

PERMIT TO CONSTRUCT

PERMIT NO. 89-151  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

TELCO

This permit hereby authorizes the applicant:

Randall Hicks  
Geoscience Consultants, Ltd.  
500 Cooper Ave, NW, Suite 200  
Albuquerque, New Mexico 87102

to construct, install or modify a monitor well system according to the procedures and conditions of the application number 89-151. The facility is located in Section 34, SW & NW, T34N, R80W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

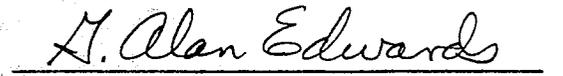
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

May 16, 1989  
\_\_\_\_\_  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

#### SPECIAL CONDITIONS

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-151. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells and boreholes have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - g. A protective casing and locking cap is strongly recommended;
  - h. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - i. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - j. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
  - a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level and product thickness measurements;
  - f. Sample collection procedures;

Conditions to Permit 89-151 (continued)

- g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed one time for the parameters BETX & TPH; soils shall be analyzed for parameters BETX, TPH and EP Toxicity.
11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.
12. The time schedule for plan implementation as submitted in the proposal shall be adhered to.

cc: Jake Strohman

SCF/jn

PERMIT TO CONSTRUCT

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PARKER INDUSTRIES

This permit hereby authorizes the applicant:

Randall Hicks  
Geoscience Consultants, Ltd.  
500 Cooper Ave, NW, Suite 200  
Albuquerque, New Mexaco 87102

to construct, install or modify a monitor well system according to the procedures and conditions of the application number 89-152. The facility is located in Section 34, NW/SW, T34N, R80W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

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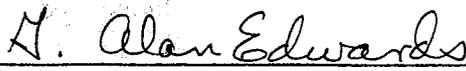
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AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
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Director  
Department of Environmental Quality

May 16, 1989  
\_\_\_\_\_  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

#### SPECIAL CONDITIONS

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-152. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells and boreholes have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

Conditions to Permit 89-152 (continued)

6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
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  - i. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
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Conditions to Permit 89-152 (continued)

- g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
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11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.
12. The time schedule for plan implementation as submitted in the proposal shall be adhered to.

cc: Jake Strohman

SCF/jn

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Modified

NL-ACME TOOL

This permit hereby authorizes the applicant:

Randall Hicks  
Geoscience Consultants, Ltd.  
500 Cooper Ave, NW, Suite 200  
Albuquerque, New Mexaco 87102

to construct, install or modify a monitor well system according to the procedures and conditions of the application number 89-153. The facility is located in Section 34, NE/NE, T50N, R72W in the county of Campbell, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

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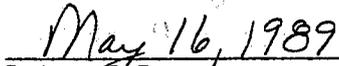
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AUTHORIZED BY:

  
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Administrator  
Water Quality Division

  
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Director  
Department of Environmental Quality

  
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Conditions to Permit 89-153 (continued)

- g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
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12. The time schedule for plan implementation as submitted in the proposal shall be adhered to.

cc: Jake Strohman

SCF/jn

PERMIT TO CONSTRUCT

PERMIT NO. 89-154  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

ACME TOOL/OPDIKE BROTHERS DRILLING

This permit hereby authorizes the applicant:

Randall Hicks  
Geoscience Consultants, Ltd.  
500 Cooper Ave, NW, Suite 200  
Albuquerque, New Mexico 87102

to construct, install or modify a monitor well system according to the procedures and conditions of the application number 89-154. The facility is located in Section 26, NW/NW, T19N, R105W in the county of Sweetwater, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

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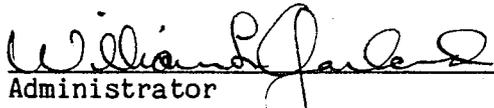
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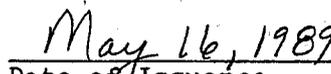
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AUTHORIZED BY:

  
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Administrator  
Water Quality Division

  
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Director  
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Conditions to Permit 89-154 (continued)

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  12. The time schedule for plan implementation as submitted in the proposal shall be adhered to.

cc: Jake Strohman

SCF/jn

R.F.

LAND APPLICATION PERMIT

Permit No. 89-155

Beaver Creek  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Amoco Production Co.

P.O. Box 1400

Riverton, WY 82501

to land apply 40 barrels of production waste to later be landfilled. The application site is located in Section 10, T33N, R96W in the County of Fremont, in the State of Wyoming. This permit shall be effective for a period of 18 months (five (5) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable standards. The authority to land apply granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the disposal method will meet applicable state requirements.

Nothing in this permit constitutes an endorsement of the disposal method described herein. This permit indicates only that standards required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allow under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the disposal method described herein. By the issuance of this permit, the State does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the application site at the above location, for the purpose of compliance with the provisions of this permit.

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

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

AUTHORIZED BY:

Lavonne R. Plummer

Administrator  
Water Quality Division

A. Alan Edwards

Director  
Dept. of Environmental Quality

May 22, 1989

Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

LAND APPLICATION STANDARD CONDITION

1. Application site shall be bermed in a manner which will not allow runoff. Application shall not be initiated during the spring runoff period or other periods where saturated soil conditions exist.
2. The application site slope shall be level to prevent runoff.
3. Application site shall not be within 300 feet of the definable high water mark of perennial and intermittent drainages, irrigation canals, lakes and reservoirs.
4. The permittee will contact the Department of Environmental Quality, Water Quality Division District Engineer, Steve Gerber phone number 332-3144, to arrange a field inspection prior to initiation of work. The district engineer should be notified at least 48 hours in advance of discharges.
5. Authorization must be obtained from Solid Waste prior to landfilling.
6. Landfilling must be completed within 18 months of land application.

PERMIT TO CONSTRUCT

PERMIT NO. 89-156  
SEE SPECIAL CONDITIONS

- X New
- Renewal
- Modified

BAR X RANCHES PARTNERSHIP

This permit hereby authorizes the applicant:

Bar X Ranches Partnership  
500 W. 27th  
Cheyenne, Wyoming 82001

to construct, install or modify a soil borings (up to 8) and/or monitoring well network (3 or more) according to the procedures and conditions of the application number 89-156. The facility is located in SE $\frac{1}{4}$  Section 3, T19N, R61W in the county of Goshen, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

Lawrence Robinson  
Administrator  
Water Quality Division

A. Alan Edwards  
Director  
Department of Environmental Quality

May 25, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Special Conditions for Permit to Construct 89-156

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-156. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. Factory slotted casing is recommended for the perforated interval.
  - g. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - h. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - i. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
7. DEQ/WQD personnel shall be given at least two weeks notice (307-777-7781) prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
  - a. A site map showing physical features, well locations and elevations;
  - b. Final location, construction details and lithologic logs of all monitoring wells;
  - c. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - d. Water level and product thickness measurements;
  - e. Sample collection procedures;
  - f. Sampling analytical results;
  - g. A map delineating the extent of the subsurface contamination including

Conditions to Permit 89-156 (continued)

free product, soil and dissolved groundwater contamination and concentrations;

- h. A potentiometric surface map showing the direction of groundwater movement; and
  - i. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed after development for the parameters listed below:

BETX (EPA Method 602) and TPH (EPA Method 418.1)

Subsequent monitoring will depend on the results of the report.

11. The results of any analyses conducted on soil or water removed from these wells or boreholes, from Horse Creek, or the domestic well shall be provided to the department within the report.

RS/jn

cc: Jake Strohman, WQD Cheyenne



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration (307) 777-7937	Air Quality Division (307) 777-7391	Land Quality Division (307) 777-7756	Solid Waste Management Program (307) 777-7752	Water Quality Division (307) 777-7781
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May 23, 1989

Kevin T. Kilty  
Bar X Ranches Partnership  
500 West 27th Street  
Cheyenne, Wyoming 82001

Re: Permit Application to Install Borings/Monitor Wells  
WQD Ref. No. 89-156  
Bar X Ranches Partnership

Dear Mr. Kilty:

We spoke by telephone on May 16, 1989 regarding the actions to be taken by Bar X with respect to permanently abandoning seven underground storage tanks on the ranch site. I explained the Water Quality Division's (WQD) requirement for cleaning out the tanks and the desirability of monitor wells being installed. Monitoring wells are preferred because the soil borings may show contamination that would require monitor wells to be installed as a result. In this way, the actual effects on groundwater quality can be assessed.

The WQD has processed the application and the enclosed permit (see conditions) reflects items discussed and agreements reached in our discussion. Please note that installing the soil borings and obtaining the surface water samples are optional to Bar X. The WQD requires the data to be submitted only if the installations or sampling are accomplished. The domestic well may be used as a monitor well only if it is completed in the uppermost (alluvial) aquifer and the screened interval extends at least 2 feet above the highest expected seasonal groundwater.

Sampling of each of the wells and analysis for BETX (EPA Method 602) and TPH (EPA Method 418.1 or 413) is required initially. Any future installations or monitoring that would be required by the WQD will depend on the results of the abandonment assessment. If free product (layer, film, sheen, iridescence) or a strong hydrocarbon odor is noted in the groundwater or soils adjacent to the groundwater, additional wells must be installed immediately to define the complete lateral and vertical extent of contamination. In case this is necessary, the permit allows additional installations of borings or wells.

Kevin T. Kilty  
May 23, 1989  
Page 2

Thank you for your time and attention. After reviewing the permit, please feel free to call this office at 307-777-7781 if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "Robert L. Stites".

Robert Stites  
Groundwater Engineering Evaluator  
Water Quality Division

RS/jn

Enclosures

PERMIT TO CONSTRUCT

PERMIT NO. 89-157  
See Conditions

X New  
Renewal  
Modified

Shively Field Terminal Building Wastewater Facility

This permit hereby authorizes the applicant:

Ms. Sue Ellis  
Saratoga Airport Board  
P O Box 576  
Saratoga, WY 82331

to construct, install or modify wastewater septic system according to the procedures and conditions of the application number 89-157. The facility is located in S14, T17N, R84W in the county of Carbon, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

Laurence Robinson  
Administrator  
Water Quality Division

A. Alan Edwards  
Director  
Department of Environmental Quality

May 25, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Conditions to Permit to Construct 89-157

DEQ Water Quality Rules and Regulations Chapter XI, Section 39 (a)(iv), concerning the septic tank states. "A cleanout having a minimum diameter of six inches shall be provided in each tank compartment and shall extend to the ground surface and be capped." Clean outs must be provided as stated, or the manways must be extended to the surface.

DM/mad

PERMIT TO CONSTRUCT

New

Permit No. 89-159R

Renewal

Modified

Deveraux SWTF  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Harry Deveraux

Box 750

Basin, WY 82410

to construct a septic tank and drainfield according to the procedures and conditions of the application No. 89-159R. The facility is located in Section 33, T51N, R93W in the County of Big Horn, in the State of Wyoming. This permit shall be effective for a period of two (2) years (five (5) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or insures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the State does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 210 Lincoln, Lander, WY 82520; telephone, 332-3144.

