performed;
  - iv. The time(s) analyses were initiated;
  - v. The initials or name(s) of the individual(s) who performed the analyses;
  - vi. References and written procedures for the analytical techniques or methods used;
  - vii. The results of such analyses, including the bench sheets, laboratory reports, instrument readouts, computer disks or tapes, etc., used to determine these results.

3. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or the approved Sampling and Analysis Plan.
4. All samples reported to the Administrator shall be unfiltered unless filtered samples are specified for the given analysis; turbidity should not exceed 20 NTUs. Samples shall be collected such that they are representative of produced water without further treatment. Sampling frequency may be reduced with the Administrator's approval. The constituents shall be analyzed by the methods listed in **Table 5** and **Table 7**.
5. The Permittee shall report any noncompliance which may endanger health or the environment to the Administrator of the Water Quality Division within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. The report shall include:
  - i. Any monitoring or other information which indicates that any contaminant may cause an endangerment to a usable groundwater of the state;
  - ii. Any noncompliance with a permit condition or malfunction of the discharge (injection) system which may cause fluid migration into or between usable ground waters of the state;
  - iii. A written submission shall be provided to the Administrator of the Water Quality Division within five (5) days of the time the Permittee becomes aware of the circumstances. This written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
6. The Permittee shall report all instances of noncompliance not reported otherwise, at the time monitoring reports are submitted.
7. The Permittee shall notify the Administrator in writing at the earliest opportunity, and verbally no less than 48 (forty-eight) hours prior to conducting the mechanical integrity tests for each injection well, so that a joint field inspection may be coordinated between both parties.
8. Sample collection of groundwater shall be of such frequency and of such variety (season, time, location, depth, etc.) to properly describe the groundwater, and shall be accomplished by the methods and procedures described in the U. S. Environmental Protection Agency manual RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September, 1986, unless alternate methods and procedures are approved by the Administrator.
9. Analysis of all samples shall be accomplished pursuant to Chapter 8, Water Quality Rules

and Regulations, Sections 7 and 8.

b. Groundwater and Injectate Monitoring Requirements:

1. The permittee submitted nine (9) separate baseline water quality analyses in their permit application. For many of the metals, the data submitted was “non-detect” in most of the samples. However, one of the submitted samples, for the “Groves 22-24” well, had considerably higher concentrations for lead, chromium, copper, and iron than the other samples that were submitted. To determine if this well sample represented an outlier, a statistical outlier test called “Dixon’s Test” was used. The “Dixon Test” was selected because it is typically used for small datasets (less than 25 samples) in which one outlier is suspected. This test indicated that for lead, chromium, and copper, the results for the “Groves 22-24” well were outliers, and they were omitted from the dataset. However, for iron, the results from the “Groves 22-24” well were determined not to be an outlier, and the results were used to establish an iron limit for this facility.
2. Non-Organic Constituents (Constituents Listed in Table 5):
  - i. Groundwater samples are to be collected from all production wells on a quarterly basis. Samples shall be collected from all wells according to the schedule established in Table 5 and for all constituents and parameters listed in Table 5. Sampling results shall be reported quarterly and in the annual water quality report described in Part I.c. of this permit. Failure to perform and report analyses in accordance with the prescribed schedule and method is a violation of this permit.
  - ii. The permittee may, once two (2) years’ worth of sampling data have been collected and reported, petition the Administrator to reduce the frequency of monitoring for any routinely-monitored constituent, or to remove any constituent from the list of routinely-monitored constituents for this facility. Under no circumstances may the permittee reduce monitoring for any constituent, or discontinue monitoring for any constituent without modification of this permit and the Administrator’s express written consent.

**Table 5 (Non-Organic Constituent Injectate and Groundwater Sampling Schedule)**

Sampling Schedule	Constituent Analyzed	EPA Analytical Method	Groundwater and Injectate Permit Limits
Quarterly (grab) Jan 1 – Mar 31 Apr 1 – Jun 30 Jul 1 – Sep 30 Oct 1 – Dec 31	Alkalinity (Dissolved Inorganic Carbon)	A2320 B	NA
	Aluminum	200.7	5.0 <sup>1</sup>
	Ammonia (production and monitor wells only)	350.1, 350.2, 350.3	30 <sup>2,3</sup>
	Ammonia (injectate only) <sup>7</sup>	350.1, 350.2, 350.3	See Section I.b.2.iii
	Arsenic	200.7, 200.8, 200.9	0.01 <sup>4</sup>
	Barium	200.7, 200.8	2 <sup>4</sup>
	Bicarbonate	A2320 B	NA
	Boron	200.7	5 <sup>1</sup>

Sampling Schedule	Constituent Analyzed	EPA Analytical Method	Groundwater and Injectate Permit Limits
Quarterly (grab) Jan 1 – Mar 31 Apr 1 – Jun 30 Jul 1 – Sep 30 Oct 1 – Dec 31	Bromate	300.0, 300.1	0.01 <sup>2</sup>
	Cadmium	200.7, 200.8, 200.9	0.005 <sup>4</sup>
	Calcium	200.7	NA
	Carbonate	A2320 B	NA
	Chloride	300	2000 <sup>1</sup>
	Chromium	200.7, 200.8, 200.9, 218.6	0.05 <sup>1</sup>
	Cobalt	200.7, 200.8, 200.9	1 <sup>1</sup>
	Conductivity	Field	NA
	Carbon-13 Isotope	Varies	NA
	Copper	200.7, 200.8, 200.9	0.5 <sup>1</sup>
	Fluoride	300.0, 300.1	4 <sup>1</sup>
	Iodine	4500	NA
	Iron	200.7, 200.9	NA <sup>1</sup>
	Lead	200.7, 200.8, 200.9	0.055 <sup>5</sup>
	Magnesium	200.7	NA
	Manganese	200.7, 200.8, 200.9	NA <sup>1</sup>
	Mercury	245.1, 245.2, 245.7	0.00005 <sup>1</sup>
	Nickel	200.7, 200.8, 200.9	NA <sup>1</sup>
	Nitrate	300.0, 300.1	10 <sup>4</sup>
	Nitrite	300.0, 353.2	1 <sup>4</sup>
	pH	Field	>6.5 & <8.5 <sup>1</sup>
	Potassium	200.7	NA
	Residual Sodium Carbonate	Calculation	NA
	Selenium	200.7, 200.8, 200.9	0.05 <sup>1</sup>
	Sodium	200.7	NA
	Sulfate	300.0, 300.1	3000 <sup>1</sup>
	Hydrogen Sulfide	A4500 S-D	NA
	Total Dissolved Solids	A2540 C	5000 <sup>1</sup>
	Total Organic Carbon	A5310C	NA
	Turbidity	Field	NA
	Vanadium	200.7, 200.8	0.1 <sup>1</sup>
	Zinc	200.7, 200.8	25 <sup>1</sup>
Injection Volume	Flow meter	2,500 BPD/well	
Injection Pressure	Gauge	220 psig	
Produced Water Volume	Flow meter	Per Report (barrels/day/well)	

<sup>1</sup>Limit based on *Wyoming Water Quality Rules and Regulations, Chapter 8, Table I.*

<sup>2</sup>Limit based on 2012 Edition of EPA's "Drinking Water Standards and Health Advisories" Health Advisory (HA).

<sup>3</sup>Limit based on "Water Quality for Wyoming Livestock & Wildlife, A Review of the Literature Pertaining to Health Effects of Inorganic Contaminants, M. F. Raisbeck, PhD, DVM et. al., 2008."

<sup>4</sup>Limit based on 2012 Edition of EPA's "Drinking Water Standards and Health Advisories" Maximum Contaminant Level (MCL).

<sup>5</sup>Limit based on background water quality data presented in permit application.

<sup>6</sup>Limit based on EPA's Drinking Water Equivalent Levels from the "Drinking Water Standards and Health Advisories" Tables.

<sup>7</sup>The ammonia concentrations expected in the injectate and produced water are the result of the breakdown/combination of other constituents. The permittee is not planning to add raw ammonia to the injectate at this facility.

All chemical concentrations in this permit are expressed in mg/L unless otherwise noted. pH is always expressed in standard units.

- iii. The permittee is allowed to perform step-wise ammonia injectate increases of fluids into the four (4) injection wells as follows:

**Table 6 (Step-Wise Ammonia Injectate Increases)**

Constituent	Sampling Schedule	Period Evaluated	Injectate Limits
Ammonia <sup>2</sup>	Quarterly	Baseline <sup>3</sup>	30 mg/L
	Once every 2 weeks	4 weeks	200 mg/L
			400 mg/L
Weekly	Indefinitely or until trigger level is observed in a production or monitor well <sup>1</sup>	600 mg/L	

<sup>1</sup>The ammonia trigger level is any single measurement of 20 mg/L or more in any production or monitor well identified in this permit. Once the ammonia trigger level is reached, the permittee will immediately reduce the ammonia concentration in the injectate, identified in Table 6, by 50% of the currently-injected amount until the ammonia concentrations in the production and monitor wells are all less than 20 mg/L.

<sup>2</sup>The ammonia concentrations expected in the injectate and produced water are the result of the breakdown/combination of other constituents. The permittee is not planning to add raw ammonia to the injectate at this facility.

<sup>3</sup>In this instance, "baseline" refers to sampling periods during which the permittee's injectate contains less than or equal to 30 mg/L total ammonia concentrations.

Once the permittee begins step-wise ammonia injectate increases, the sampling frequency for ammonia in the production and monitor wells will increase as specified in Table 6 until the permittee has reached the ammonia trigger level in one or more production and monitor wells, and has scaled back ammonia concentrations to 50% of the injectate ammonia concentration causing the ammonia trigger level to be reached (ammonia stabilization). Once ammonia stabilization has been reached, the permittee may reduce ammonia sampling frequency to monthly after approval is received by the Department.

At no time may the ammonia concentration in any production or monitor well exceed 30 mg/L. In the event ammonia concentrations at any production or monitor well exceed 30 mg/L, the permittee will continuously pump all production wells until authorized in writing by the Administrator to reduce pumping.

The permittee will report the following step-wise ammonia injection parameters in a quarterly hard-copy report to the Administrator:

- a. Date the step-wise ammonia injection began.
  - b. Date(s) of step-wise ammonia injection concentration increases.
  - c. Weekly production and monitor well ammonia sample results.
  - d. Date(s), well names, and ammonia concentrations for any wells that meet or exceed the ammonia trigger level.
  - e. Date(s) of ammonia injectate concentration scale-backs, and the amount of the concentration scale-back (from initial concentration amount to scale-back amount).
- iv. All samples collected to meet groundwater monitoring requirements shall be analyzed by an independent, third-party EPA certified laboratory.
- c. Total Organic Carbon "Triggers"
- i. Total Organic Carbon (TOC) samples will be collected as specified in Section I.b.1 of this permit. Should any production well (**Table 2**) or monitoring well (**Table 8**) TOC sample have a TOC concentration of 10 mg/L or greater in any one sample; that well shall be re-sampled for TOC within one week of receipt of TOC sample results.
  - ii. Should the second confirmatory sample also have a TOC concentration of 10 mg/L or greater, that well shall be sampled for the full list of organic constituents listed in **Table 7** within one week of receipt of TOC sample results.
  - iii. All TOC sampling and any resultant organic suite sampling conducted as the result of TOC concentrations at or exceeding 10 mg/L will be discussed in the annual report for this facility.
- d. Organic Constituents (Constituents Listed in **Table 7**)
- i. Groundwater samples from all wells capable of producing water shall be collected and analyzed for all organic constituents listed in **Table 7** prior to commencement of any injection activities at this facility to characterize the background concentrations of these constituents in the groundwater. Once injection commences at this facility, groundwater samples from all wells capable of producing water shall be collected within one year of commencement of injection and analyzed for all organic constituents listed in **Table 7**. The pre-injection and post-injection concentrations of all organic constituents will be compared in that

year's annual report. Once the second set of organics sampling has occurred, the permittee will then collect additional samples for all constituents listed in Table 7 on an annual basis during the second calendar quarter (April 1- June 30) for all wells.

- ii. The permittee may, once two years' worth of sampling data have been collected and reported, petition the Administrator to reduce the frequency of monitoring for any routinely-monitored constituent, or to remove any constituent from the list of routinely-monitored constituents for this facility. Under no circumstances may the permittee reduce monitoring for any constituent, or discontinue monitoring for any constituent without modification of this permit and the Administrator's express written consent.

**Table 7: Organic Constituent Injectate and Groundwater Sampling Schedule**

Sampling Schedule	Constituent Analyzed	EPA Analytical Method	Groundwater Permit Limit
Once prior to injection, Once within one year of commencement of injection, and Annually thereafter	1,2,4-trimethylbenzene	524	NA
	1, 3, 5-trimethylbenzene	524	NA
	Acenaphthene	8270	2 <sup>1</sup>
	Acetone	524	NA
	Anthracene	8270	10 <sup>2</sup>
	Benzo-a-anthracene	8270	NA
	Benzene	524	0.005 <sup>1</sup>
	Benzo-a-pyrene	8270	0.0002 <sup>1</sup>
	Benzo-b-fluoranthene	8270	NA
	Benzo-g,h,i-perylene	8270	NA
	Benzo-k-fluoranthene	8270	NA
	Chrysene	8270	NA
	Dibenzo-a,h-anthracene	8270	NA
	Diethyl phthalate	8270	30 <sup>2</sup>
	Di-n-butyl phthalate	8270	4 <sup>2</sup>
	Ethylbenzene	524	0.7 <sup>1</sup>
	Fluorene	8270	1 <sup>2</sup>
	Indeno-1,2,3,c,d-pyrene	8270	NA
	Isophorone	8270	7 <sup>2</sup>
	Isopropylbenzene	524	4 <sup>2</sup>
Xylenes (total)	524	10 <sup>1</sup>	
Naphthalene	524	0.7 <sup>2</sup>	

Sampling Schedule	Constituent Analyzed	EPA Analytical Method	Groundwater Permit Limit
Once prior to injection, Once within one year of commencement of injection, and Annually thereafter	n-butylbenzene	524	NA
	n-propylbenzene	524	NA
	Phenanthrene	8270	NA
	Pyrene	8270	NA
	Sec-butylbenzene	524	NA
	Styrene	524	0.1
	Tert-butylbenzene	524	NA

<sup>1</sup>Limit based on 2012 Edition of EPA's "Drinking Water Standards and Health Advisories" Maximum Contaminant Level (MCL)

<sup>2</sup>Limit based on 2011 Edition of EPA's "Drinking Water Standards and Health Advisories" Drinking Water Equivalent Level (DWEL)

<sup>3</sup>Limit based on USEPA's "Region 8 Permit Limit" toxicology calculations.