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

AUTHORIZED BY:

Administrator  
Water Quality Division

Director  
Dept. of Environmental Quality

Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

R.F.

PERMIT TO CONSTRUCT

PERMIT NO. 89-161  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

NGC Energy Company

This permit hereby authorizes the applicant:

NGC Energy Company  
85 South 200 East  
Vernal, UT 84078

to construct, install or modify deep well anode bed according to the procedures and conditions of the application number 89-161. The facility is located in all sections, T19-22, 25 & 26, R92-94, 111 & 112 in the county of Lincoln, Carbon and Sweetwater, in the State of Wyoming. This permit shall be effective for a period of five years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

Lawrence Robinson  
Administrator  
Water Quality Division

A. Alan Edwards  
Director  
Department of Environmental Quality

May 22, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

CONDITIONS TO PERMIT TO CONSTRUCT #89-161

1. The cathodic protection deep anode ground bed well shall be installed in accordance with the conditions of this permit and plans and specifications submitted in permit to construct application number 89-161.
2. After the deep anode ground bed well has fulfilled its useful purpose, it shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after the well has been plugged and abandoned, the owner shall file a plugging record with the Water Quality Division.
3. Within 45 days after the well has been installed, as-built construction plans need to be submitted to the Wyoming Department of Environmental Quality, Water Quality Division, detailing that the groundwater was protected during construction.

CWP/nc

cc: Jake Strohman



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



# Department of Environmental Quality

210 Lincoln Street • Lander, Wyoming 82520

RECEIVED

Air Quality Division  
(307) 332-3144

Land Quality Division  
(307) 332-3047

Solid Waste Management Program  
(307) 332-3144

Water Quality Division  
(307) 332-3144

OCT 20 1989

WATER QUALITY DIVISION  
WYOMING

October 18, 1989

Bob Harrower  
Rio Verde Engineering  
Box 67  
Pinedale, WY 82941

RE: Ref. No. 89-160R

Dear Mr. Harrower:

Due to the lack of response, your application is considered inactive and is being returned under the assumption that the applicant does not wish to proceed with the permit to construct process.

This project has not been permitted. Construction of this facility without a permit is a violation of the Environmental Quality Act and punishable with fines not to exceed \$10,000 per day of violation. If you wish to reconsider construction of this facility, then application procedures pursuant to Chapter III, Water Quality Rules and Regulations, must be followed.

Sincerely,

William L. Garland  
Administrator  
Water Quality Division

WLG/BL/anc

cc: IPS, DEQ/WQD, Cheyenne

PERMIT TO CONSTRUCT

PERMIT NO. 89-162  
See Conditions

X New  
Renewal  
Modified

IRI International Buuilding

This permit hereby authorizes the applicant:

IRI International  
3273 N. 1-25 Frontage Road  
P O Box 1307  
Casper, WY 82602

to construct, install or modify monitor well system according to the procedures and conditions of the application number 89-162. The facility is located in SESE, S20, T34N, R79W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

Laurence Robinson

Administrator  
Water Quality Division

H. Alan Edwards

Director  
Department of Environmental Quality

May 25, 1989

Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Conditions to Permit to Construct 89-162

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-162. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.
6. In addition to the well construction information submitted with the permit

Conditions to Permit 89-162 (continued)

application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:

- a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - g. A protective casing and locking cap is strongly recommended;
  - h. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - i. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - j. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
- a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level and product thickness measurements;
  - f. Sample collection procedures;

Conditions to Permit 89-162 (continued)

- g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed quarterly for the parameters listed below:
- EPA 601 for purgeable halo carbons, EPA 602 for purgeable aromatics, 610 for polynuclear aromatics and 418.1 for total petroleum hydrocarbon.
- The results of these analyses shall be submitted to the Cheyenne office by the last day of the month following the end of each quarter. The first set of results are due by the last day of June, 1989.
11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.

SCF/mad

cc: Jake Strohman

PERMIT TO CONSTRUCT

- New  
 Renewal  
 Modified

Permit No. 89-163  
\*Conditioned\*

Ohrmund SWTF  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Victor and Karla Ohrmund

303 1/2 Warren

Thermopolis, WY 82443

to construct a septic tank and drainfield disposal according to the procedures and conditions of the application No. 89-163R. The facility is located in Sec. 13, T42N, R95W in the County of Hot Springs, in the State of Wyoming. This permit shall be effective for a period of Two (2) years

(five (5) years maximum) from the date of issuance of this permit. The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or insures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the State does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

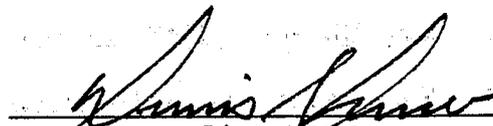
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 210 Lincoln, Lander, WY 82520; telephone, 332-3144.

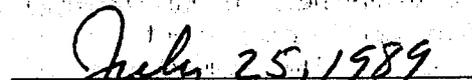
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Dept. of Environmental Quality

  
\_\_\_\_\_  
Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

**\*Condition\***

1. Notify Lander District DEQ office for inspection. At least 48 hours notice is required.



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

250 Lincoln Street • Lander, Wyoming 82520-2848

Air Quality Division  
(307) 332-6755

Land Quality Division  
(307) 332-3047

Solid Waste Management Program  
(307) 332-6924

Water Quality Division  
(307) 332-3144

January 15, 1992

Mayor Ken Cook  
Town of Burlington  
P.O. Box 38  
Burlington, WY 82411

RE: As-Built Authorization for Burlington Well #2  
Permit Number 89-165RRR

Dear Mayor:

This letter is in response to the above mentioned facility. After reviewing the plans and specifications, they appear to meet the minimum design standards for the State of Wyoming. A "Permit to Construct" cannot be issued since the facility has already been constructed. Please retain this letter as verification that the facility has been accepted by the Wyoming Department of Environmental Quality.

If you have any questions please contact Steve Gerber in our Lander office at 332-3144.

Sincerely,

William L. Garland, P.E.  
WQD Administrator

WG:SG:sg

cc: IPS, DEQ/WQD, Cheyenne  
Ron Rash, Forsgren Assoc.



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR

RECEIVED

FEB 7 1991



# Department of Environmental Quality

210 Lincoln Street • Lander, Wyoming 82520

Air Quality Division  
(307) 332-3144

Land Quality Division  
(307) 332-3047

Solid Waste Management Program  
(307) 332-3144

Water Quality Division  
(307) 332-3144

CERTIFIED P 584 340 665

February 6, 1991

Mr. Kenneth Cook  
Town of Burlington  
P.O. Box 38  
Burlington, WY 82411

Dear Mr. Cook:

Our records indicate your application for a permit to construct has not been resubmitted to this office for review and authorization. The specific information for your proposed project are:

Facility Name: Burlington Well #2

DEQ/WQD Reference Number: 89-165

Engineering Consultant: Forsgren Assoc.

DEQ/WQD Review Engineer: Steve Gerber

Date of DEQ/WQD Review: June 6, 1989

Please indicate below the status of your application and return this form to our office.

- The application will not be resubmitted as the proposed project has been canceled.
- The application will be resubmitted within thirty (30) days.
- The facility has been constructed, or is under construction. As-built construction plans and specifications will be submitted within thirty (30) days.
- Other Remarks: \_\_\_\_\_

You are reminded that the construction, installation, or modification of any sewage system, treatment works, disposal system, or other facility capable of causing or contributing to pollution, or public water supply system without a permit to Construct is a violation of Wyoming State

Mr. Kenneth Cook  
Town of Burlington  
February 6, 1991  
Page 2

Statutes, and is punishable with a fine not to exceed \$10,000 for each day of violation. Unless the Water Quality Division review engineer receives information concerning the status of this project within fifteen (15) days of the receipt of this letter, follow-up action will be taken.

Sincerely,



Steve Gerber, P.E.  
Northwest District Supervisor

SG/anc

cc: IPS, DEQ/WQD, Cheyenne

PERMIT TO CONSTRUCT

[ ] New

Permit No. 89-166RR

[ ] Renewal

[X] Modified

Bedford Water System Improvements  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Bedford Water and Sewer District

Box 320

Bedford, WY 83112

to construct a spring development, well chlorination facilities and transmission lines according to the procedures and conditions of the application No. 89-166RR. The facility is located in Section 17, 20, 25, 26, 27, 28, 29, 32, T34N, R118W in the County of Lincoln, in the State of Wyoming. This permit shall be effective for a period of two (2) years (five (5) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or insures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance

of this permit, the State does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

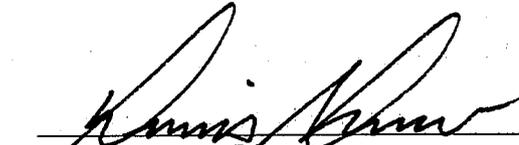
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 210 Lincoln, Lander, WY 82520; telephone, 332-3144.

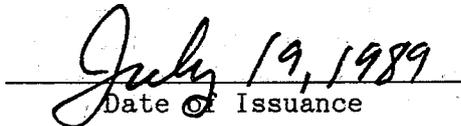
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AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Dept. of Environmental Quality

  
\_\_\_\_\_  
Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

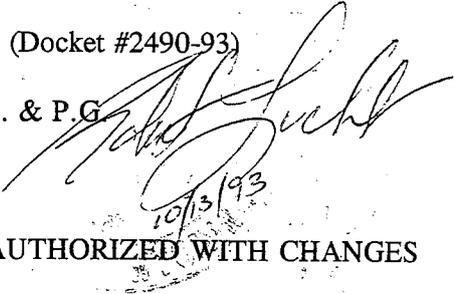
REVIEW OF PLANS AND SPECIFICATIONS  
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
Herschler Bldg., 4 West  
Cheyenne, Wyoming 82002

PROJECT: Platte Pipe Line Company, Casper Sampling and Analytical Plan

ENGINEER: Roy F. Weston, Inc., 215 Union Blvd., Suite 550, Lakewood, CO 80228-1842,  
Attn: Rick Farrand

APPLICANT: Platte Pipe Line Company, P.O. Box 2330, Casper, WY 82602, Attn: Tad Schell

WATER QUALITY DIVISION REFERENCE NUMBER: 89-167 (Docket #2490-93)

REVIEWING ENGINEER: ROBERT F. LUCHT, P.E. & P.G. 

DATE OF REVIEW: 10/11/1993

ACTION: SAMPLING AND ANALYSES PLAN - AUTHORIZED WITH CHANGES

COMMENTS:

1. Page 1 of the Sampling and Analytical Plan refers to the drywell as a "permitted dry well". There is no indication in the files of this agency that any permit was ever issued for this drywell. Please remove the word "permitted" from the second to the last sentence of the second paragraph of page 1.
2. The Administrative Order on this project requires that sufficient monitor wells be constructed down gradient to fully define the plume. Platte should be aware that these wells will have to be installed regardless of the results of the hydropunch work. This is particularly important in light of the false negative results obtained in the past, since the hydropunch itself does not allow for repeat sampling.
3. Platte Pipe Line has installed monitor well MW-6 sometime in 1992 or 1993. This agency does not have any information on the construction of this well except an approximate location and a single water analyses done in May, 1993. Please submit the construction details of this well.
4. The surveying discussed on Page 6, third paragraph should include all locations of hydropunch work, all existing monitor wells, and all soil borings.
5. This department will wish to witness the hydropunch testing and split samples with Platte.
6. Platte should be aware than if any discrepancies are found between the sampling and analytical plan and the permit to construct for monitor wells (89-167), the permit to construct will be the final authority.
7. This document represents the Water Quality Division's approval (with changes) for the Sampling and Analyses Plan required by Item #1 of docket number 2490-93.

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-167  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

Platte Pipeline Monitor Wells

This permit hereby authorizes the applicant:

Platte Pipeline  
P O Box 2330  
Casper, WY 82602

to construct, install or modify monitor wells according to the procedures and conditions of the application number 89-167. The facility is located in Sections 34 and 35, T36N, R80W, SE in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of five years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

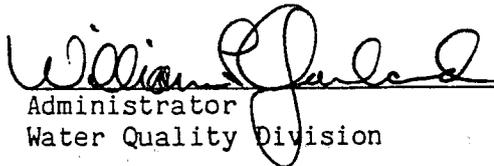
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

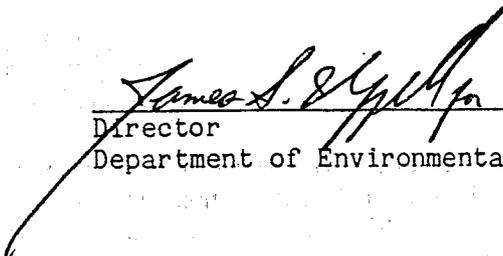
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

6-29-89  
\_\_\_\_\_  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

CONDITIONS TO PERMIT TO CONSTRUCT #89-167

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-167. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - g. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - h. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. A steel protective casing shall be cemented into a sloping concrete cap; and
  - i. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
  - a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level and product thickness measurements;
  - f. Sample collection procedures;
  - g. Sampling analytical results;

Conditions to Permit 89-167 (continued)

- h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed quarterly for the parameters listed below:
- purgeable halocarbons by EPA Method 601, purgeable aromatics by EPA Method 602, polynuclear aromatics by EPA Method 610, total petroleum hydrocarbon by EPA Method 418.1, and chromium (total dissolved), cadmium and mercury
- The results of these analyses shall be submitted to the Cheyenne office by the last day of the month following the end of each quarter. The first set of results are due by the last day of July 1989.
11. Water Quality Division may alter the above list of parameters as data indicates during the course of this investigation.
12. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.

DP/RL/nc

cc: Jake Strohmman

R.F.

PERMIT TO CONSTRUCT

PERMIT NO. 89-168

X New  
Renewal  
Modified

Roundtop Line #2 Phase 4

This permit hereby authorizes the applicant:

Cheyenne Board of Public Utilities  
2100 Pioneer Avenue  
Cheyenne, WY 82001

to construct, install or modify public water distribution system according to the procedures and conditions of the application number 89-168. The facility is located in S20 & 21, T14N, R66W in the county of Laramie, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

William P. Garland  
Administrator  
Water Quality Division

H. Alan Edwards  
Director  
Department of Environmental Quality

June 2, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

PERMIT TO CONSTRUCT

PERMIT NO. 89-169  
See Conditions

X New  
Renewal  
Modified

Saratoga Inn RV Park

This permit hereby authorizes the applicant:

Saratoga Inn and RV Resort  
P O Box 869  
Saratoga, WY 82331

to construct, install or modify extension of existings Saratoga Inn water service and construction of a RV Sanitary dump station according to the procedures and conditions of the application number 89-169. The facility is located in S12 & 13, T17N, R84W in the county of Carbon, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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AUTHORIZED BY:

Laurence Robinson  
Administrator  
Water Quality Division

A. Alan Edwards  
Director  
Department of Environmental Quality

May 25, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Conditions to Permit to Construct 89-169

1. Water pipe material shall conform to requirements of AWWA C901.
2. Recommend an additional valve in the one inch line serving RV spaces 12 through 27.
3. Pressure testing and disinfection of the new water liner will be performed in accordance with applicable AWWA specification.
4. The 1½ inch water line will be sleeved in a three inch PVC at the crossing of the ten inch PVC sewer line near RV space No. 5. The sleeve shall extend ten feet in both directions from the crossing point.
5. The system will not be operated during the winter months. The system was therefore not reviewed to insure adequate frost protection provided.

LR/mad

cc: Paul McCarthy

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-170

X New  
Renewal  
Modified

Wal-Mart Store - Laramie

This permit hereby authorizes the applicant:

Wal-Mart Properties, Inc.  
701 South Walton Blvd.  
Bentonville, AK 72716

to construct, install or modify public water distribution system and public wastewater collection system according to the procedures and conditions of the application number 89-170. The facility is located in S35, T16N, R73W in the county of Albany, in the State of Wyoming. This permit shall be effective for a period of two years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

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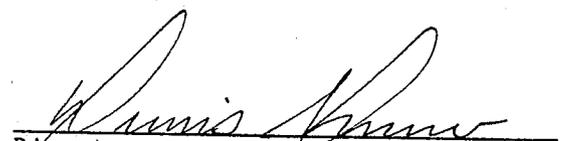
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AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

August 16, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

DM/nc

cc: Douglas M. Dahms  
Rocky Mountain Consultants, Inc.  
8301 E. Prentice Ave. #101  
Englewood, CO 80111

PERMIT TO CONSTRUCT

- New  
 Renewal  
 Modified

PERMIT NO. 89-171R

BURLINGTON NORTHERN YARD WATERLINE  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Burlington Northern Railroad

P. O. Box 597

Alliance, Nebraska 69301

to construct, install or modify a potable water distribution facility according to the procedures and conditions of the application No. 89-171R. The facility is located in Section 23, T.56N., R.84W., in the County of Sheridan, in the State of Wyoming. This permit shall be effective for a period of two (2) years (five (5) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

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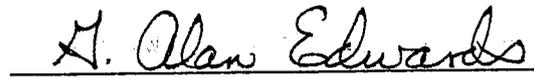
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division, the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 2161 Coffeen Avenue, Suite 501, Sheridan, Wyoming 82801; telephone, 672-6457.

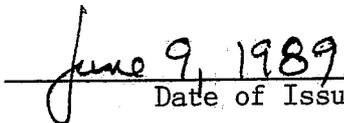
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Dept. of Environmental Quality

  
\_\_\_\_\_  
Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

xc: William A. Mentock  
Engineering, Inc.  
45 E. Loucks, Suite 018  
Sheridan, Wyoming 82801

PERMIT TO CONSTRUCT

New

PERMIT NO. 89-172

Renewal

Modified

THOLE SMALL WASTEWATER FACILITY  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Robert J. Thole

Highway 14

Carlile, Wyoming 82713

to construct, install or modify a small wastewater facility according to the procedures and conditions of the application No. 89-172. The facility is located in Section 28, T.52N., R.66W., in the County of Crook, in the State of Wyoming. This permit shall be effective for a period of two (2) years (two (2) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division, the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 2161 Coffeen Avenue, Suite 501, Sheridan, Wyoming 82801; telephone, 672-6457.

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

AUTHORIZED BY:

Laurence Robinson

Administrator  
Water Quality Division

M. Alan Edwards

Director  
Dept. of Environmental Quality

May 25, 1989

Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-174  
SEE SPECIAL CONDITIONS

- X New
- Renewal
- Modified

MINER OIL FIELD SERVICE

This permit hereby authorizes the applicant:

Miner Oil Field Service  
27 Pearson  
Cody, Wyoming 82414

to construct, install or modify a monitor well system according to the procedures and conditions of the application number 89-174. The facility is located in Section 30, NW/SE, T53N, R102W in the county of Park, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

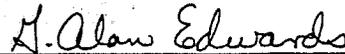
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation.

The 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.

AUTHORIZED BY:



Administrator  
Water Quality Division



Director  
Department of Environmental Quality

May 31, 1989

Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Special Conditions for Permit to Construct 89-174

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-174. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

Conditions to Permit 89-174 (continued)

In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:

- a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. Factory slotted casing is recommended for the perforated interval. Slotted casing shall extend 1-2 feet above highest expected groundwater table;
  - g. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - h. A protective casing and locking cap is strongly recommended;
  - i. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - j. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - k. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
- a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;

Conditions to Permit 89-174 (continued)

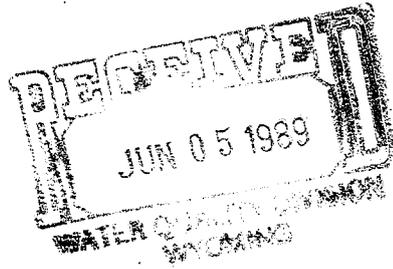
- e. Water level and product thickness measurements;
  - f. Sample collection procedures;
  - g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed quarterly for the parameters listed below:
- Purgeable Halocarbons by EPA Method 601, Purgeable Aromatics by EPA Method 602, Polynuclear Aromatics by EPA 610, Total Petroleum Hydrocarbons by EPA Method 418.1, Chromium by EPA Method 218.3 and Cadmium by EPA Method 213.2.
- The results of these analyses shall be submitted to the Cheyenne office by the last day of the month following the end of each quarter. The first set of results are due by the last day of July. After the first sampling event, the parameter list may be shortened with the approval of the Department of Environmental Quality, Water Quality Division.
11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.

SCF/jn

cc: Jake Strohman

MEMORANDUM

TO: File  
FROM: Steve Gerber *SG*  
DATE: May 31, 1989  
SUBJECT: WQD Reference No. 89-175



The submittal logged in under number 89-175 does not need to be logged in. It was for a single monitor well which has been drilled and abandoned. It would serve no purpose to go through the review process at this time.

cc: IPS

R.F.