<sup>4</sup>Limit based on USEPA's Lifetime Health Advisories.

All chemical concentrations in this permit are expressed in mg/L unless otherwise noted. pH is always expressed in standard units.

e. Groundwater and Injectate monitoring reporting requirements:

1. The results (laboratory results) of groundwater and injectate monitoring shall be reported quarterly in the UIC GEM database, and copies of laboratory reports uploaded to GEM within forty-five (45) days of the sample date.
2. The Permittee shall provide two (2) annual water quality summary reports to the Administrator, one hard copy and one in a digital format. The reports shall contain the following minimum information:
  - i. well names;
  - ii. name of coal seam sampled;
  - iii. API numbers;
  - iv. ¼ ¼, Section, Township, Range location of each production well;
  - v. water quality sample date;
  - vi. water quality analysis date;
  - vii. detection limits;
  - viii. EPA methods;
  - ix. water quality analytes (sorted alphabetically);
  - x. water quality results (mg/L), including copies of the laboratory reports;
  - xi. produced water volumes;
  - xii. injection rates and volumes;
  - xiii. dates describing when wells were injecting, producing, or idle;
  - xiv. permit limits; and

- xv. laboratory reports and data sheets.
3. Reports shall include explanations of permit compliance or non-compliance.
  4. Should a permit limit in **Table 5** or **Table 7** be exceeded, the report shall also describe the reporting mechanisms that were undertaken, and the permittee's investigation into the causes of the exceedances and efforts to prevent such exceedances in the future.
  5. Reports shall include time-series graphs of parameter concentrations on the X-axis and sample dates on the Y-axis with plots of permit limits superimposed on the X-axis.
  6. Reports shall include test data and analysis of all pressure falloff and MIT tests completed during the reporting period. Other report formats may be submitted with prior approval from the Administrator.
  7. If a well is dry at the time of sampling, the permittee shall report the well as dry.
- f. Monitoring Well monitoring requirements:
1. Prior to injecting any amendments, the Permittee shall collect an initial sample from the monitoring wells listed in **Table 8** for laboratory analysis, and semi-annually thereafter, in accordance with **Table 9**.

**Table 8 (Monitoring Well Locations)**

Well Name	API Number	Well Depth (feet)	Quarter/Quarter	Section	Township	Range
Groves 44-14	49005353050000	1169	SESE	14	45N	75W
Groves 22-13	49005467110000	1286	SENE	13	45N	75W
Groves 11-24	49005356260000	1221	NWNW	24	45N	75W
Groves 44-13	49005467160000	1354	SESE	13	45N	75W
Groves 42-14	49005465670000	1192	SENE	14	45N	75W

**Table 9 (Monitoring Well Monitoring Schedule)**

Sampling Schedule	Constituent Analyzed	EPA Analytical Method
Semiannual (grab) Jan 1 – June 30 Jul 1 – Dec 31	Alkalinity (Dissolved Inorganic Carbon)	A2320 B
	Ammonia	350.1, 350.2, 350.3
	Arsenic	200.7, 200.8, 200.9
	Bicarbonate	A2320 B
	Calcium	200.7
	Carbon 13 Isotope	Varies
	Carbonate	A2320 B
	Chloride	300.0
	Conductivity	Field
	Iron	200.7, 200.9

Sampling Schedule	Constituent Analyzed	EPA Analytical Method
Semiannual (grab) Jan 1 – June 30 Jul 1 – Dec 31	Magnesium	200.7
	Manganese	200.7, 200.8, 200.9
	Nickel	200.7, 200.8, 200.9
	Nitrate	300.0
	Nitrite	300.0
	pH	Field
	Potassium	200.7
	Residual Sodium Carbonate	Calculation
	Selenium	200.7, 200.8, 200.9
	Sodium	200.7
	Sulfate	300.0
	Hydrogen Sulfide	A4500 S-D
	Total Dissolved Solids	300.0
	Total Organic Carbon	5310C
	Turbidity	Field
Zinc	200.7, 200.8	

2. All samples collected from monitoring wells shall be analyzed by an independent, third-party EPA certified laboratory.

g. Monitoring Well Requirements:

1. The results of monitoring well sampling (laboratory results) for all wells listed in **Table 8** shall be reported quarterly in the UIC GEM database, copies of laboratory reports uploaded to GEM, and copies of laboratory reports provided to the well owner(s) within forty-five (45) days of the sample date.
2. The Permittee shall provide two (2) annual water quality summary reports to the Administrator, one hard copy and one in a digital format.
3. The reports shall be separate and specific from the groundwater monitoring and injectate reports described in Part I.c. and Part J.b. of the permit. The reports shall include the following:
  - i. A list of all monitoring wells that were sampled during the semiannual reporting period.
  - ii. The results of water quality analyses, including:
    - A. water quality sample date;
    - B. water quality analysis date;
    - C. detection limits;
    - D. EPA methods;
    - E. water quality analytes (sorted alphabetically); and

- F. water quality results (mg/L), including copies of the laboratory reports.
- iii. Well information, including:
    - A. well depths, if available publicly;
    - B. SEO permit number;
    - C. well name;
    - D.  $\frac{1}{4}$   $\frac{1}{4}$ , Section, Township, Range;
    - E. completed formation and/or perforated intervals, if available publicly; and
    - F. water levels, if available publicly.
  - iv. Analysis of sampling results, including:
    - A. A comparison of the current semiannual reporting period's results to previous results for each monitoring well sampled.
    - B. If a well that has been previously sampled was not sampled during the current semiannual reporting period, a description of why the well was not sampled.
- 4. The Permittee shall immediately notify the Administrator of potential water quality issues presented by a valid State Engineer Office (SEO) water well permit holder within the area of review (**Table 3**) or within  $\frac{1}{2}$  (one-half) mile of an injection or production well listed in **Table 2** of this permit.
  - 5. The Permittee shall immediately notify the Administrator and SEO water well permit holder of potential water quality issues encountered with any SEO-permitted water well.

**J. Requirements for Monitoring the Discharge**

"Injectate" is a mixture of amendments consisting of vitamins and minerals, multi-nutrients, cell vitality enhancers, and produced water. For the purposes of this permit, "injectate" does not refer to amendments that have not been diluted with produced water.

a. Injectate sampling requirements:

- 1. The Permittee shall meter volumes of all injectate emplaced into each well.
- 2. The permittee must report the specific vitamins and minerals, multi-nutrients, cell vitality enhancers, tracers, and produced water used to make up the injectate, the amounts or volumes of each amendment, the concentration of each amendment in the injectate, and the rate of injectate injection into the well. Due to the nature of some of the amendments, it is acceptable to calculate concentrations based upon known volume or weight of these amendments per unit volume of "make-up" or produced water and report these values to the Administrator. The permittee is required to describe how each amendment's concentration in the injectate was determined.

2. Amendments are incorporated into the injectate by a continuous-feed system. The injectate sampling required by this permit shall occur at a sample withdrawal port located downstream of the injection port, and is to be representative of the amendments and produced water.
3. Injectate sampling shall occur once per quarter. The Permittee is required to sample the injectate for all constituents listed in **Table 5 and Table 7**. Sample results and laboratory reports shall be reported and uploaded quarterly into the UIC GEM database within forty-five (45) days of the sample date, and in the annual water quality report described in Part J.b. of this permit.
4. Injectate quality shall not exceed injectate limits established in **Table 5 or Table 7** during any single sampling event at the point of injection for any constituent.
5. Only one injectate sample per monitoring period is required to be collected and analyzed for all constituents listed in **Table 5 and Table 7**.
6. All samples reported to the Administrator shall be unfiltered unless filtered samples are specified for the given analysis; turbidity shall not exceed 20 NTUs unless otherwise approved by the Administrator. Samples shall be collected such that they are representative of injectate without further treatment.
7. All samples collected to meet injectate sampling requirements shall be analyzed by an independent, third-party EPA certified laboratory.

b. Injectate reporting requirements:

1. The results (laboratory results) of injectate sampling shall be reported quarterly in the UIC GEM database, and copies of laboratory reports and analyses uploaded to GEM within thirty (45) days of the sample date.
2. The Permittee shall provide two (2) annual water quality summary reports to the Administrator, one hard copy and one in a digital format. Amendment reports will be held confidential by the Administrator.
3. The reports shall contain the following minimum information:
  - i. injection well names;
  - ii. name of coal seam being injected into;
  - iii. API numbers;
  - iv.  $\frac{1}{4}$   $\frac{1}{4}$ , Section, Township, Range location of each injection well;
  - v. injectate quality sample date;
  - vi. injectate quality analysis date;
  - vii. detection limits;
  - viii. EPA methods;
  - ix. injectate quality analytes (sorted alphabetically);

- x. injectate quality results (mg/L);
- xi. injection volumes;
- xii. injection pressures;
- xiii. injection rates;
- xiv. beginning and end dates of all well nutrient restorations;
- xv. permit limits.

**K. Test Procedures**

All samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity and in accordance with an approved Sampling and Analysis Plan. All required analyses shall be conducted in compliance with Wyoming Water Quality Rules and Regulations, Chapter 8, Section 7.

**L. Records and Reports**

The Permittee shall furnish to the Administrator within a specified time any information which the Administrator may request relating to the operation of the facility, including copies of records required to be kept by this permit. The Permittee shall retain copies of all records and reports required by this permit for a period of three (3) years following permanent well abandonment. After that time, those records shall be delivered to the Administrator for disposal or archive at his discretion. Reports of compliance or noncompliance with, and any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted no later than thirty (30) days following each schedule date.

Confirmed noncompliance resulting in the migration of injected fluid into any zone outside the permitted receiver shall be reported to the Administrator within twenty-four (24) hours, and a written submission (via certified mail) shall be provided within five (5) days of the time the Permittee becomes aware of the excursion. The written submission shall contain: a description of the noncompliance; the period of noncompliance, including exact dates and times, and if the noncompliance has not been controlled, the anticipated time it is expected to continue; and a list of the steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance.

Confirmed noncompliance not already reported under this section shall be reported at the time monitoring reports are submitted. The reports shall contain the same information as required by the paragraph above.

**M. Permit Actions**

This permit is issued for a period of ten (10) years. Injection may occur only during the first five (5) years of the permit.

If the permittee wishes to continue injection after the five (5) year injection duration of this permit, the permittee shall apply to the Administrator and obtain a new permit prior to the expiration date of this permit. An expired permit continues in effect until a new permit is issued or the permit is terminated by the Administrator. It shall not be a defense for the Permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. The filing of a request by the Permittee, or at the instigation of the Administrator, for permit modification, revocation, termination, or notification of planned changes or anticipated noncompliance shall not stay any condition of this permit.

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

1. Violation of this permit;
2. Obtaining a permit by misrepresentation of facts in the application; or
3. Failure of the tubing, casing, cement, or confining layers.

This permit will be reviewed at least once every five (5) years, and may be reviewed more frequently. A permit may be modified at any time as may be required, including for conformity with changes in regulations or standards which occur after the permit was issued. A permit may be modified in whole or part in order to apply more or less stringent standards; or prohibitions for toxic or other substances present in the permittee's discharge as may be ordered by the Environmental Quality Council.

#### **N. Mechanical Integrity**

Mechanical integrity shall be maintained continuously.

The following Part I mechanical integrity tests are required for each injection well identified in **Table 1** on a five (5) year basis, as long as injection is occurring during the life of this permit (once in 2012 and once in 2017) as follows:

1. The Permittee may not exceed 220 psig (measured at the surface) injection pressure in the wellbores (unless for testing purposes). The Permittee shall pressure test the casing before injection and at least once every five (5) years. The casing shall be pressure tested up to an indicated surface pressure of 700 psig and held for 15 minutes. A passing test shall show that there is a less than 10 percent (%) psig pressure loss after 15 minutes at 700 psig. The Administrator may eliminate the requirement for pressure testing if he/she determines wireline methods are deemed adequate.

#### **O. Abandonment or Conversion to Water Wells**

General Requirements:

1. The Permittee shall notify the Administrator at least seven (7) days before conversion or abandonment of the facility.
2. An abandonment report, detailing the compliance with abandonment procedures outlined in the original application for coverage under this permit, or describing any deviations from the original plan, shall be submitted as soon as practicable after abandonment. The abandonment shall include reclamation of the well site.
3. In no case shall the abandonment procedure be less stringent than that required at the time of abandonment by the Wyoming Oil and Gas Conservation Commission for the abandonment of producing oil wells.

4. Injection wells covered by this permit shall be permanently abandoned or converted to another use within three (3) years after the date when coal bed methane water was last injected unless those wells are converted to water wells.
5. Wells which are to be converted to another use shall be covered by an approved Wyoming State Engineer Office's permit to document that it has been converted to a water well. A copy of this permit shall be submitted to the Administrator as evidence that the well has been converted.

**P. Duties of the Permittee**

The Permittee shall give advance notice to the Administrator as soon as possible of any planned physical alteration or additions, other than authorized operation and maintenance, to the permitted facility and receive authorization prior to implementing the proposed alternation or addition. The Permittee shall furnish the Administrator within a reasonable time any information which the Administrator may request to determine whether cause exists for modifying, revoking, or reissuing, or terminating this permit, or to determine compliance with this permit; and to furnish to the Administrator upon request, copies of records required to be kept by this permit. Any modification which may result in a violation of a permit condition shall be reported to the Administrator, and any modification that will result in a violation of any permit conditions shall be reported to the Administrator through the submission of a new or amended permit application. The Permittee shall report all instances where he becomes aware that he failed to submit any relevant facts in the permit application, or where he submitted incorrect information in a permit application or in any report to the Administrator, and shall promptly submit such facts or information.

**Q. Signatories Requirement**

All reports filed in conjunction with this permit shall contain 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."

All reports required by this permit and other requested information shall be signed as follows:

For a corporation – by a principal executive officer of at least the level of vice-president;

For a partnership or sole proprietorship – by a general partner or the proprietor, respectively;

For a municipality, state, federal, or other public agency – by either a principal executive officer or ranking elected official; or

By a duly authorized representative for any of the above.

A person is a duly authorized representative only if:

1. The authorization is made in writing by one of the prescribed principals;
2. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
3. The written authorization is submitted to the Administrator.

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Administrator prior to or together with any reports or information, to be signed by the new authorized representative.

#### **R. Noncompliance**

The Permittee shall comply with all conditions of the permit. Any permit noncompliance constitutes a violation of Wyoming Water Quality Rules and Regulations, Chapter 16 and is grounds for enforcement action, permit termination, revocation, or modification. Noncompliance resulting in a violation shall be reported to the Administrator orally within twenty-four (24) hours, and a written submission shall be provided within five (5) days of the time the Permittee becomes aware of the violation. The written report shall contain the sections specified in Section K of this permit. Any permit noncompliance constitutes a violation of this permit.

The filing of any 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.

#### **S. Permit Transfer**

Any transfer of this permit shall be accomplished by the submission of the proper forms for permit transfer to the Administrator. Transfer of this permit must first be approved by the Administrator and the Director. No transfer shall be approved unless the proposed Permittee agrees to bring any and all noncompliance issues into compliance with this permit. The Permittee is alone responsible for the operation of the facility covered by this permit. Sale of the facility and subsequent operation of this facility by another is a violation of this permit unless a transfer of this permit has first been accomplished.

#### **T. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege. This permit does not authorize injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

#### **U. Severability**

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

**END OF PERMIT**



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

October 10, 2013

Mr. Jeffrey Moore  
Ciris Energy Inc.  
9155 East Nichols Ave., Suite 200  
Centennial, CO 80112

RE: Ciris Energy Inc. Antelope Project  
Final Permit **13-268**, Class V Miscellaneous Injection  
Campbell County, Wyoming

Dear Mr. Moore:

Attached please find one copy of the Class V CBM biomethanogenesis permit modification for the facility referenced above. This permit requires routine monitoring and reporting. The corresponding report forms can be filled out using our on-line webform (Monitor Reports Link), or you may have the lab submit them using the Electronic Data Deliverable system (EDD) at the following site: <http://gem.wqd.apps.deq.wyoming.gov/default.aspx>. Please use the exact well names/sampling point names used in your permit when reporting data to avoid any miscommunications.

The underground injection control program was promulgated to prevent serious problems caused by direct discharges to the groundwater. Those problems included groundwater pollution leading to contamination in domestic water wells and serious health affects caused by exposures to toxic substances and water borne pathogens. Your cooperation with our program is sincerely appreciated.

If you have any questions please do not hesitate to contact me at the below referenced phone number or email.

Sincerely,

Kathy Shreve  
Environmental Program Principal  
Wyoming Department of Environmental Quality  
Water Quality Division  
(307) 777-6682  
[kathy.shreve@wyo.gov](mailto:kathy.shreve@wyo.gov)

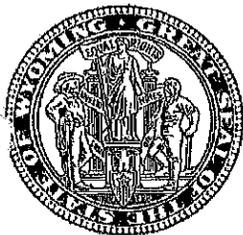
KS/rm/13-0993

Enclosures: Permit

cc: John Passehl, WDEQ







# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 23, 2013

### City of Laramie

Attn: David Derragon, Interim Public Works Director

P.O. Box C

Laramie, Wyoming 82073

RE: Laramie Special Purpose Tax Phase 4 – Schedule 2 Project,  
Application No. 13-269, Albany County

Dear Mr. Derragon:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Public Water Supply Distribution Systems** consisting of replacing approximately 800 lineal feet of 8-inch water main located in the Southeast ¼, Section 33, T16N, R73W, Albany County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the water distribution system in accordance with **Chapter 12, Section 14** of the Water Quality Division Rules and Regulations, in accordance with the general permit, the conditions listed below, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in **Part V, Section O** of the general permit. Additionally, the following project specific conditions also apply:

1. All storm sewer and sanitary sewer main crossings with the water main below the sewer main require flow fill encasement to be installed along the water main to a distance of 10 feet on center from the sewer main in both directions.

All construction, installation, or modification allowed by this Notification of Coverage shall be completed by July 23, 2018.

This Notice of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



Please reference Application No. 13-269 in any future correspondence.

If you have any questions, please contact me at either [seth.tourney@wyo.gov](mailto:seth.tourney@wyo.gov) or by phone at (307) 777-7088.

Sincerely,



Seth Tourney, P.E.  
Southeast District Engineer  
Water Quality Division

SWT/rm/13-0682

Enclosures: Certificate of Completion form

cc: IPS  
Cal Van Zee, City of Laramie, P.O. Box C, Laramie, Wyoming 82073  
John Wetstein, Wester-Wetstein & Associates, 605 Plaza Court, Laramie, Wyoming 82070



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 8, 2013

**Ruben & Melisa Navarro**  
535 Sybille Creek Road  
Wheatland, WY 82201

RE: Navarro Residential Septic System  
Application No. 13-270 Platte County

Dear Mr. & Mrs. Navarro:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility** consisting of a 1250 gallon, two compartment, concrete septic tank, discharging into about 368 feet of chamber type trench leachfield divided into **EITHER** - two equal rows of at least 22 *Infiltrator* brand, Quick4 High Capacity model chamber units each - **OR** - four equal rows of at least 11 *Infiltrator* brand, Quick4 High Capacity model chamber units each, for a 5 bedroom home, **located in the W½ of Section 31, T24N, R68W, Platte County**, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the small wastewater system in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, the condition listed below, and the materials submitted in your application package.

Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **July 8, 2015**.

The following project specific condition also applies:

**Septic Tank Clean-Out Riser Requirement** - Either a 6 inch diameter clean-out riser or the manway from each compartment of the septic tank must be extended to the ground surface.

This **Notice of Coverage** is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General Permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7158 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7156 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



Please reference Application No. 13-270 in any future correspondence.

If you have any questions, please contact me at either [ron.ewald@wyo.gov](mailto:ron.ewald@wyo.gov) or by phone at (307) 777-6183.

Sincerely,



Ronald L. Ewald  
Assistant Southeast District Engineer  
Southeast District, Water & Wastewater Section  
Water Quality Division

RLE/rm/13-0612

Enclosures: Certificate of Completion form

cc: IPS, Cheyenne  
Dodge Excavating, Tyler Dodge, 1256 Sybille Creek Road, Wheatland, WY 82201  
Platte County Planning Office, Reed Elmquist, P.O. Box 728, Wheatland,  
Wyoming 82201



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

**July 23, 2013**

### City of Laramie

Attn: Dave Derragon, Acting Public Works Director  
P.O. Box C  
Laramie, Wyoming 82073

RE: Grand Avenue Waterline Replacement,  
Application No. **13-271, Albany County**

Dear Mr. Derragon:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Public Water Supply Distribution Systems** consisting of installing approximately 150 lineal feet of 30-inch water main, 150 lineal feet of 16-inch water main, 160 lineal feet of 8-inch water main and Existing **Sewage Collection Systems** consisting of replacing approximately 315 lineal feet of 8-inch sanitary sewer main located in the **Section 34, T16N, R73W, Albany County**, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the water distribution system in accordance with **Chapter 12, Section 14** of the Water Quality Division Rules and Regulations, the sewage collection system in accordance with **Chapter 11, Section 9** of the Water Quality Division Rules and Regulations, and both systems in accordance with the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in **Part V, Section O** of the general permit. Additionally, the following project specific conditions also apply:

All construction, installation, or modification allowed by this Notification of Coverage shall be completed by July 23, 2018.

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



This Notice of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Please reference Application No. 13-271 in any future correspondence.

If you have any questions, please contact me at either [seth.tourney@wyo.gov](mailto:seth.tourney@wyo.gov) or by phone at (307) 777-7088.

Sincerely,



Seth Tourney, P.E.  
Southeast District Engineer  
Water Quality Division

SWT/rm/13-0684

Enclosures: Certificate of Completion form

cc: IPS

Cal Van Zee, City of Laramie, P.O. Box C, Laramie, Wyoming 82073

Claudia Torrence, Trihydro Corporation, 1252 Commerce Drive, Laramie, Wyoming 82070



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 23, 2013

### City of Laramie

Attn: Dave Derragon, Acting Public Works Director  
P.O. Box C  
Laramie, Wyoming 82073

RE: Laramie, Wyo., SPT, Phase 4, Schedule 5,  
Application No. 13-273, Albany County

Dear Mr. Derragon:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Public Water Supply Distribution Systems** consisting of replacing approximately 30 lineal feet of 6-inch water main and Existing Sewage Collection Systems consisting of replacing approximately 1,630 lineal feet of 8-inch sanitary sewer main located in the Section 4, T15N, R73W, Albany County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the water distribution system in accordance with Chapter 12, Section 14 of the Water Quality Division Rules and Regulations, the sewage collection system in accordance with Chapter 11, Section 9 of the Water Quality Division Rules and Regulations, and both systems in accordance with the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. Additionally, the following project specific conditions also apply:

All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **July 23, 2018**.

This Notice of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Herschler Building · 122 West 25th Street · Cheyenne, WY 82002 · <http://deq.state.wy.us>

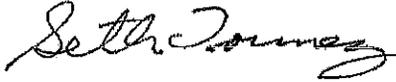
ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



Please reference Application No. 13-273 in any future correspondence.

If you have any questions, please contact me at either [seth.tourney@wyo.gov](mailto:seth.tourney@wyo.gov) or by phone at (307) 777-7088.

Sincerely,



Seth Tourney, P.E.  
Southeast District Engineer  
Water Quality Division

SWT/rm/13-0681

Enclosures: Certificate of Completion form

cc: IPS  
Cal Van Zee, City of Laramie, P.O. Box C, Laramie, Wyoming 82073  
John E. Garner, Farnsworth Group, 1612 Specht Point Road, Suite 105, Fort Collins, CO 80525



## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 • Casper, WY 82601 • (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 17, 2013

Jerry Stone  
P.O. Box 51146  
Casper, WY 82605

RE: Lot 36 of Skyview Industrial Park – 4" Fire Line  
Application No. 13-274, Natrona County

Dear Mr. Stone:

The above application for coverage under General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Water Supply Distribution Systems consisting of the construction of approximately 150 feet of 4 inch waterline located in **Section 32, Township 34N, Range 79W**, Natrona County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 12** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2015.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Lewis James, P.E., JKC Engineering, 111 West 2<sup>nd</sup> Street, Suite 420, Casper, WY 82601





# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 • Casper, WY 82601 • (307) 473-3450

John Corra, Director

## NOTIFICATION OF COVERAGE

September 19, 2013

Tom Necklason  
Crook County School District #1  
P.O. Box 830  
Sundance, WY 82729

RE: Crook County School District #1 – Moorcroft K-8  
Application No. 13-275, Crook County

Dear Mr. Necklason:

The above application for coverage under General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Water Supply Distribution Systems and Existing Sewage Collection Systems, consisting of the installation of approximately 1,025 feet of PVC sanitary sewer line including five manholes and 1,955 feet of PVC waterline including six hydrants located in the NE ¼, **Section 6, Township 49N, Range 67W**, Crook County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 11 and 12** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **December 31, 2015**.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File (electronic)  
Jay Ligocki, P.E., Vista West Engineering, 1470 Sugarland Drive, Suite 3, Sheridan, WY 82801  
Dan Blakeman, Town of Moorcroft, P.O. Box 70, Moorcroft, WY 82721 (permit only)





# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

July 17, 2013

Jay Ligocki, P.E.  
Vista West Engineering  
1470 Sugarland Drive, Suite 3  
Sheridan, WY 82801

RE: Crook County School District #1 – Moorcroft K-8  
Location: NE ¼, Section 6, Township 49N, Range 67W  
WDEQ Application #13-275

Dear Mr. Ligocki:

We have completed our review of the permit application submitted on June 26, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3469 should you have any questions related to these comments or the application and review process.

Sincerely,

Jason Vreeland, P.E.  
Assistant Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS  
WDEQ File



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** Crook County School District #1 – Moorcroft K-8

**LOCATION:** Moorcroft, Wyoming

**ENGINEER:** Vista West Engineering

**APPLICANT:** Crook County School District #1

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-275**

**DATE ON PROPOSAL/PLANS/REPORT:** June 26, 2013

**DATE RECEIVED BY DEQ:** June 26, 2013

**DATE OF THIS REVIEW:** July 17, 2013

**WDEQ REVIEWER:** Jason Vreeland, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 11&12, Section 7(b)&7(c) – Please provide a plan set with plan and profile views at a legible scale with profiles on the same sheet as the plan views in accordance with WWQRR.
- 2) Chapter 11, Section 6(b) – Please provide a letter of acceptance from the City concerning their approval of the proposed connection.
- 3) Chapter 11, Section 6(b) – Please comment on the downstream impacts to the existing sewers, lift stations, treatment facilities and the capacity of the Town’s system.