PERMIT TO CONSTRUCT

PERMIT NO. 89-176

X New  
Renewal  
Modified

Wyoming Industrial Park - Glenn Road, Bruce Lane and  
Foster Road Waterline Improvements

This permit hereby authorizes the applicant:

North Platte Water & Sewer District  
P O Box 614  
Casper, WY 82602

to construct, install or modify public water distribution system according to the procedures and conditions of the application number 89-176. The facility is located in S5, T33N, R79W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

William J. Gale  
Administrator  
Water Quality Division

H. Alan Edwards  
Director  
Department of Environmental Quality

June 2, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration (307) 777-7937	Air Quality Division (307) 777-7391	Land Quality Division (307) 777-7756	Solid Waste Management Program (307) 777-7752	Water Quality Division (307) 777-7781
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May 30, 1989

B.E. and Betty Gissendanner  
3315 McComb  
Cheyenne, WY 82001

RE: Permit to Construct Application Number 89-178

Dear Mr. & Mrs. Gissendanner:

The Department of Environmental Quality, Water Quality Division, has reviewed your application (#89-178) concerning the septic system for/at S12, T14N, R64W, SW $\frac{1}{4}$ , Laramie County. The Water Quality Division has determined that the septic system meets the minimum state standards for isolation distances to wells, property lines, seasonal high groundwater, etc. Since the drainfield size cannot be determined without digging up the entire system, the department cannot evaluate if the system is sized correctly. However, based on 12 years of actual operating experience, the system appears to be adequately sized for current conditions of two people on year round usage. The affect of any increased wastewater quantity or quality or improper maintenance cannot be determined.

Nothing in this letter constitutes an endorsement of the construction or the design of the facility described herein. This letter indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for and does not in any way guarantee the performance of the activities allowed under this letter. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this letter, the state does not in any way waive its sovereign immunity.

. & Betty Gissendanner  
May 31, 1989  
Page 2

Since a permit to construct cannot be issued for as-built wastewater treatment facilities, this letter will serve as your final approval document.

Sincerely,

A handwritten signature in cursive script that reads "William L. Garland". The signature is written in dark ink and is positioned above the typed name.

William L. Garland  
Administrator  
Water Quality Division

WLG/DM/mad

PERMIT TO CONSTRUCT

PERMIT NO. 89-179  
See Conditions

- X New
- Renewal
- Modified

Anderson Commercial Small Septic System

This permit hereby authorizes the applicant:

Leigh Anderson  
Rt 1, Box 441  
Torrington, WY 82240

to construct, install or modify commercial small septic system according to the procedures and conditions of the application number 89-179. The facility is located in S31, T25N, R61W in the county of Goshen, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

Laurence Robinson  
Administrator  
Water Quality Division

L. Alan Edwards  
Director  
Department of Environmental Quality

May 25, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Conditions to Permit to Construct 89-179

The drain field shall be located at least ten feet from any building.

DM/mad

PERMIT TO CONSTRUCT

- New  
 Renewal  
 Modified

PERMIT NO. 89-180

CORDERO MINE SPP #14  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Cordero Mining Company  
P. O. Box 1449  
Gillette, Wyoming 82716

to construct, install or modify a sediment control facility according to the procedures and conditions of the application No. 89-180. The facility is located in Section 2, T.46N., R.71W., in the County of Campbell, in the State of Wyoming. This permit shall be effective for a period of five (5) years (five (5) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division, the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 2161 Coffeen Avenue, Suite 501, Sheridan, Wyoming 82801; telephone, 672-6457.

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

AUTHORIZED BY:

William J. [Signature]  
Administrator  
Water Quality Division

A. Alan Edwards  
Director  
Dept. of Environmental Quality

June 9, 1989  
Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-181  
SEE SPECIAL CONDITIONS

- X New
- Renewal
- Modified

CAMPBELL TESTING COMPANY

This permit hereby authorizes the applicant:

Campbell Testing Company  
1374 Willer Drive (P. O. Box 366  
Mills, Wyoming 82644

to construct, install or modify a sand point system according to the procedures and conditions of the application number 89-181. The facility is located in Section 34, SW/SW, T34N, R80W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

Laurena Robinson

Administrator  
Water Quality Division

G. Alan Edwards

Director  
Department of Environmental Quality

May 31, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

#### Special Conditions for Permit to Construct 89-181

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-181. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

Conditions to Permit 89-181 (continued)

6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The screened interval shall extend at least two feet above the highest expected seasonal groundwater level and at least three feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - c. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - d. Factory slotted casing is recommended for the perforated interval.
  - e. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - f. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - g. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - h. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
  - a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Water level and product thickness measurements;
  - e. Sample collection procedures;
  - f. Sampling analytical results;
  - g. A map delineating the extent of the subsurface contamination including dissolved groundwater contamination and concentrations;
  - h. A potentiometric surface map showing the direction of groundwater movement; and

Conditions to Permit 89-181 (continued)

- i. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed quarterly for the parameters listed below:  
  
EPA 601 (Purgeable Halocarbons), EPA 602 (Purgeable Aromatics), EPA 610 (Polynuclear Aromatics) and EPA 418.1 (Total Petroleum Hydrocarbons) Chromium by EPA 218.3 and Cadmium by EPA 213.2.  
  
The results of these analyses shall be submitted to the Cheyenne office by the last day of the month following the end of each quarter. The first set of results are due by the last day of June. After the first sampling event, the parameter list may be shortened with the approval of the Department of Environmental Quality, Water Quality Division.
11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.
12. A 4" concrete slab 48" long and 48" wide shall be installed around each well cap. This slab is intended to provide an additional seal to prevent surface contamination of the well. The well number shall be written in the wet concrete, after the surface is finished.

SCF/jn

cc: Jake Strohmman

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-182R

- X New
- Renewal
- Modified

Riverside Acres Water Transmission and Distribution system

This permit hereby authorizes the applicant:

South Riverside Acres Water Improvement and Service District  
P.O. Box 2314  
Casper, WY 82602

to construct, install or modify water transmission and distribution system according to the procedures and conditions of the application number 89-182R. The facility is located in Sections 6 & 7, T33N, R77W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of five years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

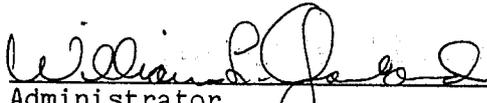
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

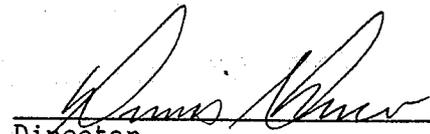
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Southeast District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

September 12, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

LBH/nc

cc: Geocivil Engineers, Inc. P.C.  
505 East 11th St  
Casper, WY 82601

R.F.

PERMIT TO CONSTRUCT

PERMIT NO. 89-183  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

CHUGWATER REST AREA

This permit hereby authorizes the applicant:

Wyoming Highway Department  
5300 Bishop Boulevard  
Cheyenne, WY 82002-9019

to construct, install or modify septic tank and absorption system and sewer and water lines to connect to Town of Chugwater according to the procedures and conditions of the application number 89-183. The facility is located in Section 25, T21N, R67W in the county of Platte, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

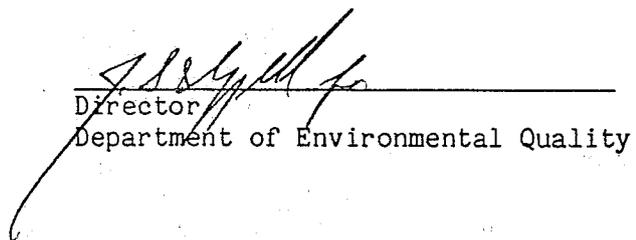
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

  
\_\_\_\_\_  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

SPECIAL CONDITIONS FOR PERMIT TO CONSTRUCT 89-183

1. The on-site sewage treatment system in addition to the connection to the Town of Chugwater sewage collection system was constructed at the request of the Town.
2. No physical connection with or without a valve will be made between the on-site well and irrigation system and the public water supply. If at some later date a connection is to be made to the public water system a modification to this permit must first be requested and approved. At that time a disinfection capability and monitoring by EPA will be required. Any drinking fountain, lavatory, or hose bib in the rest area not prominently "marked not for human consumption" will be considered a public water supply.

LBH/jn

cc: McFall - Konkel & Kimball  
500 East 18th Street  
Cheyenne, WY 82001

AJ

LAND APPLICATION PERMIT

PERMIT NO. 89-184  
SEE SPECIAL CONDITIONS

ROAD APPLICATION - GUERNSEY STATION

This permit hereby authorizes the applicant:

Platte Pipeline Company  
P O Box 3128  
Houston, Texas 77253

to land apply approximately 20 cubic yards of remnant crude oil sludge. The application site is located in Section 17, T26N, R65W in the county of Platte, in the State of Wyoming. This permit shall be effective for a period of six (6) months (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable standards. The authority to land apply granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the disposal method will meet applicable state requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the application site at the above location, for the purpose of compliance with the provisions of this permit.

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

AUTHORIZED BY:

Laurence Robinson

Administrator  
Water Quality Division

H. Alan Edwards

Director  
Department of Environmental Quality

May 25, 1989

Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

Conditions to Land Application Permit #89-184

1. Crude oil sludge shall be applied at a rate which will not produce runoff or ponding. Application shall not be initiated during the spring runoff period or other periods where saturated soil conditions exist.
2. The application site slope shall not exceed 8 percent for vehicular application or 15 percent for spray irrigation or irrigation by gated pipe on the contour.
3. Crude oil sludge application shall be terminated within 300 feet of the definable high water mark of perennial and intermittent drainages, irrigation canals, lakes and reservoirs.
4. The permittee will contact the Department of Environmental Quality, Water Quality Division District Engineer, Larry Robinson, 122 West 25th, Herschler Building, 4 West, Cheyenne, Wyoming 82002, phone number 777-7781, to arrange a field inspection prior to initiation of work. The district engineer should be notified at least 48 hours in advance of discharges.
5. Waste oil and sludges applied to a road will be mechanically incorporated into the road bed as it is applied. Wastes will not be applied during the period from November 1 to April 30.

DM/jn

LAND APPLICATION PERMITPERMIT NO. 89-185  
SEE SPECIAL CONDITIONSROAD APPLICATION - CASPER STATION

This permit hereby authorizes the applicant:

Platte Pipeline Company  
P O Box 3128  
Houston, Texas 77253

to land apply approximately 20 cubic yards of remnant crude oil sludge. The application site is located in Sections 34 & 35, T34N, R80W in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of six (6) months (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable standards. The authority to land apply granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the disposal method will meet applicable state requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

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

AUTHORIZED BY:

Lawrence Robinson  
Administrator  
Water Quality Division

H. Alan Edwards  
Director  
Department of Environmental Quality

May 25, 1989  
Date of Issuance

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4. The permittee will contact the Department of Environmental Quality, Water Quality Division District Engineer, Larry Robinson, 122 West 25th, Herschler Building, 4 West, Cheyenne, Wyoming 82002, phone number 777-7781, to arrange a field inspection prior to initiation of work. The district engineer should be notified at least 48 hours in advance of discharges.
5. Waste oil and sludges applied to a road will be mechanically incorporated into the road bed as it is applied. Wastes will not be applied during the period from November 1 to April 30.

DM/jn



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



# Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

January 19, 1990

Kieth Piontek  
CH2M Hill  
P.O. Box 22508  
Denver, Colorado 80222

RE: Laramie Tie Treatment Plant  
Permit ~~UIC~~ 89-186, class 5X26  
Albany County, Wyoming

Dear Mr. Piontek:

The report submitted by you on December 22, 1989 has been reviewed. This letter will document the results of that review. This letter will also authorize some minor changes in the analytical program associated with the UIC permit, and make recommendations concerning the NPDES permit.