- 4) Chapter 12, Section 14(b) – Please provide more information on the type of fire suppression system to be installed including sprinkler system type and minimum pressure required for the system. Also, the specifications provided in Appendix D refer to a reduced pressure backflow preventer. Is this to be installed on the service line?
- 5) Chapter 12, Section 14(b) – The design report refers to the IFC stating that the IFC allows fire flows to be reduced on fully-sprinkled buildings. The referenced section allows for the fire flows to be reduced up to 75% when approved. Has the local fire district approved of this?
- 6) Chapter 12, Section 14(b) – The design report indicates that the required fire flow is 1,850 gpm for 4 hours. Please demonstrate that the Town has adequate storage or supply to maintain this flow.
- 7) Chapter 12, Section 14(e) – The profile appears to show the waterline with several high points and without air relief. Please address.



# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

August 1, 2013

Bill Urbigit, Public Works Director  
City of Riverton  
816 N. Federal BLVD  
Riverton, WY 82501

RE: Federal Blvd. Infrastructure Improvements  
DEQ Permit #13-277  
Located in Fremont County, E 1/2, S 34 and W 1/2, S 35, T 1N, R 4E

Dear Mr. Urbigit,

This project consists of the installation of water and sewer system upgrades on Federal Blvd from North of Washington Street to South of Monroe.

The above application for coverage under General Permit has been reviewed in accordance with Chapter 3, Section 7; Chapter 11 and Chapter 12 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facility in accordance with the general permit and the materials submitted in your application package, and the General Permit to Construct, Install, Modify or Operate Extensions to or Modification to Existing Public Water Supply Distribution Systems and the General Permit to Construct, Install, Modify or Operate Extensions to or Modification of Existing Sewage Collection Systems. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. Construction shall be completed by Dec 31, 2015

Your attention is directed to the attached Certificate of Completion form, which is to be submitted within 60 days of the completion of the aforementioned project.

These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact Hannes Stueckler at 307-335-6964 or James Brough at 307-335-6961.

Sincerely,

Hannes E. Stueckler, P.E.  
Assistant Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
Kyle Lehto P.E., HDR Engineering, Inc., P.O. Box 1836, Riverton, WY 82501

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6755  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726





# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 3, 2013

Jerry Blane, President  
JHMR Employee Housing  
P.O. Box 290  
Teton Village, WY 83025

RE: JHMR Employee Housing Water Line and Sewer Line Project, Permit No. 13-278, Latitude 43.4692 N., Longitude -110.7890 W, Teton County

Dear Mr. Blane:

This project involves the re-alignment and installation of about 543 linear feet of 8-inch and 6-inch water mains and about 226 linear feet of 8-inch sewer main. This project will serve ten residential apartment buildings. The above application for coverage under General Permits to Construct the extension of a public water distribution system has been reviewed in accordance with Chapter 3, Section 7; Chapter 11, Section 9; and Chapter 12, Section 14 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

James Brough, P.E.  
Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
Robert Norton, P.E., Nelson Engineering, P.O.Box 1599, Jackson, WY 83001  
Shawn O'Malley, P.E., Town of Jackson, P.O. Box 1687, Jackson, WY 83001

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6755  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 2, 2013

Robin Stuart  
19 Emerald Avenue  
Gillette, WY 82716

RE: Stuart Small Wastewater System  
Application No. 13-279, Crook County

Dear Mr. Stuart:

The above application for coverage under General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility consisting of a 1,500 gallon Norwesco polyethylene septic tank, discharging into four trenches of eleven Infiltrator Quick 4 chambers each, for a four bedroom home located in the NW¼, **Section 24, Township 50N, Range 66W**, Crook County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2014.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Additionally, the following permit condition applies:

1. Cleanouts are required every 100 feet and at all changes in direction 22.5 degrees and greater.
2. Flow-divider tees or a distribution box is required to evenly split flow between trenches. Standard tees are not an adequate substitute for flow-dividing tees.
3. The RV connection must be constructed as noted in the detail attached to the application packet or as approved by the District Engineer.

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Tim Lyons, Crook County Growth and Development

Cheyenne  
122 West 25<sup>th</sup> Street 82002  
(307) 777-7937

Lander  
510 Meadowview Drive 82520  
(307) 332-3144

Sheridan  
2100 W. 5<sup>th</sup> Street 82801  
(307) 673-9337





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 19, 2013

William Koenig  
1103 West 21<sup>st</sup> Street  
Casper, WY 82604

RE: WCK Properties, Sanitary Sewer Main Extension  
Application No. 13-281, Natrona County

Dear Mr. Koenig:

The above application for coverage under General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Sewage Collection Systems, consisting of the installation of 185 feet of six inch sanitary sewer line and one manhole located in the **SE ¼, Section 20, Township 34N, Range 79W**, Natrona County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 11** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **December 31, 2015**.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Shawn Gustafson, P.E., ECS Engineers, 1607 CY Avenue, Suite 102, Casper, WY 82604





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

September 4, 2013

### U.S. Bureau of Reclamation

Attn: Coleman W. Smith, Area Manager  
P.O. Box 1630  
Mills, WY 82644

RE: Guernsey State Park – Dump Station Water System Rehabilitation,  
Application No. 13-282, **Platte County**

Dear Mr. Smith:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate Extensions to or Modifications of Existing Public Water Supply Distribution Systems** consisting of extending the well casing, installing a pitless adapter and pressure tank located in the Northwest ¼ of the **Southwest ¼, Section 27, T27N, R66W, Platte County**, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the water distribution system in accordance with **Chapter 12, Section 14** of the Water Quality Division Rules and Regulations, in accordance with the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in **Part V, Section O** of the general permit. Additionally, the following project specific conditions also apply:

All construction, installation, or modification allowed by this Notification of Coverage shall be completed by September 4, 2017.

This Notice of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

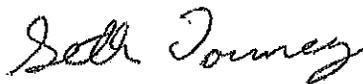
ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



Please reference Application No. 13-282 in any future correspondence.

If you have any questions, please contact me at either [seth.tourney@wyo.gov](mailto:seth.tourney@wyo.gov) or by phone at (307) 777-7088.

Sincerely,



Seth Tourney, P.E.  
Southeast District Engineer  
Water Quality Division

SWT/rm/13-0845

Enclosures: Certificate of Completion form

cc: IPS  
Darin Westby, Wyoming State Parks, Historic Sites & Trails, 2301 Central Avenue, Barrett Bldg. 4<sup>th</sup>,  
Cheyenne, WY 82002  
Lance Marrs, Wyoming State Parks, Historic Sites and Trails, 2301 Central Avenue, Barrett Bldg. 4<sup>th</sup>,  
Cheyenne, WY 82002

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-283

REFERENCE PERMIT NO. 09-380

City of Sundance Cole Tank Relocation, PWS No. WY5600055

This permit hereby authorizes the applicant:

Larry Schommer, Public Works Director  
City of Sundance  
213 Main Street, P.O. Box 542  
Sundance, WY 82729

to construct, install or modify the relocation of an existing 256,000 gallon potable water storage tank and associated transmission lines according to the procedures and conditions of the application number 13-283. The facility is located in Section 31, Township 52 North, Range 62 West, further located in Crook County, Wyoming. All construction, installation, or modification allowed by this permit shall be completed by December 31, 2015.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable permit conditions or other operational requirements. Compliance with all applicable standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 5                    The applicant will provide immediate oral or written notice to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601, Phone 307-473-3465, FAX 307-473-3458, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
- 2 of 5                    Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
- 3 of 5                    Within thirty days of completion of construction of the authorized facility, the Engineer of Record will submit two (2) complete copies of the Operation and Maintenance Manuals to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY 82601.
- 4 of 5                    The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".
- 5 of 5                    Construction of the storage tank will not commence until the WDEQ/WQD Northeast District Office has been provided, and has approved, the storage tank structural and foundation designs sealed by a Wyoming professional engineer.

AUTHORIZED BY:



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

8-7-13

Date of Issuance

JRV/rm/13-0736

cc: Tammy Reed, P.E., Trihydro Corporation, 1252 Commerce Drive, Laramie, WY 82070  
John Gillis, PhD, EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129

## STATEMENT OF BASIS

1. Permit Number: **13-283**
2. Application reviewed for compliance with the following applicable regulations :  
  
CHAPTER 3 AND CHAPTER 12 OF THE WYOMING WATER QUALITY RULES AND REGULATIONS AND POLICIES 14.13.2 AND 14.13.3.
3. Does the permit comply with all applicable regulations identified above?  
  
YES
4. Facilities include components not specifically covered or differing from applicable regulations and approval is based upon a deviation in accordance with Section 5.  
  
NO
5. A review to determine groundwater impacts in accordance with Section 17, Chapter 3 is not required.
6. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Jason Vreeland, P.E., and completed on August 7, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis."



# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

July 18, 2013

Tammy Reed, P.E.  
Trihydro Corporation  
1252 Commerce Drive  
Laramie, WY 82070

RE: City of Sundance Cole Water Storage Tank Relocation  
Location: Section 31, Township 52N, Range 62W  
WDEQ Application #13-283

Dear Ms. Reed:

We have completed our review of the permit application submitted on July 2, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3469 should you have any questions related to these comments or the application and review process.

Sincerely,

Jason Vreeland, P.E.  
Assistant Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS  
WDEQ File



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** City of Sundance Cole Water Storage Tank Relocation

**LOCATION:** Sundance, Wyoming

**ENGINEER:** Trihydro Corporation

**APPLICANT:** City of Sundance

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-283**

**DATE ON PROPOSAL/PLANS/REPORT:** June 28, 2013

**DATE RECEIVED BY DEQ:** July 2, 2013

**DATE OF THIS REVIEW:** July 18, 2013

**WDEQ REVIEWER:** Jason Vreeland, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 12, Section 7(d) and 13(a)(iv-viii) -- Please submit details of the tank vents, overflow, inlet and outlet, and overflow outfall. Additionally, please address the attached WDEQ policies 14.13.2 and 14.13.3.
- 2) Chapter 12, Section 13(a)(vi) -- Please provide the calculations demonstrating that the overflow pipe will be of sufficient diameter to permit wasting of water in excess of the filling rate.
- 3) The inlet and outlet pipe vertical alignments appear to be on a slope as high as 27%. Has the need for pipe anchors been evaluated for this alignment?



## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 15, 2013

Edward Houck  
CE Ranch LLC.  
322 Highway 111  
Aladdin, WY 82710

RE: Houck Small Wastewater System  
Application No. 13-284, Crook County

Dear Mr. Houck:

The above application for coverage under General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility consisting of a 1,000 gallon J&D Precast concrete septic tank, discharging into one trench of seventeen Infiltrator Quick 4 standard chambers, for a barn located in the NW $\frac{1}{4}$ , Section 9, Township 53N, Range 61W, Crook County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **December 31, 2015**.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Additionally, the following permit condition applies:

1. Cleanouts are required every 100 feet and at all changes in direction 22.5 degrees and greater.

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Tim Lyons, Crook County Growth and Development



WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-285

REFERENCE PERMIT NO. 13-095

Upton Logistics Center Sewer Extension

This permit hereby authorizes the applicant:

Weston County Development Board  
Carmen Diehl  
P.O. Box 255  
Upton, WY 82730

to construct, install or modify the Upton Logistics Center Sewer Extension project consisting of a lift station and approximately 6,350 feet of gravity and force main sanitary sewer line according to the procedures and conditions of the application number 13-285. The facility is located in the NE ¼ of Section 34, Township 48 North, Range 65 West, further located in Weston County, Wyoming. All construction, installation, or modification allowed by this permit shall be completed by December 31, 2015.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable permit conditions or other operational requirements. Compliance with all applicable standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

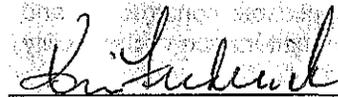
The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

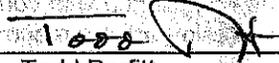
In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 4 The applicant will provide immediate oral or written notice to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601, Phone 307-473-3465, FAX 307-473-3458, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
- 2 of 4 Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
- 3 of 4 Within thirty days of completion of construction of the authorized facility, the Engineer of Record will submit two (2) complete copies of the Operation and Maintenance Manuals to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY 82601.
- 4 of 4 The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

**AUTHORIZED BY:**



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

12-5-13  
Date of Issuance

JRV/rm/13-1139

cc: Nicholas Marty, P.E., Bearlodge LTD., Inc., P.O. Box 130, Sundance, WY 82729  
Don Sharkey, Town of Upton, P.O. Box 203, Upton, WY 82730

## STATEMENT OF BASIS

1. Permit Number: **13-285**
2. Application reviewed for compliance with the following applicable regulations :  
  
CHAPTER 3 AND CHAPTER 11 OF THE WYOMING WATER QUALITY RULES AND REGULATIONS
3. Does the permit comply with all applicable regulations identified above?  
  
YES
4. Facilities include components not specifically covered or differing from applicable regulations and approval is based upon a deviation in accordance with Section 5.  
  
N/A
5. A review to determine groundwater impacts in accordance with Section 17, Chapter 3 is not required.
6. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Jason Vreeland, P.E., and completed on December 4, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis."



# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

July 25, 2013

Nicholas Marty, P.E.  
Bearlodge Engineering  
P.O. Box 130  
Sundance, WY 82729

RE: 2013 Town of Upton & Industrial Park Sanitary Sewer Improvements 2013  
Location: NE ¼, Section 34, Township 48N, Range 65W  
WDEQ Application #13-285

Dear Mr. Marty:

We have completed our review of the permit application submitted on July 3, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3478 should you have any questions related to these comments or the application and review process.

Sincerely,

Karen L. Farley, P.E.  
Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc:

IPS  
WDEQ File



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** 2013 Town of Upton & Industrial Park Sanitary Sewer Improvements

**LOCATION:** Upton, Wyoming

**ENGINEER:** Bearlodge Engineering

**APPLICANT:** Weston County Development Board

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-285**

**DATE ON PROPOSAL/PLANS/REPORT:** May 10, 2013

**DATE RECEIVED BY DEQ:** July 3, 2013

**DATE OF THIS REVIEW:** July 25, 2013

**WDEQ REVIEWER:** Karen L. Farley, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 11, Section 10(a) – Please provide more information on the pumping station design including total dynamic head, net positive suction head, specific type of pump, pump curves, and back-up power.
- 2) Chapter 11, Section 6(b) – Page 1 of the design report references Exhibit 1 which displays the current and proposed service area. It appears that this exhibit was not provided. Please address.
- 3) Chapter 11, Section 6(b) – Please clarify the design flow. The table on page 2 appears to indicate a design flow of 143 gpm on peak day (we calculated 154 gpm), the wetwell fill rate is listed as 139 gpm on page 3, and the specifications appear to indicate the pump must be sized based on 98 gpm. Please address.

- 4) Chapter 11, Section 6(b)(iii) – The downstream impacts were presented in the report, but not evaluated. For example, the sanitary sewer main in Aspen Avenue shows a capacity of 256 gpm – with the addition of this project, the capacity will be almost met. Please provide a more complete analysis of the downstream sections. It appears, at first glance, that the Aspen Avenue main may need to be upsized.
- 5) Chapter 11, Section 7(b) – The plan set does not appear to indicate the pipe type for the force main either on sheet 3 or on the profile. The wet well detail shows 4" PVC – C900 as the effluent pipe, but there is no further information either in the plan view, profile view, design report, or project manual. Please address.
- 6) Chapter 11, Section 7(b) – The plan set appears to be missing sheet 2. Please address.
- 7) Chapter 11, Section 9(d) – Please justify the use of brick and mortar to adjust manholes as indicated on sheet 5.
- 8) Chapter 11, Section 9(c)(ii)(C) – Please confirm that velocities in the force main are no less than 2.5 fps. In addition, please justify the use of 4" force main for this project.
- 9) Chapters 11, Section 9(c)(ii)(E) – WWQRR require cleanouts at a maximum spacing of 400 feet in pressure piping. Please address.
- 10) Chapter 11, Section 9(f) – The water crossing at station 45+60 appears to be less than 18 inches in vertical clearance.
- 11) Chapter 11, Section 9(e)(iii) – Stream Crossings. "Pipe shall have a minimum cover of one foot in rock, and three feet under other surfaces. The crossing shall be made with an inverted siphon or without a grade change. Pipe materials shall be steel, cast iron, or ductile iron pipe." Please address.
- 12) The design is not stamped – please provide 3 copies of the stamped and sealed design report.
- 13) There is conflicting titles for this project – the application form gives a description that includes the words "Industrial Park"; the header of the design report shows "Logistic Center Waterline 2013"; the project manual has a title of "Upton Logistic Center Sewer Improvements 2013". Please address.
- 14) The paragraph titled "Wetwell Fill Rate (Pumps Idle, Peak Flow Scenario)" that is given on Page 3 of the design report needs to be clarified. It is very confusing and doesn't seem to correlate with other aspects of the project.



# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

December 5, 2013

Mark Hines, P.E.  
DOWL HKM  
1901 Energy Court, Suite 170  
Gillette, WY 82718

RE: Gillette Regional Water Supply Project – Phase I District Extensions  
Location: Section 11, Township 49N, Range 72W, Campbell County  
WDEQ Application #13-286

Dear Mr. Hines:

We have completed our review of the response submitted on November 13, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3469 should you have any questions related to these comments or the application and review process.

Sincerely,

Jason Vreeland, P.E.  
Assistant Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS:  
WDEQ File  
Mike Cole, P.E., City of Gillette Utilities Department, 611 N. Exchange Avenue, Gillette, WY 82716



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

**PROJECT:** Gillette Regional Water Supply – Phase I District Extensions  
**LOCATION:** Campbell County, Wyoming  
**ENGINEER:** DOWL HKM  
**APPLICANT:** City of Gillette

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-286**

**DATE ON PROPOSAL/PLANS/REPORT:** November 11, 2013

**DATE RECEIVED BY DEQ:** November 13, 2013

**DATE OF THIS REVIEW:** December 5, 2013

**WDEQ REVIEWER:** Jason Vreeland, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 12, Section 12(b) – Please provide justification for the use of portable generators as alternative power. Justification should address response time to install a portable generator as well as the expected pressure drop in the system prior to activation of alternative power. Also, if a combination of storage and pumping capacity supplied by alternative power is used, please provide the calculations supporting that the two are able to provide the maximum day demand.

- 2) Chapters 12, Section 14(e) – A variance to the regulation requiring vaults to drain to the surface of the ground, or be provided with a sump for a permanent or portable pump, will not be granted without justification. The current City of Gillette standards with regards to valve vaults does not comply with the WWQRR and is not sufficient justification for a variance. Variances are to be granted on an individual basis and will not be given to the City for every vault to be installed unless each is justified individually. If site specific conditions warrant a vault without a sump a variance will be considered.



# Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

August 14, 2013

Mark Hines, P.E.  
DOWL HKM  
1901 Energy Court, Suite 170  
Gillette, WY 82718

RE: Gillette Regional Water Supply Project -- Phase I District Extensions  
Location: Section 11, Township 49N, Range 72W, Campbell County  
WDEQ Application #13-286

Dear Mr. Hines:

We have completed our review of the permit application submitted on July 1, 2013. Attached you will find a summary of the review comments. Please provide the information requested as soon as possible. Please feel free to contact me at (307) 473-3469 should you have any questions related to these comments or the application and review process.

Sincerely,

Jason Vreeland, P.E.  
Assistant Northeast District Engineer  
WDEQ/WQD

Attachments: WDEQ Comments

cc: IPS  
WDEQ File  
Mike Cole, P.E., City of Gillette Utilities Department, 611 N. Exchange Avenue, Gillette, WY 82716



**REVIEW OF PLANS & SPECIFICATIONS**  
**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**WATER QUALITY DIVISION**  
**152 North Durbin Street, Suite 100**  
**Casper, Wyoming 82601**  
**Phone (307) 473-3465**

---

**PROJECT:** Gillette Regional Water Supply – Phase I District Extensions

**LOCATION:** Campbell County, Wyoming

**ENGINEER:** DOWL HKM

**APPLICANT:** City of Gillette

**WATER QUALITY DIVISION APPLICATION NUMBER: 13-286**

**DATE ON PROPOSAL/PLANS/REPORT:** June 25, 2013

**DATE RECEIVED BY DEQ:** July 1, 2013

**DATE OF THIS REVIEW:** August 14, 2013

**WDEQ REVIEWER:** Jason Vreeland, P.E.

**ACTION: NOT AUTHORIZED FOR CONSTRUCTION.** In accordance with Chapter 3, Section 14 (a), Wyoming Water Quality Rules and Regulations (WWQRR), the application is denied because it is incomplete and/or contains errors. Please address the comments outlined below and submit the requested information/clarifications in order that the application process may be completed in accordance with Chapter 3, Section 9 of the WWQRR. If the applicant fails to provide the requested information within six months, the incomplete application shall be returned. **This review may not include all deficiencies and shall not be construed as a complete comprehensive list.**

**WDEQ COMMENTS**

- 1) Chapter 12, Section 7 – The plan set and project manual indicate they are for a 90% submittal and not for construction. Please provide three copies of the “for construction” plan set and project manual.
- 2) Chapter 12, Section 7(c) – Please label the pipe type for the directional bore at all locations.
- 3) Chapter 12, Section 9 – Please comment on the connecting systems and if their current water supply will be abandoned.

- 4) Chapter 12, Section 11(c) – What form of chlorination is expected at the Antelope Valley and Gillette West pumping stations? If chlorine gas will be used, please address the requirements of Section 11(c) in Chapter 12 of the WWQRR with respect to storage areas, ventilation, etc. Other forms of chlorination must address the applicable sections in Chapter 12 of WWQRR.
- 5) Chapters 12, Section 12(a) – For each pumping station please provide the total dynamic head, pump curves, and the net positive suction head required and available. Also, please comment on the proximity to the 100-year flood elevation or highest recorded flood elevation, whichever is higher.
- 6) Chapter 12, Section 12(a) – The final hydraulics report indicates that the Z1, R5 Tank has an HGL of 4764'. The report also indicates that the W. Gillette Pump Station will be at an elevation of 4670' for an elevation difference of 94 feet. The design report indicates that the suction head on this pump will equal the Zone 1 HGL minus pump elevation or about 80'. Please address.
- 7) Chapter 12, Section 12(b) – Please comment on the ability of the system to supply the maximum daily demand in all areas affected by the pumping stations, proposed and existing, in the event of a power outage at the pumping stations, while maintaining a minimum pressure of 20 psi. WWQRR require alternate power where the finished water storage volume that floats on the distribution system is not capable of supplying the maximum daily demand.
- 8) Chapter 12, Section 12(g) – Please comment on the heating systems of the pumping stations and the minimum design temperature.
- 9) Chapter 12, Section 14(a) – The design report indicates that C909 will be allowed as an equal to C900/C905. The design report also indicates that DR18, PC 235 pipe will be used exclusively. Please comment on the availability of 16 inch C909 PC 235 pipe. It is my understanding that 16 inch PVC0 is only available in PC 165.
- 10) Chapter 12, Section 14(b) – Sheet SUM-4 of the plan set indicates that the Cook Road Water District Transmission Pipeline pressure is 29 psi. WWQRR require working pressures of at least 35 psi. Please address.
- 11) Chapter 12, Section 14(b) – The dead-end at Station 300+00 on Sheet WA-24 doesn't appear to have a flushing hydrant or blowoff for flushing purposes. WWQRR require either a flushing hydrant or blowoff at dead-end lines.
- 12) Chapter 12, Section 14(b) – The final hydraulics report indicates that the Antelope Valley pump station will be required to pump to the future 4950 zone established by the future Southeast Tank. The design report indicates that the pressure zone downstream of the proposed pump station will be at HGL=4908'. Please address.
- 13) Chapter 12, Section 14(b) – The design report indicates that the pipeline feeding the Antelope Valley Pump station is sized to supply 1,210 gpm. The final hydraulics report indicates that the total flow including the Crestview system is 1,320 gpm. Will the transmission line be able to accommodate the Crestview system?
- 14) Chapter 12, Section 14(b) – The design report indicates that the Antelope Valley Business Park line was designed as an 8 inch transmission line but may be increased to 12 or 16 inches. Please clarify what is to be installed.
- 15) Chapter 12, Section 14(c) – Please show the culvert crossing in the profile at station 327+30 on Sheet WA-28, 345+20 on Sheet WA-30, 364+00 on Sheet WA-33, 378+15 on Sheet WA-35, 382+00 on Sheet WA-35, 432+40 on Sheet WA-43, and 451+00 on Sheet WA-45.

- 16) Chapter 12, Section 14(c) – The water crossings at station 411+59 on Sheet WA-40 and 681+00 on Sheet WA-68 do not appear to have valves on either side of the crossing. Valves are required at water crossings with the valve closest to the supply source in a manhole.
- 17) Chapter 12, Section 14(c) – The design report indicates the typical valve spacing will be approximately one mile for this project. This spacing exceeds the minimum valve spacing as required by WWQRR. A variance may be requested but it must be accompanied by adequate justification. Typically a variance is not granted for valve spacing exceeding ½ mile. Please address.
- 18) Chapters 12, Section 14(e) – WWQRR require vaults to drain to the surface of the ground or provided with a sump for a permanent or portable pump. Please address.
- 19) Chapter 12, Section 14(i) – The design report indicates that water service will be provided to water districts through RPZ type backflow preventers located in the control buildings. Sheet M-8 does not appear to require backflow prevention for the Antelope Valley connection. Will backflow prevention be installed at this location?



# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 18, 2013

Pamela Hopkinson, Mayor  
Town of Byron  
P.O. Box 5  
Byron, WY 82412

RE: North Big Horn Avenue Sewer Line Extension Project, Permit No. 13-287, Township 56N, Range 97W, Big Horn County

Dear Mayor Hopkinson:

This project consists of installing approximately 930 linear feet of 8-inch sewer mains and four manholes along North Bighorn Street from East Platt Avenue to East Clarks Avenue. The above application for coverage under General Permits to Construct the extension of an existing sewer collection system has been reviewed in accordance with Chapter 3, Section 7; and Chapter 11, Section 9 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

James Brough, P.E.  
Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
David Bergh, GDA Engineers, P.O. Box 338, Cody, WY 82414

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6755  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726





# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 12, 2013

HB Properties LLC  
David Williams  
2280 South Main  
Salt Lake City, Utah 84115

RE: Rock Springs - Burger King Restaurant - Water and Sewer Main Extensions - Permit Number 13-288, SE ¼ Section 33, SW ¼ Section 34, T19N, R105W, Sweetwater County

Dear Mr. Williams:

The above application for coverage under General Permit to Construct for the extension of a **Public Water Supply System** consisting of about 136 linear feet (LF) of 8-inch PVC water main and 170 LF of 6-inch PVC water main and the extension of a **Public Sewage Collection System** consisting of two separate systems, the Burger King Restaurant with about 165 LF of 6-inch sewer main, two manholes, one cleanout and a 1000 gallon grease trap, a future Restaurant with about 35 LF of 6-inch sewer main, one manhole, one cleanout and a 1000 gallon grease trap in accordance with Chapter 3, Section 7, Chapter 12, Section 14 and Chapter 11, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

Mark Baron, P.E.  
Southwest District Engineer  
Water Quality Division

PDF to Cheyenne

Loony Reed, P.E., Legend Engineering, 52 West 100 North, Heber City, UT 84032



WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT No. 13-289

Reference Permit No. 11-271

PacifiCorp Jim Bridger Power Plant - Replacement of Sewage Treatment Facility

This permit hereby authorizes the applicant:

Ricky Tripp  
PacifiCorp Jim Bridger Power Plant  
P.O. Box 158  
Point of Rocks, WY 82942

to construct a domestic wastewater treatment facility consisting of sewage pretreatment, primary treatment, secondary settling, sludge handling and disposal, disinfection and a sewage treatment building to serve the power plant workforce at an average sewage treatment rate of 15 gallon per minute, according to the procedures and conditions of the application number 13-289. The facility is located about 9 miles north of Point of Rocks, WY, at Lat 41.739, Lon -108.778, Section 3, T20N, R101W, in the county of Sweetwater, in the State of Wyoming. All construction, installation, or modification allowed by this permit shall be completed by December 31, 2013. This Permit to Construct extends the original construction period of Permit to Construct 11-271 from August 2, 2013 to December 31, 2013.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, or any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 8 The applicant will provide immediate oral or written notice to the Wyoming Department of Environmental Quality, Water Quality Division (WQD), Southwest District Engineer, 510 Meadowview Drive, Lander, WY 82520, 307-332-3144, FAX 307-332-3183, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
- 2 of 8 Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Southwest District a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
- 3 of 8 This Permit to Construct is being issued based on a proposed sewage treatment facility design. The final design of the sewage treatment facility must be submitted to the Southwest District Engineer at least 30 days before construction starts for approval. The design must be performed by a professional engineer licensed in the State of Wyoming.
- 4 of 8 Treated sewage effluent is to be routed through Unit 4 effluent pond #91 and then only discharged into the Jim Bridger Power Plant Evaporation pond permitted by the Office of the State Engineer under Permit 9596 for reservoirs.
- 5 of 8 Treated wastewater monitoring results shall be retained and available for inspection upon request by the Wyoming Department of Environmental Quality. Copies of records shall be maintained by the plant operator.
- 6 of 8 The required treated wastewater monitoring and sampling frequency is listed in the attached Monitoring Schedule on page 4 of 4 of this permit.
- 7 of 8 If the treated wastewater is found to be in non-compliance with either Fecal Coliform Bacteria or Chlorine Residual results must be immediately reported to the Wyoming Department of Environmental Quality.
- 8 of 8 The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

7-30-13

Date of Issuance  
MDB/rm/13-0703

## STATEMENT OF BASIS

1. Permit Number: 13-289
2. Application reviewed for compliance with the following regulations:  
Chapters 3 and 11 of the Wyoming Water Quality Rules and Regulations.
3. Does the permit comply with all applicable regulations identified above?  
No. The discharge limits are based upon Chapter 11, Section 55(c)(i) numerical water quality criteria for special situations as adjusted for the current E. Coli surface water standard. The treated sewage effluent discharges into an non-permitted 4910 acre-foot non-discharging, non-potable utility and evaporative effluent pond.
4. If Section 17 of Chapter 3 review is required indicate the basis for determining groundwater will be protected.  
Sewerage systems are exempted from review by Chapter 3, Section 17.
5. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Mark D. Baron, P.E., Southwest District Engineer, mark.baron@wyo.gov, and completed on December 31, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents permit conditions, and the items identified in this "Statement of Basis."

cc: Michael W Meyer, P.E., Jim Bridger Power Plant, P.O. Box 158, Point of Rocks, WY 82942

PacifiCorp Jim Bridger Power Plant Wastewater Treatment Facility - Monitoring Schedule - Treated Wastewater Reuse Monitoring and Reporting Requirements WDEQ/WQD Permit Number 13-289, Sweetwater County, July 18, 2013.

Parameter	Method <sup>1</sup>	Regulatory Limit	Point of Compliance	Sampling Frequency
Biochemical Oxygen Demand (BOD)	SM5210B	30 mg/l maximum.	At the point of discharge to effluent pond.	Twice annual grab sample. Record to be kept.
Total Suspended Solids (TSS)	SM2540D	100 mg/l maximum.	At the point of discharge to effluent pond.	Twice annual grab sample. Record to be kept.
E. coli Bacteria	SM9223B	126 cfu/100 ml maximum.	At the point of discharge to effluent pond	Twice annual grab sample. Record to be kept.
Chlorine Dosage	Chlorine meter.	Target dosage 10 mg/l.	Before the Contact Tank.	Daily. Record to be kept.
Chlorine Residual	Chlorine meter.	50 mg/l maximum.	At the point of discharge to effluent pond.	Daily. Record to be kept.
Chlorine Residual	Chlorine meter.	1 mg/l minimum.	Contact tank.	Daily. Record to be kept.

1. Equivalent wastewater testing methods may be used.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-290

Cakebread Ranches Day Lodge -Public Water System  
No Public Water System Number Assigned

This permit hereby authorizes the applicant:

Steve and Jill Cakebread  
P.O. Box 3529  
Alpine, WY 83128

to construct a public water supply system consisting of a new water well, an existing water well, a well control room, new distribution piping and UV disinfection system to serve a Day Lodge, Fly Shop, Restaurant, Green House and Office according to the procedures and conditions of the application number 13-290. The facility is located about 3.5 miles northwest of the Town of Thayne at Long: 111° 1' 28" W and Lat: 42° 57' 59" N, in the county of Lincoln, in the State of Wyoming. All construction, installation, or modification allowed by this permit shall be completed by August 13, 2015.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

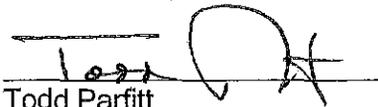
In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 3            The applicant will provide immediate oral or written notice to the Wyoming Department of Environmental Quality, Water Quality Division (WQD), Southwest District Engineer, 510 Meadow View Drive, Lander, WY 82520, 307-332-3144, FAX 307-332-7726, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
  
- 2 of 3            Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Southwest District a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
  
- 3 of 3            The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

8-23-13

Date of Issuance

MDB/rm/13-0797

## STATEMENT OF BASIS

1. Permit Number: 13-290
2. Application reviewed for compliance with the following regulations:  
Yes. Chapters 3 and 12 of the Wyoming Water Quality Rules and Regulations.
3. Does the permit comply with all applicable regulations indentified above?  
No. A variance has been requested from the requirement to have an alternative source of power, a pitless unit and neat cement grout for an existing water well.
4. Facilities include components not specifically covered or differing from applicable regulations and approval is based upon a deviation in accordance with Section 5.  
Chapter 12, Section 8 (d)(iii) requires an alternative source of power. Since the proposed water system is a transient system a variance is granted.  
Chapter 12, Section 9 (b)(iii)(D)(IV)(1.) requires that pitless units for water wells be shop fabricated. Since a pitless weld on adapter was installed on an existing water well per the manufacturers recommendations a variance is granted.  
Chapter 12, Section 9 (b)(B)(iii)(C)(IV)(1.) requires neat cement grout to be used for 2-inch annular openings between the water well bore hole and casing. Bentonite chips were used to seal the existing water well annular opening. Since water testing does not indicate a seal failure a variance is granted.
5. If a Section 17 of Chapter 3 review is required indicate the basis for determining groundwater will be protected.  
Not Required.
6. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Mark D. Baron, P.E., mark.baron@wyo.gov, Southwest District Engineer and completed on August 13, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis."

cc: Brian Lenz, P.E., Jorgensen Associates, P.C., P.O. Box 9550, Jackson, WY 83002

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-291

SINCLAIR WYOMING REFINING COMPANY WASTEWATER TREATMENT SYSTEM

This permit hereby authorizes the applicant:

Sinclair Wyoming Refining Company  
Attn: John Moore  
100 East Lincoln Highway  
Sinclair, Wyoming 82334

to construct, install or modify a grinder pump lift station, two (2) 22,000 gallon septic tanks, AdvanTex AX-Max Treatment System, and approximately 140 chambers for a pressure dosed leachfield according to the procedures and conditions of the application number 13-291. The facility is located in Section 16, T21N R86W; Carbon County, in the State of Wyoming. All construction, installation, or modification allowed by this permit shall be completed September 16, 2016.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the construction or the design of the facility described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the facility is located or is being constructed or installed for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

The permittee shall construct and operate the permitted facility in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

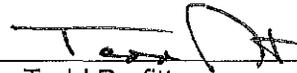
In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 The applicant will provide immediate oral or written notice to the Southeast District, Water Quality Division, Herschler Building 4 West, Cheyenne, WY, 82002, Phone 307-777-7088, FAX 307-777-7610, in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
2. Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Southeast District, Water Quality Division, Herschler Building 4 West, Cheyenne, WY, 82002 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
3. The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

Date of Issuance 9-18-13

SWT/rm/13-0870

## STATEMENT OF BASIS

1. Permit Number: 13-291
2. This application was reviewed for compliance with the applicable regulations ;

Chapters 3, 11

3. Does the permit comply with all applicable regulations identified above?

Yes

4. A review to determine groundwater impacts in accordance with Section 17, Chapter 3 was not required.

Sewerage Systems are exempted from review by Chapter 3, Section 17.

5. Documentation of Statement of Basis: The archive file for this permit includes adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Chapter 3, Section 6, Wyoming Water Quality Rules and Regulations. This review was performed by Seth Tourney, Southeast District Engineer, Water and Wastewater Section, Wyoming Department of Environmental Quality /Water Quality Division, and completed on September 17, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents, permit conditions, and the items identified in this "Statement of Basis."

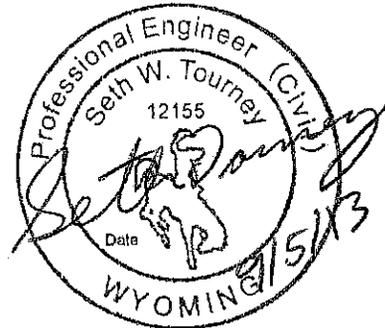
## REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY / WATER QUALITY DIVISION  
122 West 25<sup>th</sup> Street, Herschler Building 4 West, Cheyenne, Wyoming 82002

PROJECT: Sinclair Wyoming Refining Company Wastewater Treatment System

ENGINEER: Jason Broome (Forsgren and Associates)  
370 East 500 South, Suite 200  
Salt Lake City, UT 84111

APPLICANT: John Moore (Sinclair Wyoming Refining Company)  
100 East Lincoln Highway  
Sinclair, WY 82334  
(307) 328-8009



WATER QUALITY DIVISION REFERENCE NUMBER: 13-291  
REVIEWING ENGINEER: Seth W. Tourney  
DATE OF REVIEW: September 5, 2013

**ACTION:** NOT AUTHORIZED FOR CONSTRUCTION. In accordance with Section 14(a), Chapter 3, Wyoming Water Quality Rules and Regulations, the application is denied because it is incomplete or does not meet applicable minimum design and construction standards. Please address the comments outlined below and submit the requested information in order that the application process may be completed in accordance with said Section 7. If the applicant fails to provide the requested information within six months the incomplete application shall be returned.

### COMMENTS, INADEQUACIES, AND QUESTIONS

1. The proposed system has an organic loading capacity of 22,062 gpd; however, the proposed design flow requirement is 28,750 gpd. The design report needs to clarify the actual design flow requirements or evaluate the accuracy of the proposed loading requirements of the treatment system.
  - a. In the design of the AX-MAX systems, the limiting design factor for the proposed surface area of the attached growth system is the organic loading rather than the hydraulic loading as indicated in the 2<sup>nd</sup> paragraph on Page 16 of the report.
  - b. The design calculations seem to indicate that 575 sq. ft. of textile surface area is being proposed, please provide the textile surface available for the AX-MAX300-42 and AX-MAX275-42 on page 16 of the design report.
  - c. Please be advised that the design flows from Table 1 of Chapter 25 in the Water Quality Rules and Regulations are maximum daily flows. These flows must be multiplied by 0.6 to obtain the average daily flows.

2. Design Flows:

- a. On Page 5, the average daily flow for 400 persons could be calculated as  $(400 \text{ persons})(30 \text{ gpcd})(0.6) = 7,200 \text{ gpd}$ .
  - b. On Page 6 of Section 3.2 in Table 1, the 30 gpd provided in the table is the maximum daily flow instead of the peak hour flow. It appears that the AADF and APDF may need to be adjusted to accurately reflect the design flow capacity of the maintenance building.
  - c. On page 5 of Section 3.1, it presented that a peaking factor of 2 is being provided for the design. This is actually a low value compared to industry standards. Please provide the reference for this peaking factor.
  - d. The design flow for the facility needs to be clearly identified and match the supporting capacity of the treatment system.
3. The variance request for the septic tanks needs to have supporting hydraulic calculations. The Septic Tank Sizes for Large Flows by T.R. Bounds has been reviewed; however, the design report did not perform any calculations using the concepts in the research paper.
- a. Additionally, this design paper fails to provide a relationship between the scum layer and the effluent baffle. Please provide density calculations supporting the variance from the scum storage volume floating on top of the liquid layer.
  - b. The variance request mentions an alarm. This is a good concept, and it is recommended to install an alarm. Please provide specifications on the alarm. Audio? Visual?
4. Water Depth Variance. Where is the total water depth variance in the design report?
5. On Page 7 in Section 3.3, the onsite treatment systems with flows of 2,000 instead of 10,000 are regulated as Class V injection wells. Please revise text accordingly.
6. On Page 13 in Section 4.4 in the 1<sup>st</sup> paragraph, it indicates that the AdvanTex AX-MAX treatment system treats water to "better than secondary" treatment standards. Please provide the reference for these standards.
7. On Page 17 in Section 4.4.5, it mentions the volumes available for surge control, please identify the location and operation of this surge volume.
8. On Page 18 in Section 4.5, the paragraph on WYDEQ Policy #13.41.2 should mention that these area reductions are accounted for in the equivalent areas of the chambered units to avoid confusion on the drainfield sizing.
9. On page 19 in Section 19 in the last paragraph, how will the gravity pipe release effluent and to where?

### **Construction Plans**

10. The access manholes are being obstructed for the 20-inch manway requirements. Please provide a top view detail of the piping to ensure proper minimum requirements are being met. This shall include pipe thicknesses and inside diameter dimensions of the access risers. The pipe distances on the baffles shall be provided to ensure proper placement of the baffle tees in the top view detail.
11. The response letter seems to indicate that vents are being provided on the septic tanks, and it would be good for vents especially in Tank #2 with the denitrification process. However, the construction plans do not appear to have vents installed on the septic tanks. Please provide.
12. On page 5 of 13, the Bypass gravity outlet should be connected to a flow divider tee and evenly distributed to the leachfield rather than overloading one trench in an overflow condition.
13. On page 6 of 13, the drain field distribution valve is buried. Please provide access to the valves.
14. Please revised page 1 of 1 for the Z100SW Septic Tank #1 and page 1 of 1 for the Z100SW Septic Tank #2 to match the baffle and any revisions to the septic tanks required due to this review process.

**END OF REVIEW**

SWT/rm/13-0847

## REVIEW OF PLANS AND SPECIFICATIONS

### WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY / WATER QUALITY DIVISION

122 West 25<sup>th</sup> Street, Herschler Building 4 West, Cheyenne, Wyoming 82002

PROJECT: Sinclair Wyoming Refining Company Wastewater Treatment System

ENGINEER: Jason Broome (Forsgren and Associates)  
370 East 500 South, Suite 200  
Salt Lake City, UT 84111

APPLICANT: John Moore (Sinclair Wyoming Refining Company)  
100 East Lincoln Highway  
Sinclair, WY 82334  
(307)328-8009



WATER QUALITY DIVISION REFERENCE NUMBER: 13-291

REVIEWING ENGINEER: Seth W. Tourney

DATE OF REVIEW: August 6, 2013

**ACTION:** **NOT AUTHORIZED FOR CONSTRUCTION** In accordance with Section 14(a), Chapter 3, Wyoming Water Quality Rules and Regulations, the application is denied because it is incomplete or does not meet applicable minimum design and construction standards. Please address the comments outlined below and submit the requested information in order that the application process may be completed in accordance with said Section 7. If the applicant fails to provide the requested information within six months the incomplete application shall be returned.

### COMMENTS, INADEQUACIES, AND QUESTIONS

#### General Comments

1. Only one set of reports and plans were submitted. Please be advised that three (3) copies of the design reports and plans are required.
2. The variance requests were not provided under a signed and stamped document or even in a letter format. Please include all variance requests with supporting documentation inside the design report, which is signed and sealed by a professional engineer.

### Design Report Comments

3. The design report does not indicate which AX-MAX model to be installed with the project. Please add this information to the design report.
4. On Page 7 of the design report, the "AdvanTex AX-Max Treatment System" narrative should clearly identify the models chosen for the design, and supporting reasons why these models were chosen for the design.
  - a. It is inferred through the design criteria and the construction plans that the AX-MAX300-42 and the AX-MAX275-42 may have been chosen based on Table 2 in the AdvanTex AX-MAX Design Criteria in Appendix E of the design report.
  - b. In this section, please clearly provide the calculations to demonstrate the design or selection process for the units used in the design.
  - c. This narrative needs to address the control system to be installed to establish the proper recirculation ratio (Rb) and dose frequency for the system (See page 8 of 11 of the design criteria for the model).
  - d. This narrative should address the surge volume, and the location of controlling the surge volume (see page 8 of 11 of the design report).
  - e. This narrative should address the Climate Considerations and System Enclosures necessary for proper operation of the system (See page 8 of 11 of the design report).
  - f. This narrative should discuss sludge handling (see page 8 of 11 of the design report).
5. On page 4 of the design report, there is the "Influent Wastewater Characteristics" section. Please address the following:
  - a. Table 2 on page 4 of the design report has Septic Tank Effluents that exceed Typical average concentrations given in Table 1 on page 3 of 11 in the Design Criteria of Appendix E. Please provide a narrative which demonstrates that the proposed design meets the influent wastewater characteristics.
6. On page 4 of the design report, there is the "Effluent Standards" section. Please address the following:
  - a. This section states, "The intent of the project is to utilize a septic system with secondary treatment downstream of the septic tank(s), in order to achieve an effluent quality that meets USEPA primary drinking water standards."
    - i. It should be noted the secondary treatment in the proposed design does not demonstrate that the effluent quality meets safe drinking water standards.



- a. Appendix G indicates that the geotechnical report is available upon request. If this document is to be used in supporting your narrative in the report for the above comment, please include the geotechnical report.
9. In the construction plans, it appears that this will be a pressure dosage system. Please provide a narrative demonstrating that the proposed system meets compliance with Chapter 25 Section 9 of the Water Quality Rules and Regulations.
    - a. The pump tank used to dose the system shall be in compliance with Section 9 (i) of the Water Quality Rules and Regulations.
    - b. The pumps used to dose the system shall be in compliance with Section 9 (ii) of the Water Quality Rules and Regulations. The pressure calculations need to be provided.
    - c. The pressure transfer pipe between the tank and the leachfield shall be designed to drain after each pump cycle to prevent freezing. Please demonstrate compliance with Section 9 (iii) of the Water Quality Rules and Regulations.
    - d. In the responses received on 7/26/13, it states, "The leachfield will be pressure dosed. Effluent pumps are designed to pump at 50 gpm. The discharge laterals in the leachfield shall have orifices facing up and down to provide draining during pump cycles. The design meets the requirements of Chapter 25, Section 9 of the Water Quality Rules and Regulations." Please add this text to the design report.
      - i. In addition please provide an exhibit showing how the pressure dosage system will hydraulically drain, including the transfer line from the AX-MAX system to the drainfield.
  10. In Appendix A on page 15 for Septic Tank #1, it does not appear that the 20 percent storage depth for scum is being provided. Please provide in accordance with Chapter 25 Section 8 (a) (iii) (C) of the Water Quality Rules and Regulations.
    - a. The responses to comments indicated a variance was to be requested for this requirement. However, no variance can be granted for the reasons stated in this response letter.
  11. In Appendix A on page 15 for Septic Tank #2, it does not appear that the 20 percent storage depth for scum is being provided. Please provide in accordance with Chapter 25 Section 8 (a) (iii) (C) of the Water Quality Rules and Regulations.
    - a. The responses to comments indicated a variance was to be requested for this requirement. However, no variance can be granted for the reasons stated in this response letter.

### Construction Plans

12. On page 4 of 13, please provide cleanouts at the bends greater than 22.5 degrees in accordance with Appendix A (page 14).
13. On page 5 of 13, the Bypass gravity outlet should be connected to a flow divider tee and evenly distributed to the leachfield rather than overloading one trench in an overflow condition.
14. On page 7 of 13, it appears that the lift station has the ability to pressurize the septic tanks. It is intended for this design? If so, please provide a narrative in the design report.
  - a. If the septic tanks can be pressurized, how does the design affect the recirc chamber in the AdvanTec AX-MAX system?
  - b. If the septic tanks can be pressurized, how does the design affect the scum storage in the septic tanks?
15. On page 1 of 1 for the Z100SW Septic Tank #1, it appears that the baffle tees are in conflict with the 24-inch access opening. Please provide a detail indicating how the baffle will allow access to the septic tank.
  - a. It appears that a 6-inch cleanout needs to be installed in accordance with Chapter 25 Section 8 (iv) of the Water Quality Rules and Regulations.
  - b. It does not appear that the outlet of the baffle tee is extending into the middle third of the liquid depth in accordance with Chapter 25 Section 8 (iii) (A) of the Water Quality Rules and Regulations.
  - c. Please indicate how the tank will be connected together to ensure a water tight seal.
  - d. A variance with supporting justification for the water depth needs to be included in the design report.
16. On page 1 of 1 for the Z100SW Septic/Pre Anoxic Tank #2, the baffle detail needs to allow venting of the tank in accordance with Chapter 25 Section 8 (a) (iii) (B) of the Water Quality Rules and Regulations.
  - a. The location of the baffle appears to be directly underneath the 24-inch access opening. Thus, this may deny access through this entry point. Please provide a detail indicating how the baffle will allow access to the septic tank.
  - b. It appears that the baffle tees are in conflict with the 24-inch access opening. Please provide a detail indicating how the baffle will allow access to the septic tank.
  - c. Please provide a clearer detail on the outlet of the septic tank to ensure compliance with Chapter 25 Section 8 (iii) (A) of the Water Quality Rules and Regulations.
  - d. Please indicate how the tank will be connected together to ensure a water tight seal.
  - e. A variance with supporting justification for the water depth needs to be included in the design report.

PROJECT: Sinclair Wyoming Refining Company Wastewater Treatment System  
DATE OF REVIEW: August 6, 2013

17. On Page 2 of 13, it appears that 13 laterals are indicated for installation; however, the design report indicates that only 7 laterals will be installed. Please update and revise.

**Unaddressed Responses Received on July 26, 2013**

18. In the responses received on 7/26/13, it states, "There are only showers, sinks, and toilets served by this system; there are no facilities that will be a source of oil and/or grease, such as a kitchen. Therefore, an oil and grease separator is not required for the maintenance building. Other than a safety shower located off the main floor of the building, there are no sumps, pits, traps or drains in the building floor. We are requesting a variance from the installation of an oil and grease separator." Please add this text to the design report. Also, ensure that the safety shower is contributing to the wastewater facility.

**END OF REVIEW**

SWT/rm/13-0732



# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 19, 2013

REV, Inc.  
Larry Fusselman  
P.O. Box 2364  
Rock Springs, WY 82901

RE: Rock Springs - Kay Addition - Water and Sewer Main Extensions - Permit Number 13-292, S ½ Section 25, T19N, R105W, Sweetwater County

Dear Mr. Fusselman:

The above application for coverage under **General Permit to Construct** for the extension of a **Public Water Supply System** consisting of about 370 linear feet (LF) of 10-inch PVC water main and the extension of a **Public Sewage Collection System** consisting of about 670 LF of 8-inch sewer main to serve a 13 lot residential subdivision in accordance with Chapter 3, Section 7, Chapter 12, Section 14 and Chapter 11, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, the facilities in accordance with the general permits and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the General Permit. These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at :

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact me at 307-332-3144.

Sincerely,

Mark Baron, P.E.  
Southwest District Engineer  
Water Quality Division

PDF to Cheyenne

Shawn M. Arnoldi, P.E., Choice Engineering Services, Inc., 404 N. Street, Suite 201, Rock Springs, WY 82901





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

July 19, 2013

Cort Cundy  
P.O. Box 1478  
Sundance, WY 82729

RE: Cundy Small Wastewater System  
Application No. 13-293, Crook County

Dear Mr. Cundy:

The above application for coverage under General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility consisting of a 1,500 gallon Boom Concrete septic tank discharging into a chambered bed system with six rows of 10 chambers each, for a residential building located in the NE¼, **Section 27, Township 51N, Range 63W**, Crook County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2015.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Additionally, the following permit condition applies:

1. Cleanouts are required every 100 feet and at all changes in direction 22.5 degrees and greater.
2. Flow-divider tees or a distribution box is required to evenly split flow between rows. Standard tees are not an adequate substitute for flow-dividing tees.

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Tim Lyons, Crook County Growth and Development

Cheyenne  
122 West 25<sup>th</sup> Street 82002  
(307) 777-7937

Lander  
510 Meadowview Drive 82520  
(307) 332-3144

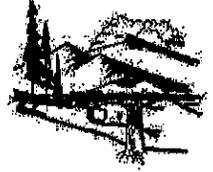
Sheridan  
2100 W. 5<sup>th</sup> Street 82801  
(307) 673-9337





## Department of Environmental Quality

*To protect, conserve, and enhance the quality of Wyoming's  
environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

152 N. Durbin St., Suite 100 · Casper, WY 82601 · (307) 473-3450

Todd Parfitt, Director

### NOTIFICATION OF COVERAGE

August 12, 2013

Josh Haas  
P.O. Box 106  
Sundance, WY 82729

RE: Haas Small Wastewater System  
Application No. 13-294, Crook County

Dear Mr. Haas:

The above application for coverage under General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility consisting of a 1,050 gallon AK Industries polyethylene septic tank discharging into two rows of twelve Biodiffuser Standard Chambers each, for a residential building located in the **SW¼, Section 4, Township 50N, Range 64W**, Crook County, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install, or modify the facility in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by December 31, 2015.

This Notification of Coverage is covered under the General Permits on the Wyoming Department of Environmental Quality webpage:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Additionally, the following permit condition applies:

1. Cleanouts are required every 100 feet and at all changes in direction 22.5 degrees and greater.
2. Flow-divider tees or a distribution box is required to evenly split flow between rows. Standard tees are not an adequate substitute for flow-dividing tees.