This report indicates that UIC parameters have consistently been in compliance with the permit. The present permit places limitations only on the following parameters:

<u>PARAMETER</u>	<u>MAXIMUM DISPOSAL VALUE</u>
Aluminum	5.0
Arsenic	.22
TDS	20,000
Carbonate	1,560
Bicarbonate	5,000
Vanadium	.14
Zinc	25.0

For aluminum, the first analyses done on 9/18/89 showed that the effluent contained 91.2 mg/l of total aluminum. The above referenced permit limits aluminum to 5.0 mg/l, specifically as dissolved aluminum rather than total aluminum. On 10/17/89 24.3 mg/l was reported as dissolved aluminum. The report shows that 202,670 gallons of fluid were discharged prior to that first sampling. Part C of the above referenced permit clearly requires that these effluents be analyzed prior to discharge. All other samples were taken after more careful attention was given to the neutralization of the effluents, and they all show values in compliance with the permit.

The addition of alum to the effluent is apparently to limit the amount of arsenic, barium, copper, chromium, lead and zinc in the effluent. As dissolved constituents as specified by the permit, this treatment has been effective in removing vanadium, arsenic, and molybdenum. Barium and zinc do not appear to be affected at all by this treatment, in fact the amounts of dissolved barium in the effluent are at least as high as that found in the produced fluids. Zinc appears to be totally unaffected by the treatment. Zinc has, however, always met the limitations imposed by this permit.

TDS has always met the limitations imposed by this permit. In fact, the TDS of the fluids is usually approximately 1/2 of the limitation imposed by the permit.

The bicarbonate limitation required by this permit is 5,000 mg/l. On one occasion this limitation was exceeded by discharging 7,000 mg/l of bicarbonate. This limitation was imposed only as a further control to limit the TDS. At the time when this exceedance was noted, the TDS of the fluids met the discharge limitations.

It should be noted that uranium analyses were required by fluorometric methods only. This method is much less costly than the radiometric methods used to date. There is some confusion about these methods on this report. The results are shown in pCi/l indicating a radiometric analyses. The results are shown to 3 decimal places which is consistent with a fluorometric analyses in mg/l. Whichever it is this should be clarified before the next milestone report.

At this time, it is the opinion of the Water Quality Division that some of the parameters required by this permit can be dropped from future analyses. This is because they have consistently been below all applicable standards and do not appear to be affected by the process. If at some time in the future, other indicator parameters show increases or violations, testing of the below list may be required again. From this date on, it is no longer necessary to analyze for the following parameters:

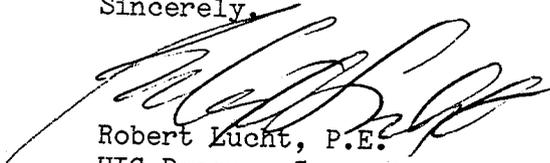
Barium	Molybdenum
Zinc	Uranium
Radium	

Union Pacific should take precautions to see that the remaining parameters are sampled as required by this permit.

Union Pacific has also requested that the requirement to analyze these effluents before discharging them be waived. The justification for waiving this requirement is that the pilot studies are completed now as far as active addition of reagent to the cells. The remainder of the test involves only the flushing out of residual reagents and disposal of what is essentially city water contaminated with some creosote and treated to remove the organic. The inorganic parameters required by this permit should not be elevated. The advantage to direct discharge of the effluents is that the time required for treatment can be reduced. The records compiled by Union Pacific in the past have indicated that this is an

acceptable procedure. Union Pacific will continue to analyze all of these effluents monthly. For this reason, the Water Quality Division of DEQ will concur with this procedure.

Sincerely,



Robert Lucht, P.E.  
UIC Program Supervisor

RL/jt

xc:: Jake Strohman

RF

DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE OF WYOMING  
GROUNDWATER POLLUTION CONTROL PERMIT  
AUTHORIZATION TO DISCHARGE INTO UNDERGROUND RECEIVERS  
(Permit to Inject)

- ( ) New
- (X) Modified

Permit Number:

UIC 89-186  
UIC CLASS 5X26  
REF. #88-133

In compliance with the Wyoming Environmental Quality Act (W.S. 35-11-101 through 1104, specifically 301(a)(i) through (iv), Laws 1973, Ch. 250, Section 1) and Water Quality Rules and Regulations Chapter IX (September 4, 1980),

Union Pacific Corporation  
P. O. Box B  
Laramie, WY 82070

is authorized to operate

Union Pacific, Laramie In-situ pilot recovery system

according to procedures and conditions of the application UIC 88-133 and a report dated March 22, 1989 entitled "Inorganic Water Quality Issues" and requirements and other conditions of this permit.

This permit shall become effective on date of issuance.

*John Stokman for William L Garland*  
Administrator  
Water Quality Division  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002  
Phone: (307) 777-7781

5-31-89  
Date

*H. Alan Edwards*  
Director  
Department of Environmental Quality  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002

May 31, 1989  
Date

A. Discharge (Injection) Zone and Area of Review

The injection zone for this permit includes the alluvial aquifer along the Laramie River in Section 5 and 8, T15N, R73W in Albany County, Wyoming. Incidental to this, injections may be made into the Chugwater, Sundance and Morrison Formations within this same legal description. The injection zone is, however, limited to the area within the contaminated isolation system.

B. Groundwater Classification

The groundwater within the alluvial aquifer is class III under Chapter VIII Wyoming Water Quality Rules and Regulations, except for the organic contamination present which makes the water unusable at the present time. All metals meet class I standards, but TDS, sulfate and chloride make this water class III.

The Morrison Formation within this area is a class I aquifer in that it is being used for class I purposes. The Morrison does not meet class I standards for TDS and sulfate among other parameters.

The Chugwater and Sundance Formation within this permit area is class VI under Chapter VIII of Water Quality Rules and Regulations. Both of these formations contain high TDS, sulfate and chlorides.

C. Authorized Operations

The permittee is authorized to inject certain fluids on a pilot basis for the express purpose of cleaning up the aquifer. The aquifer is presently contaminated with polynuclear aromatics, phenols and various other organic compounds. In brief the permittee is authorized to inject several classes of compounds; A/P/S solutions, bioreclamation solutions, spent fluids and natural groundwaters. The volumes injected are limited to those envisioned in the approved work plan for 1988 and 1989 test work at the "T-4" area and the main pilot facility.

A/P/S Solutions

These solutions are composed of alkaline, polymers, and surfactants to help break the bonding of creosote, residual oil and pentachlorophenol to the soil matrix within the alluvial aquifer. These solutions will contain approximately 1600 mg/l of xanthene gum, 2.5% sodium carbonate, and an industrial surfactant such as tergetol. These chemicals may be present in the above concentrations or any other concentration and may be substituted with other chemicals of the same general type.

Bioreclamation Solutions

These solutions are near neutral in pH with various organic nutrients added. The chemicals which may be added include various ammonium nitrates and phosphates. The total ammonia content when assayed as "ammonia as N" shall not exceed 3 mg/l in any injected solution. These solutions will contain various bacteria which are presently on site but which have been cultured to a high state of activity.

### Disposal of Spent Solutions

This permit covers the pilot scale work at the T-4 site and the Main Pilot Facility. As part of this process, various solutions will be produced that will require on site disposal. Each of these fluids will be sampled and approval requested under this permit before any fluid is disposed of in any drainline.

The water quality of all spent fluids disposed of under this permit by injection into a drainline shall meet the following criteria:

<u>Parameter</u>	<u>Maximum Disposal Value</u>
Aluminum	5.0
Arsenic	.22
TDS	20,000
Carbonate	1560
Bicarbonate	5000
Vanadium	.14
Zinc	25.0

Union Pacific shall analyze for all of the above tests and submit the results to Water Quality Division. Union Pacific shall filter all samples prior to preservation and analysis thus the above standards apply to dissolved parameters. This permit includes only pilot scale work at the T-4 and main pilot facility, no other activity is covered. This permit is automatically void on December 1, 1990.

### Natural Groundwaters

As part of the preliminary work at each of the two sites, "natural" groundwaters will be pumped out of an upper drainline, run through an API oil/water separator and reinjected into the aquifer. This activity is authorized at any time on this entire site. Natural groundwaters whose chemical, bacteriological, or physical makeup has not been altered by any process other than pumping may be reinjected. It is recognized that many of these groundwaters are contaminated.

### D. Proper Operation and Maintenance

The permittee is required to conduct the operation in accordance with statements, representations and procedures presented in the complete permit application and supporting documents, as accepted and approved by the administrator.

The permittee is required at all times to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve permit compliance. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate quality assurance procedures.

The subsurface discharge (injection) authorized by permit shall be consistent with the conditions and content of the permit; 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.

E. Entry and Inspection

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

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate rules and regulations of the Department, any substances or parameters at any location.

F. Environmental Monitoring Program for Groundwaters of the State

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall prepare records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation to be retained for a period of at least 3 years after closure of the facility.
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 date(s) analyses were performed;
  - d. Names of individuals who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.
4. The prescribed program for this permitted activity is as follows:

The monitoring program as described in the workplan submitted with the UIC application is sufficient except that:

- a. On page 4-10 of the workplan where it discusses the analysis of water samples from the WTDD's, these drainlines shall be sampled monthly and analyzed for a complete list of inorganic parameters as listed in part F-5 below.

b. These analyses shall be done monthly as long as any fluid is being circulated through the test cells for any purpose. This includes test cells at the T-4 test and at the MPF test.

c. These analyses are in addition to the organic analysis that were spelled out in detail in the workplan.

5. Water samples shall be analyzed for the following listed inorganic parameters in addition to the organic analysis listed in the approved work plan:

Field Measurements:

pH (reported to nearest .1 ph units)  
Temperature (degrees C)  
Conductivity (micromhos/cm corrected to 25 degrees C)  
Water Level (for wells)  
Pumping Time (for wells)

Laboratory Measurements:

Ammonia (NH<sub>3</sub> as N)  
Aluminum (Al)  
Barium (Ba)  
Iron (Fe)  
Manganese (Mn)  
Molybdenum (Mo)  
Vanadium (V)  
Uranium (U308) (Fluorometric)  
Bicarbonate (HCO<sub>3</sub>)  
Carbonate (CO<sub>3</sub>)  
Total Dissolved Solids (TDS)  
Total Alkalinity  
Arsenic (As)  
Nickel (Ni)  
Radium (Ra) (radiometric pCi/l)  
Zinc (Zn)

Whenever the approved workplan refers to "A Complete List of Inorganic Parameters", or "A long list of Inorganic Parameters" the above list shall be analyzed for. This list includes several parameters that were not included in Appendix B of the approved workplan, but which shall be analyzed whenever inorganic parameters as listed in Table B-2 of Appendix B of the workplan are called for.

G. Requirements for Monitoring the Discharge

Discharge (injection) volume and/or pressure shall be controlled and monitored to prevent fracturing of confining strata.

The injected volume shall be monitored using a continuous recording meter which will show the volume being delivered to any drainline. A totalizer shall be installed that will show the total volume injected to date for each drainline. A continuous recording pH meter shall also be installed on each drainline during all operations under this permit. Due to the nature of this operation, pressure monitoring will not be meaningful and is not required. Records shall be kept of all reagents used in this pilot facility and submitted with the final report on the project.

For each calendar quarter that this facility is operated, a quarterly report shall be submitted. This report shall show the volumes of all flows injected for any purpose as well as the average pH of these flows. An approximate estimate of the chemical makeup of all flows shall also be submitted. This need not be an exact time-weighted average, but can be an approximation based on chemicals added. The quarterly reports shall show typical water levels at the end of each week's operation on all monitor wells and pH and conductivity for all monitor wells at the same times. Volume of oil in place initially, volume recovered, and volume remaining in place shall be submitted for each cell operated, and shall be presented for each week's operation during each calendar quarter. Quarterly reports shall be due 30 days after the conclusion of each quarter.

It is the intent of this clause to allow these quarterly reports to be combined with quarterly reports for all other WQD permits, at the discretion of UPRR. Further, all of these reports can be compiled into similar reports required by EPA if this is possible. Reports required by EPA on a more frequent basis can be used to satisfy these requirements if this is more convenient for UPRR. Without amending this permit, UPRR can also propose to use less frequent reports required by EPA as long as those reports include all of the above data. Written acceptance by WQD of a reporting schedule is required prior to implementation if less than quarterly. The intent is to allow one set of reports to satisfy both EPA and WDEQ requirements.

#### H. Test Procedures

Test procedures for the determination of water quality parameters and constituents shall be in accord with provisions of Water Quality Rules and Regulations Chapter VIII, Section 7.

#### I. Records and Reports

1. 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, for a period of at least 3 years from the date of the report or application.
2. The permittee shall give notice to the administrator as soon as possible of any planned physical alterations or additions to the permitted facility.
3. 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.
4. Monitoring results shall be reported at intervals specified in Section C and/or Section G of this permit.

5. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
6. The permittee shall report any noncompliance which may endanger health or the environment, orally within 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 groundwaters of the state.

A written submission shall be provided within 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; such reports shall contain the information listed in 6. above.
8. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the administrator, it shall promptly submit such facts or information.
9. The permittee shall retain all records concerning the nature and composition of injected fluids until 5 years after completion of any specified plugging and abandonment procedures. The administrator may require the owner/operator to deliver the records to the administrator at the conclusion of the retention period.
10. A subsurface discharge (injection) well may not commence subsurface discharge (injection) until, following public notice and an opportunity for hearing, a groundwater pollution control permit has been issued by the department for the proposed operation, and:
  - a. Well construction is complete and the permittee has submitted notice of completion of construction to the administrator, and
  - b. The administrator has inspected or otherwise reviewed the subsurface discharge (injection) well and finds it in compliance with the conditions of the permit; or the permittee has not received notice from the administrator of intent to inspect or otherwise review the facility within 13 days of the notice of a. above, in which case prior inspection or review is waived, and

c. Well mechanical integrity testing has been proven or demonstrated to the satisfaction of the administrator.

11. Annual reports shall be submitted to the administrator within 30 days following the anniversary date of the permit.

12. A comprehensive report for an aborted or curtailed operation authorized by this permit shall be submitted to the administrator within 30 days of complete termination of the injection (discharge) or associated activity, in lieu of an annual report.

#### J. Permit Actions

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 the permit;
2. Obtaining a permit by misrepresentation or failure of the discharge well or system.

Each permit is reviewed at least once every 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 is issued.

A permit may be modified in whole or part in order to apply more, or less, stringent standards; or prohibitions for a toxic or other substance present in the permittee's discharge, as may be ordered by the council.

This operation (permit) can be terminated by authority of the administrator for one or more permit violations.

Public notice of the permit review and request for public comment will be made every 10 years by the administrator.

#### K. Mechanical Integrity

Each discharge well and associated discharge facilities is required to have mechanical integrity which demonstrates the unimpaired condition of the well and facilities. The approved procedures for demonstrating the mechanical integrity for the well and facilities handling the discharge authorized by this permit consist of:

This section is not applicable to this permit.

The operation (discharge) of any well or system will terminate immediately if mechanical integrity of the well or system fails and/or a leak or unauthorized fluid movement occurs. The discharge shall be discontinued until mechanical integrity has been restored and permission to continue the discharge has been obtained from the administrator.

L. Abandonment

The permittee shall notify the administrator at least 180 days before well abandonment. Immediately following the permanent cessation of subsurface discharge or related activity, or where a well has not been completed, the applicant/permittee shall notify the director and follow the procedures prescribed by the director for plugging and abandonment or the discontinuance of related activities:

This injection will be done by means of shallow trenches using drainlines laid in gravel or by gravel-less drainlines if preferred by the permittee. Abandonment will require only removal of the lines leading to the drainlines down to the connection with the horizontal drainline itself. This includes the vertical drop pipe from the surface.

M. Duties of the Permittee

It is a duty of the permittee to:

1. Comply with all permit conditions;
2. Halt or reduce activity -- it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the permit conditions;
3. Take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;
4. Furnish to 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; and furnish to the administrator, upon request, copies of records required to be kept by this permit.

N. Financial Responsibility

The permittee is required to maintain financial responsibility and resources in form approved by the director, to close, plug and abandon the discharge operation in a manner prescribed by the director.

Union Pacific Railroad as a corporation has shown financial responsibility and has committed to reclamation as required.

O. Special Measures the Director Finds Necessary:

If the sheet pile walls around these two pilot facilities should prove ineffective in containing injected fluids as shown by pH and conductivity monitoring right outside the wall, UPRR will pump-out and treat sufficient water to bring these wells back to their initial condition at the conclusion of the test.

P. Special Permit Conditions:

Pollution or waste which migrates into an aquifer containing a usable groundwater of the state is a violation of the permit.

Mechanical integrity -- operations terminate immediately if mechanical integrity of well or system fails and/or a leak or unauthorized fluid movement occurs.

Q. Signatories Requirement

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 described 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 an authorized representative.

Any person signing a report or other requested information shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine, and imprisonment."

R. Noncompliance

Any permit noncompliance constitutes a violation of the permit.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification or planned changes or anticipated noncompliance, does not stay any permit condition.

S. Permit Transfer

The owner/operator of record (permittee) is always responsible for permit compliance. A permit holder cannot transfer his permit without approval of the department director.

T. Responsibilities

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.

U. Property Rights

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

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.

RL/jn



**JIM GERINGER**  
GOVERNOR

## Department of Environmental Quality

Herschler Building ● 122 West 25th Street ● Cheyenne, Wyoming 82002

ADMINISTRATION (307) 777-7758 FAX 777-7682	ABANDONED MINES (307) 777-6145 FAX 634-0799	AIR QUALITY (307) 777-7391 FAX 777-7682	INDUSTRIAL SITING (307) 777-7368 FAX 777-6937	LAND QUALITY (307) 777-7756 FAX 634-0799	SOLID & HAZARDOUS WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
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### MEMORANDUM

TO: FE Warren Air Force Base Non-CERCLA file

FROM: Maggie Davison 

SUBJECT: Active Fire Protection Training Area, Ref. Permit No. 89-187

DATE: July 19, 1995

Today a site visit was made to the above-referenced Fire Training Area located on F.E Warren Air Force Base, Laramie County. Groundwater contamination downgradient of the site (MW215) was encountered during the investigations associated with Landfill 6, Operable Unit 3. The contamination appears to be petroleum-hydrocarbon in nature and does not seem to be emanating from the landfill or any of the other identified CERCLA sites. The most immediate potential source is the Fire Training Area.

The site was constructed with a burn pit which may or may not have a double liner (the construction drawings are contradictory). Influent to the burn pit are potable water (municipal), JP-4 fuel and recycled water from the burn pit which has passed through an oil-water separator and a containment pond. There was a backflow preventer of some sort placed on the service line from the municipal water line prior to a junction which combined the fuel, recycled water and potable water before discharging into the burn pit. Flow from the burn pit is collected in a drain and piped through the oil-water separator into the containment pond where it can then be recycled back into the burn pit. For some reason, the line to the oil-water separator was also plumbed into the junction of the potable water line, fuel line and water recycle line (see detail B of attached sheet). Leak detection monitoring at the site consists of two "leak detection stations" (note detail A of attachment) and a groundwater monitoring station. One leak detection station is associated with the burn pit and one with the containment pond. The purpose of these stations is to provide a method for detecting fluids which have penetrated the top HDPE liner in each location; basically to monitor for fluids in the interstitial space between the liners, again assuming that a double liner was installed at the burn pit and the retention pond.

Although environmental monitoring systems were permitted and installed under permit number 89-187, no monitoring or reporting requirements were included in the permit. Base personnel have stated that monitoring has been done and that possibly some fire-fighting agents detected. However, no one seems to know who performed the monitoring or where a record of the monitoring results can be located.

July 19, 1995

Page 2

The backflow preventer was removed from the water line and the service line disconnected and capped during the last week of June. Soils were investigated at the outlet of a drain line which had been installed in the manhole which had contained the backflow preventer. No gross evidence of contamination was noted. Analytical results have not been received to date.

The service line is to be disconnected from the water main as soon as possible. Following this action, probably during the first or second week of August, the trench containing the service line between the backflow preventer manhole and the connection to the main will be excavated starting at the manhole in an attempt to discern staining or other gross evidence of contamination which will point to the source. DEQ staff will be on site, probably equipped with an HNU PID to observe the effort. Additionally, bailers will be brought to sample the leak detection stations, the groundwater testing station and MW215. MW215 will not be purged but will be checked for LNAPL. If the excavation and sampling efforts fail to suggest a source area for the release, a more conventional approach to investigation including boreholes and additional monitor wells will be designed and implemented.

The Air Force is planning to modify the facility by removing the influent potable water, JP-4 and recycle (?) lines. Propane is planned to be used as fuel for the fire with a manual application of a small amount (approximately 5 gallons) of JP-4 for smoke. Water will be provided by the pumper truck rather than by a direct line. The waste line from the burn pit to the oil-water separator will remain and water generated during the training exercises will flow through the oil-water separator and into the retention pond. The Air Force was told that, since the system would no longer be connected to a public water supply, no permit to construct would be needed from the District Engineers section. However, the facility is capable of contaminating waters of the state and, since groundwater contamination is present, should be permitted through the Groundwater Pollution Control program so that a monitoring and reporting schedule can be incorporated into the permit.