If you have any questions, please contact me at 307-473-3469.

Sincerely,

Jason Vreeland, P.E.  
Assistant NE District Engineer  
WDEQ/WQD

cc: IPS, Cheyenne  
WDEQ Casper File  
Tim Lyons, Crook County Growth and Development





# Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matt Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

July 16, 2013

Clifford D. Root, CEO  
Bighorn Divide & Wyoming Railroad  
642 South Federal Blvd  
Riverton, WY 82501

RE: BHD & Wyoming Railroad Offices  
DEQ Permit #13-295  
Located in Fremont County, SW ¼, NE ¼, S27, T38N, R94W; (Lat 43.2349, Long. -108.1015)

Dear Mr. Root,

This project consists of the installation of a septic tank and drain field to serve a new 4500 square foot office building.

The above application for coverage under General Permit has been reviewed in accordance with Chapter 3, Section 7; and Chapter 11 of the Wyoming Water Quality Rules and Regulations and is hereby approved.

You are authorized to construct, the facility in accordance with the general permit and the materials submitted in your application package and the General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility. Construction shall be completed by November 31, 2015.

Your attention is directed to the attached Certificate of Completion form, which is to be submitted within 60 days of the completion of the aforementioned project.

These General Permit requirements can be downloaded from the Wyoming Department of Environmental Quality webpage. The General Permits can be found under the Water Quality Division Water and Wastewater Program, Engineering and Technical Services at:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

If you have any questions, please contact Hannes Stueckler at 307-335-6964 or James Brough at 307-335-6961.

Sincerely,

Hannes E. Stueckler, P.E.  
Assistant Northwest District Engineer  
Water Quality Division

xc: PDF to Cheyenne  
Deon Anesi, Dirty D's Backhoe Service, 319 Sycamore Dr., Riverton, WY 82501

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6765  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726





# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

**August 1, 2013**

**Delton Tinsley**  
599 Highway 26  
Wheatland, WY 82201

RE: Dwyer Property Residential Septic System  
Application No. 13-296, Platte County

Dear Mr. Tinsley:

The above application for coverage under **General Permit to Construct, Install, Modify or Operate a Small Wastewater Facility** consisting of a 1000 gallon, one compartment, concrete septic tank discharging into about 190 feet of chamber type trench leachfield divided into two equal length trenches of at least 11 Infiltrator brand, EQ36 model chamber units each, for a 3 bedroom home, located in the **SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> of Section 7, T26N, R67W, Platte County**, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the small wastewater system in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, the condition listed below, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by August 1, 2015.

The following project specific condition also applies:

Septic Tank Riser Requirement - either a 6" diameter riser or the manway from the septic tank compartment shall be extended to the ground surface.

This **Notice of Coverage** is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General Permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH	ABANDONED MINES	AIR QUALITY	INDUSTRIAL SITING	LAND QUALITY	SOLID & HAZ. WASTE	WATER QUALITY
(307) 777-7758	(307) 777-6145	(307) 777-7391	(307) 777-7369	(307) 777-7756	(307) 777-7752	(307) 777-7781
FAX 777-7682	FAX 777-6462	FAX 777-5616	FAX 777-5973	FAX 777-5864	FAX 777-5973	FAX 777-5973



Please reference Application No. 13-296 in any future correspondence.

If you have any questions, please contact me at either [ron.ewald@wyo.gov](mailto:ron.ewald@wyo.gov) or by phone at (307) 777-6183.

Sincerely,



Ronald L. Ewald  
Assistant Southeast District Engineer  
Southeast District, Water & Wastewater Section  
Water Quality Division

RLE/rm/13-0722

Enclosures: Certificate of Completion

cc: IPS, Cheyenne  
Platte County Planning Office, Reed Elmquist, P.O. Box 728, Wheatland,  
Wyoming 82201  
Bill Walker, 157 Pleasant Valley Road, Hartville, Wyoming 82215

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-297

Reference Permit No. 06-396 and 09-343

**Land Application of Produced CBM Water**  
**River Unit Alpha Project - Renewal**

This permit hereby authorizes the applicant:

Anadarko E&P Onshore, LLC  
1099 18<sup>th</sup> Street, Suite 1800  
Denver, Colorado 80202

to construct, install or modify a land application water system for produced CBM discharge water procedures and conditions of the application number 13-297. The facility is located in portions of Sections 22, 27, and 28, Township 49 North, Range 77 West in the county of Johnson, in the State of Wyoming. The facility is located approximately 32 miles southwest of Gillette, Wyoming. This permit shall be effective until July 1, 2018.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the land application described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the land application is located for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

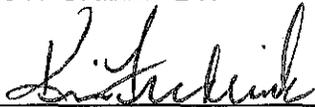
The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor: any infringement of federal, state or local laws or regulations.

The permittee shall conduct permitted land application in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

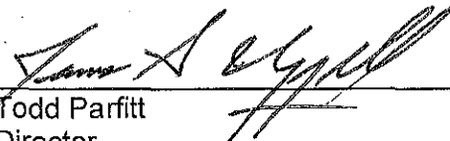
In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 4 The applicant will provide immediate oral or written notice to the DEQ/WQD CBM/Oil and Gas Group in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
- 2 of 4 The applicant shall submit an annual report to the department providing relevant details of the land application, including quantity of water applied, quality of water applied, type and quantity of soil amendments applied, any violations of DEQ regulations (WYPDES or groundwater), soil sampling data from the land receiving the water, and any other information deemed applicable by the department. This report will be submitted by April 1 of each year.
- 3 of 4 Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
- 4 of 4 The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".

AUTHORIZED BY:



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

7-19-13

Date of Issuance

KJM/rm/13-0652

cc: WDEQ Casper Field Office

## STATEMENT OF BASIS

1. Permit Number: 13-297 (renewal of Permit No. 06-396 and 09-343)
2. Application reviewed for compliance with the following applicable regulations :
  - a. Chapter 11.
3. Does the permit comply with all applicable regulations identified above?

Yes

Application requires review to determine groundwater impacts in accordance with Section 17, Chapter 3.

The water is being applied at an agronomic rate determined by soil testing to prevent groundwater impacts. Applicant has submitted annual permits as required under previous permit.

Documentation of Statement of Basis.

The archives file for this permit will include adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Section 6, Chapter III, Wyoming Water Quality Rules and Regulations. This review was performed by Kim Medina, and completed on July 15, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents permit conditions, and the items identified in this "Statement of Basis."

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
PERMIT TO CONSTRUCT

PERMIT NO. 13-298

Reference Permit No. 06-420 and 09-344

Land Application of Produced CBM Water  
Wagoner/Jenkins Project - Renewal

This permit hereby authorizes the applicant:

Anadarko E&P Onshore, LLC  
1099 18<sup>th</sup> Street, Suite 1800  
Denver, Colorado 80202

to construct, install or modify a land application water system for produced CBM discharge water procedures and conditions of the application number 13-298. The facility is located in portions of Sections 16, 17, 20, and 21, Township 50 North, Range 77 West in the county of Johnson, in the State of Wyoming. The facility is located approximately 32 miles west of Gillette, Wyoming. This permit shall be effective until July 1, 2018.

The issuance of this permit confirms that the Wyoming Department of Environmental Quality (DEQ) has evaluated the application submitted by the permittee and determined that it meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the engineer's design are the responsibility of the permittee, owner, and operator.

Granting this permit does not imply that DEQ guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements. Compliance with discharge standards remains the responsibility of the permittee.

Nothing in this permit constitutes an endorsement by DEQ of the land application described herein. This permit verifies only that the submitted application meets the design and construction standards imposed by Wyoming statutes, rules and regulations. The DEQ assumes no liability for, and does not in any way guarantee or warrant the performance or operation of the permitted facility. The permittee, owner and operator are solely responsible for any liability arising from the construction or operation of the permitted facility. By issuing this permit, the State of Wyoming does not waive its sovereign immunity.

The permittee shall allow authorized representatives from DEQ to enter and inspect any property, premise or place on or at which the land application is located for the purpose of investigating actual or potential sources of water pollution, and for determining compliance or non-compliance with any rules, regulations, standards, permits or orders.

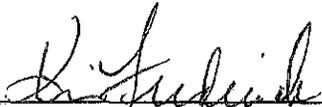
Nothing in this permit shall be construed to preclude the institution of any legal action or other proceeding to enforce any applicable provision of law or rules and regulations. It is the duty of the permittee, owner and operator to comply with all applicable federal, state and local laws or regulations in the exercise of its activities authorized by this permit.

The issuance of this permit does not convey any property rights in either real or personal property or any invasion of personal rights, nor: any infringement of federal, state or local laws or regulations.

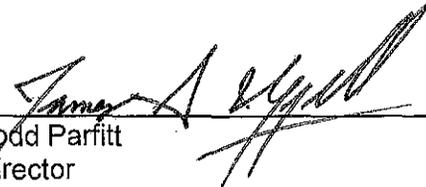
The permittee shall conduct permitted land application in accordance with the statements, representations, procedures, terms and conditions of the permit application, supporting documents and permit. This permit does not relieve the permittee from any duty to obtain any other permit or authorization that may be required by any provision of federal, state or local laws.

In carrying out its activities authorized by this permit, the permittee, owner and operator shall comply with all of the following permit conditions:

- 1 of 4 The applicant will provide immediate oral or written notice to the DEQ/WQD CBM/Oil and Gas Group in accordance with the provisions of Section 11, Chapter 3, Wyoming Water Quality Rules and Regulations of any changes or modifications which are not consistent with the terms and conditions of this permit.
- 2 of 4 The applicant shall submit an annual report to the department providing relevant details of the land application, including quantity of water applied, quality of water applied, type and quantity of soil amendments applied, any violations of DEQ regulations (WYPDES or groundwater), soil sampling data from the land receiving the water, and any other information deemed applicable by the department. This report will be submitted by April 1 of each year.
- 3 of 4 Within sixty days of completion of construction of the authorized facility, the applicant will submit to the Northeast District, Water Quality Division, 152 North Durbin, Suite 100, Casper, WY, 82601 a certification of completion signed by the Engineer of Record or the owner. A form titled "Certificate of Completion" has been provided and must be completely filled out.
- 4 of 4 The review and approval of this permit is based upon the items identified in the attached "Statement of Basis".



Kevin Frederick  
Administrator  
Water Quality Division



Todd Parfitt  
Director  
Department of Environmental Quality

7-19-13

Date of Issuance

KJM/rm/13-0653

cc: WDEQ Casper Field Office

## STATEMENT OF BASIS

1. Permit Number: 13-298 (renewal of Permit No. 06-420 and 09-344)
2. Application reviewed for compliance with the following applicable regulations :
  - a. Chapter 11.
3. Does the permit comply with all applicable regulations identified above?

Yes

Application requires review to determine groundwater impacts in accordance with Section 17, Chapter 3.

The water is being applied at an agronomic rate determined by soil testing to prevent groundwater impacts. Applicant has submitted annual permits as required under previous permit.

Documentation of Statement of Basis.

The archive file for this permit will include adequate documentation of all sections of this Statement of Basis.

## CERTIFICATION

The issuance of this permit is based upon a review of the application package submitted in accordance with the requirements of Section 6, Chapter III, Wyoming Water Quality Rules and Regulations. This review was performed by Kim Medina, and completed on July 15, 2013. Permit issuance is recommended based upon statements, representations, and procedures presented in the permit application and supporting documents permit conditions, and the items identified in this "Statement of Basis."



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

Todd Parfitt, Director

## NOTIFICATION OF COVERAGE

August 2, 2013

Barry D. Toy  
317 Crow Creek Road  
Wheatland, WY 82201

RE: Toy Residential Septic System  
Application No. **13-299, Platte County**

Dear Mr. Toy:

The above application for coverage under **General Permit to Construct**, Install, Modify or Operate a **Small Wastewater Facility** consisting of a 1000 gallon, one compartment, concrete septic tank discharging into about 420 square feet of chamber type bed leachfield divided into two equal length rows of at least 11 *Infiltrator* brand, Standard model chamber units each, for a 2 bedroom home, located in a portion of **Section 10, T27N, R69W, Platte County**, in accordance with Chapter 3, Section 9 of the Wyoming Water Quality Rules and Regulations has been reviewed and is hereby approved. You are authorized to construct, install or modify the small wastewater system in accordance with **Chapter 25** of the Water Quality Division Rules and Regulations, the general permit, the condition listed below, and the materials submitted in your application package. Your attention is directed to the mandatory reporting requirements outlined in Part V, Section O of the general permit. All construction, installation, or modification allowed by this Notification of Coverage shall be completed by **August 2, 2015**.

The following project specific condition also applies:

Septic Tank Riser Requirement - either a 6" diameter riser or the manway from the septic tank compartment shall be extended to the ground surface.

This **Notice of Coverage** is covered under the General Permits on the Wyoming Department of Environmental Quality webpage. The General Permits can be viewed at the following path:

[http://deq.state.wy.us/wqd/www/Permitting/Pages/general\\_permits.asp](http://deq.state.wy.us/wqd/www/Permitting/Pages/general_permits.asp)

Herschler Building · 122 West 25th Street · Cheyenne, WY 82002 · <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
--	---	---	---	--	--	---



Please reference Application No. **13-299** in any future correspondence.

If you have any questions, please contact me at either [ron.ewald@wyo.gov](mailto:ron.ewald@wyo.gov) or by phone at (307) 777-6183.

Sincerely,



Ronald L. Ewald  
Assistant Southeast District Engineer  
Southeast District, Water & Wastewater Section  
Water Quality Division

RLE/rm/13-0725

Enclosures: Certificate of Completion

cc: IPS, Cheyenne  
Platte County Planning Office, Reed Elmquist, PO BOX 728, Wheatland, WY 82201