Also attached are vague specifications for modifications to the system. Apparently the construction is to be done under the base's SABRE contracting, which means that the contractor is not provided with any design drawings to demonstrate what work is to be done or an engineering design report. For this reason, it may be difficult to obtain a complete permit application from the base. One specific issue that is not addressed on the enclosure is whether the existing fuel dispersal system in the burn pit will be used to convey propane or if excavation of the pit will be required to modify the system. If the pit is to be excavated, the possibility of investigating the pit as a source of contamination during that time, assuming the initial plan fails to identify a source, should be considered and coordinated with base personnel.

MD/nc 53174.LTR

Enclosures

cc: Kevin Frederick  
Ron Ewald  
John Kleinschmidt

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-187R  
SEE SPECIAL CONDITIONS

New  
 Renewal  
 Modified

Fire Training Facility F E Warren AFB

This permit hereby authorizes the applicant:

U. S. Air Force, 90 CSG/CC  
F.E. Warren AFB  
Cheyenne, Wyoming 82005-5000

to construct, install or modify fire training facility with burn pit, gray water holding pond, and water distribution according to the procedures and conditions of the application number 89-187R. The facility is located in S27, T14N, R67W in the county of Laramie, in the State of Wyoming. This permit shall be effective for a period of two years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

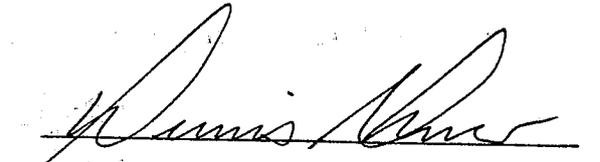
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Southeast District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
Administrator Director  
Water Quality Division

  
Department of Environmental Quality

October 23, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

CONDITIONS TO PERMIT TO CONSTRUCT #89-187

The facility is approved as designed with the addition of the gravity drain line to the manhole containing the reduced pressure backflow preventor.

LBH:nc  
cc:

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-188

- X New
- Renewal
- Modified

Restore Grounds, Wherry Housing (Park Construction)

This permit hereby authorizes the applicant:

F E Warren AFB WY  
90 CSG/CC  
F E Warren AFB WY 82005-5000

to construct, install or modify sprinkler system for new park according to the procedures and conditions of the application number 89-188. The facility is located in Section 25, T14N, R67W in the county of Laramie, in the State of Wyoming. This permit shall be effective for a period of two years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

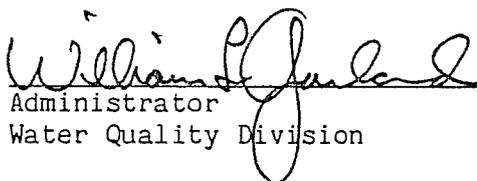
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

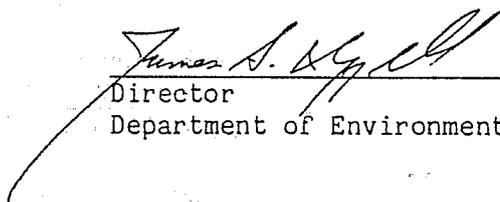
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Southeast District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

6/30/89  
\_\_\_\_\_  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

LBH/mad

PERMIT TO CONSTRUCT

PERMIT NO. 89-190  
See Conditions

X New  
Renewal  
Modified

Acme Tool Company

This permit hereby authorizes the applicant:

Geoscience Consultants, LTs.  
500 Cooper NW, Suite 200  
Albuquerque, NM 87102

to construct, install or modify monitor well system according to the procedures and conditions of the application number 89-190. The facility is located in NE/SE. S33, T1N, R4E in the county of Fremont, in the State of Wyoming. This permit shall be effective for a period of one (1) year (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

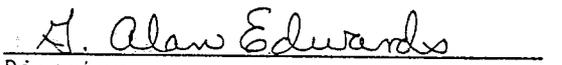
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

June 1, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Conditions to Permit to Construct #89-190

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-190. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.
6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be

Conditions to Permit 89-190 (continued)

implemented when the wells are constructed, installed and developed:

- a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - g. A protective casing and locking cap is strongly recommended;
  - h. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - i. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - j. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
- a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level and product thickness measurements;
  - f. Sample collection procedures;
  - g. Sampling analytical results;

Conditions to Permit 89-190 (continued)

- h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the assumed direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
  10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed one time for the parameters listed below.  
BETX and TPH, soils shall be analyzed for parameters BETX, TPH and EP toxicity.
  11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.

SCF/mad

cc: Jake Strohman

8

PERMIT TO CONSTRUCT

PERMIT NO. 89-191

X New  
Renewal  
Modified

Town of Greybull Sanitary Sewer Improvements

This permit hereby authorizes the applicant:

Town of Greybull  
24 South 5th Street  
Greybull, WY 82426

to construct, install or modify sanitary sewer improvements according to the procedures and conditions of the application number 89-191. The facility is located in S8 & S5, T52N, R93W in the county of Big Horn, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

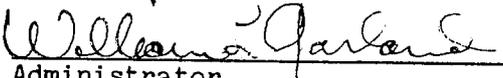
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

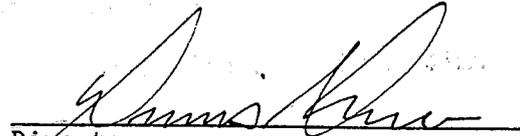
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

August 16, 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

SS/mad



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

August 15, 1989

The Honorable Michael Mayville  
Mayor, Town of Greybull  
P O Box 271  
Greybull, WY 82414

RE: Town of Greybull, Wyoming C560257-94, DEQ/WQD Ref. No. 89-191, Approval of Plans and Specifications

Dear Mayor Mayville:

The plans and specifications for the construction of Sanitary Sewer Improvements for the referenced project have been reviewed by the State of Wyoming Department of Environmental Quality. This office hereby approves the plans and specifications and is enclosing a permit to construct. This permit includes a waiver of the Wyoming DEQ/WQD Chapter XI regulation requiring creek crossing by sewers be within 10' of perpendicular to the creek. The proposed crossing is approximately 20' from perpendicular to the creek. This permit does not supercede the requirements for obtaining any permit from local or state agencies.

The procedure for submission and approval of modifications to the approved plans and specifications is the same as for the original set; i.e., five copies of any proposed modifications, together with an explanation of the reasons therefore should be forwarded to us. Unauthorized modifications of approved sets of plans and specifications may result in suspension of federal participation in the project.

We are sending the approved plans and specifications for the referenced project which must be kept available at all times so that personnel from this office may have access to them during inspection activities.

This is confirmation of our verbal authorization for the project to be advertised and bids opened. You are requested to furnish this office with the date this project is advertised and the date on which bids will be opened as soon as possible. You are reminded to complete the enclosed checklist and associated documentation when bids are opened.

The following points should be brought to your attention at this time:

1. Contracts may not be awarded until authorization has been given by the Department of Environmental Quality.

2. Prior DEQ approval is required for rejection of bids on any contract on this project.
3. Current wage rates must be in the specifications prior to bid opening.
4. Bidders must submit with their bid a signed statement as to whether they have previously performed work subject to the President's Executive Order Number 11246.
5. Contact EPA if any questions arise concerning MBE/WBE utilization on this project.

Following approval of the enclosed checklist and associated documentation by the State of Wyoming Department of Environmental Quality, you will be notified that the construction contract may be awarded.

Sincerely,



William L. Garland  
Administrator  
Water Quality Division

WLG/SS/mad

cc: EPA, Region VIII  
Dale Crank, Crank Companies, Inc.  
Grant File

Date:

Subject: Bid Documents for Review and Approval

From: \_\_\_\_\_ Grant No.:

2sets to: Department of Environmental Quality - Water Quality Division  
Herschler Building, Fourth Floor West  
Cheyenne , Wyoming 82002  
Attn. - Mike Hackett

The following documents are inclosed for review and approval prior to my awarding of the contracts.

- \_\_\_\_\_ Proof of advertising
- \_\_\_\_\_ Tabulation of bids
- \_\_\_\_\_ Recommendation of proposal grantee wishes to accept and contract amount
- \_\_\_\_\_ Any addendum not previously submitted and bidder acknowledgement of all addenda
- \_\_\_\_\_ EPA Form 5700-32 signed by authorized representative
- \_\_\_\_\_ Three (3) lowest proposals for each schedule
- \_\_\_\_\_ Bid bond of three (3) lowest bidders
- \_\_\_\_\_ Certification on non-segregation of facilities
- \_\_\_\_\_ MEE/WBE proposals for lowest proposal
- \_\_\_\_\_ Current Engineers estimate

The proposals expire \_\_\_\_\_ date.

For additional information contact:

Name:

Address:

Phone No.:

\_\_\_\_\_  
Signature of Authorized Representative



THE STATE OF WYOMING



MIKE SULLIVAN  
GOVERNOR

## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756  
FAX (307) 634-0799

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

August 24, 1990

Mike Patton, P.E.  
Coastal Chem  
P.O. Box 1287  
Cheyenne, Wyoming 82003

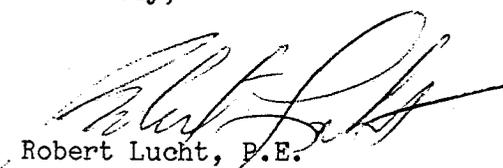
RE: Coastal Chem Injection Wells  
Permit UIC 89-192, class I  
Laramie County, Wyoming

Dear Mr. Patton:

The above referenced permit requires only quarterly reporting, It is no longer necessary for you to send monthly reports. In addition, this permit has changed the monitoring requirements from the old permits. There are some parameters required which are not being reported. Please see that the parameter list found on page 9 of this permit for the wastewater are all performed as required.

This permit requires quarterly monitoring of well #15. This requirement is found on page 8 of the permit. Please see that this work is done as required.

Sincerely,

  
Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

RL/jt

xc: Jake Strohman



OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

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Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

May 21, 1990

Mike Patton, P.E.  
Coastal Chem  
P.O. Box 1287  
Cheyenne, Wyoming 82003

RE: Coastal Chem Injection Wells  
Permit UIC 89-192, class I  
Laramie County, Wyoming

Dear Mr. Patton:

Enclosed please find the final signed permit on the above referenced wells. This permit completely replaces the previous permits on these wells which are now void.

The public comment period from April 9, 1990 until May 9, 1990, resulted in no comments whatsoever on this operation.

Sincerely,

Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

RL/jt

xc: Jake Strohman  
Greg Oberley, EPA Region VIII

DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE OF WYOMING  
GROUNDWATER POLLUTION CONTROL PERMIT  
AUTHORIZATION TO DISCHARGE INTO UNDERGROUND RECEIVERS  
(Permit to Inject)

( ) New

Permit Number:

(X) Modified

89-192  
Ref. UIC 81-966R  
Ref. UIC 84-009R  
UIC CLASS 1-I

In compliance with the Wyoming Environmental Quality Act (W.S. 35-11-101 through 1104, specifically 301(a)(i) through (iv), Laws 1973, Ch. 250, Section 1) and Water Quality Rules and Regulations Chapter IX (September 4, 1980),

Coastal Chem, Inc.  
ATTN: Mike Patton  
P.O. Box 1287  
Cheyenne, Wyoming 82003  
307-637-2700

is authorized to operate

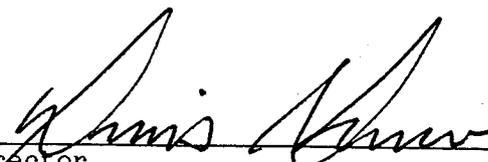
Coastal Chem, Inc. Disposal Wells Number 1 in the SW1/4 NW1/4 Section 16, T13N, R67W 6th P.M. and Number 2 in the NE1/4 SE1/4 Section 17, T13N, R67W 6th P.M. both in Laramie County, Wyoming for the subsurface injection of non-hazardous industrial wastes.

according to procedures and conditions of the application 81-966 and 84-009 and requirements and other conditions of this permit.

This permit shall become effective on date of issuance.

  
\_\_\_\_\_  
Administrator  
Water Quality Division  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002  
Phone: (307) 777-7781

May 24, 1990  
Date

  
\_\_\_\_\_  
Director  
Department of Environmental Quality  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002

May 29, 1990  
Date

A. Discharge (Injection) Zone and Area of Review

Injection is authorized into the Hygiene Sandstone member of the Pierre Shale Formation in the depth interval 5,807 to 6,309 feet in Well 1 and in the depth interval 5,817 to 6,190 feet in Well 2. Injection into any other interval is not authorized by this permit.

This permit does not authorize wastewater treatment or disposal by any method or procedure other than subsurface injection, nor does it authorize the discharge of plant wastes to the surface or into any surface drainage.

The area of review, based on volumetric calculation, is an area described by the following legal description:

Township 13 North, Range 67 West, 6th P.M.

Section 8: S1/2S1/2  
Section 9: S1/2  
Section 15: W1/2W1/2  
Section 16: All  
Section 17: All  
Section 20: N1/2  
Section 21: NW1/4, N1/2NE1/4

The above area of review is based on the following assumptions:

Time of operation: 46 years (total of 16,790 days)  
Porosity: 20%  
Maximum Injection Rate: 450 gpm (648,000 gpd or 15,428 bpd)  
Thickness of Receiver: 216 feet

The above assumptions lead to a radius of fillup of 3291 feet assuming that injectate moves radially outward from the points of injection. The above area of review has been set assuming that all of the injectate can go into either or both of the wells.

It should be noted that the original investigation for these wells was conducted for a 3 mile radius about the midpoint between wells 1 and 2, with a pressure buildup investigation out to 20 miles.

B. Groundwater Classification

The groundwater in the Hygiene Sandstone Member of the Pierre Shale Formation within the area of review has been designated Class VI groundwater of the state, based on the prior use of this location for industrial wastewater disposal (UIC 81-966R and UIC 84-009R); and because the depth of the Hygiene Sandstone member of the Pierre Shale Formation is such that economical use of any waters is not practical.

C. Authorized Operations

The permittee is authorized to inject industrial wastes as generated by the manufacture of ammonium nitrate, dry ice, and to inject storm runoff water from the plant site, and to inject waters collected in various groundwater cleanup facilities on the site, into the Hygiene Sandstone member of the Pierre Shale Formation. Depths of injection are 5,831 to 6,305 feet below the kelly bushing on Well 1, and 5,807 to 6,227 feet below the kelly bushing on Well 2. Wastes to be injected include SIC code 287.

The composite wastewater stream is composed of:

<u>SOURCE</u>	<u>AVERAGE GPM (1)</u>	<u>% TOTAL</u>
Boiler Blowdown	35	15.3
Process Condensate (2)	20	8.8
Cooling Tower Blowdown	105	46.0
Monitoring Wells	5	2.2
Corlett Creek Sump	30	13.2
Interceptor Trench	12	5.3
Storm Runoff	16	7.0
Area Washdown (3)	<u>5</u>	<u>2.2</u>
TOTALS	228	100.0

- (1) Will vary throughout the year due to plant operating conditions and weather conditions.
- (2) Process condensate is condensed water vapor and/or steam.
- (3) Area washdown is raw plant water.

The composite injection also contains a small amount of Nalco 7801 corrosion inhibitor. Approximately 4-1/2 gallons of inhibitor is used per day. Nalco 7801 is an aqueous solution of alkonal amine phosphate ester and ethylene glycol. Nalco 7801 has been shown to not meet the definition of hazardous waste under RCRA.

Coastal recently expanded its plant and added the manufacturing capability for low density, explosive grade ammonium nitrate and dry ice. This expansion caused a rapid increase in the concentration of the nitrogen compounds. Coastal has been working on reducing these concentrations over the past few years.

The following table contains a list of absolute permit limitations:

<u>PARAMETER</u>	<u>CONCENTRATION</u> (mg/l)
Ammonium Nitrate (NH <sub>4</sub> NO <sub>3</sub> )	25,000
Nitrate (NO <sub>3</sub> )	19,000
Ammonia (NH <sub>3</sub> )	10,000
Chromium (Cr+6)	5.0
Urea	7,500
ph	11.0 standard units

In addition to the above limitations, Coastal shall initiate a program to reduce the above parameters to levels similar to what was injected before the plant expansion. A target date of reduction of these parameters is five years from the date of this permit. Water Quality Division will not view failure to achieve this improvement as a violation of this permit, but will expect that progress shall be made. The following table contains the target concentrations Coastal shall file a report 5 years from the date of this permit detailing what efforts have been made toward reduction of the above parameters to pre-expansion levels.

<u>PARAMETER</u>	<u>CONCENTRATION</u> (mg/l)
Ammonium Nitrate (NH <sub>4</sub> NO <sub>3</sub> )	7,000
Nitrate (NO <sub>3</sub> )	5,000
Ammonia (NH <sub>3</sub> )	4,000
Chromium (Cr+6)	2.0
Urea	3,500

The authorized maximum injection rate (volume) under normal operating conditions is 450 gallons per minute (648,000 gallons per day or 15,428 barrels per day) as a total of the injection volume of both wells. Either well separately is authorized for a maximum injection rate of 350 gallons per minute (504,000 gallons per day or 12,000 barrels per day). These limitations are based on the maximum level that these wells can receive without fracturing of the formation. There is no emergency provision in this permit, these limitations shall not be exceeded under any circumstances.

The maximum injection pressure in either of the wells is 930 psig as measured at the wellhead. Exceedence of this pressure under any circumstance is a violation of the permit.

In the event that the injection rate and/or pressure exceed authorized limitations such excessive rate or pressure is a violation and shall be reported pursuant to Section I.6 of this permit. To insure that this condition is met, the permittee shall post signs as follows on the interior of the injection plant and on both wellhead shelters:

COASTAL'S INJECTION PERMIT NUMBER 89-192 REQUIRES NOTIFICATION OF THE WATER QUALITY DIVISION 777-7095 WHENEVER THE INJECTION VOLUME EXCEEDS 350 GALLONS PER MINUTE IN EITHER WELL OR A TOTAL OF 450 GALLONS PER MINUTE IN BOTH WELLS TOGETHER. THIS PERMIT ALSO REQUIRES IMMEDIATE NOTIFICATION ANYTIME THE PRESSURE AT THE WELLHEAD EXCEEDS 930 PSIG. NOTIFY THE CHIEF ENGINEER IF ANY OF THESE VALUES ARE EXCEEDED.

The above wording shall be prepared on a steel or fiberglass sign with red lettering a minimum of 1 inch high and shall be maintained in good condition at all times.

This permit does not allow for the injection of any material that is either characteristic or listed hazardous waste as defined in 40 CFR 261. Injection of any such hazardous waste is a violation of this permit and shall be reported pursuant to Section I.6 of this permit.

Construction details of the two injection wells:

DISPOSAL WELL 1: The annulus was filled with treated water on February 12, 1969 when the well was originally completed. Annulus pressure between the 4.5 inch tubing and the 7 inch casing has been monitored continuously since injection began.

Pressure tests have been conducted annually. As a result of the pressure test in 1981, it is reported that the integrity of the casing to tubing annulus was confirmed by a 44 hour check of its pressure after filling it liquid full. A closed system reportedly was demonstrated by pressure increase with temperature during shut-in.

Integrity of the packer was also indicated by the pressure test. A "packer test" by radioactive tracer survey was conducted on December 2, 1982 and again on March 21, 1990. No leaks around the packer were indicated by the tracer survey.

Applicant/permittee has provided a cement-bond log (1969) which indicates the presence of adequate cement to prevent the migration of injection fluid through vertical channels outside the casing. A second cement bond log was run December 14, 1989. In December of 1982 further testing of the well was conducted, including the running of two types of temperature logs and the use of a high sensitivity flowmeter (and the running of radioactive fluid velocity logs). No movement of fluid along the outside of the casing has been indicated.

The submitted information is accepted as indicative of well mechanical integrity for the permitted operation. If an increase in normal injection rate (Volume) and/or pressure is requested by the applicant/permittee, adequate justification must be required before an increased normal injection rate/pressure will be authorized.

TD: 6,305' below ground level.

Casing: 9-5/8", H-40, 32.3#, set at 1,101' 7", J-55, 23#, set at 5,831'.

Tubing: 4-1/2", J-55, 10.5#, 5,770.46'; with 60.65' of 4-1/2" Fibercast casing below the packer. Tubing coated internally with Tube-Cote TK-75.

Packer: Permanent Baker compression packer set at 5,740' with 57,000 psi surface compression.

Cementing program: Cement circulated on the surface string with 700 sax of class G cement with 3% CaCl in the last 100 sax.

The 7" casing was cemented in two stages. Cemented first stage (5,831-3,711) with a spearhead of 500 gallon mud flush, followed by 460 sax 50/50 Pozmix cement with 2% allowed gel. Opened D.V. tool and circulated cement to surface using spearhead of 500 gallon mud flush followed by 900 sax 50/50 Pozmix cement with 2% allowed gel and 2% added gel.

Completion: Open hole completion 5,831'-TD with Fibercast tailpipe below packer set at 5,770'. (Note: Based on injection logging of December 1-2, 1982, it was reported that the packer and tubing were found to be located 40 ft. higher than expected, and the hole was found to be bridged at a depth of 6,007 feet instead of open to approximately 6,275 feet as expected.)

Treatment: Well was acidized with 2,000 gallon H.F. acid and fraced with 500 barrels water (Adomall added). Average injection rate 30 BPM. Average pressure 2,700 pounds.

Pressure monitoring: Annulus between casing and tubing filled with demineralized corrosion inhibiting water.

Injection pressure, annulus, and injection rate monitored continuously using a chart recorder, and manual recording of pressures and rates.

Plant personnel routinely inspect well monitoring devices. The chart record is compared to gauge readings. If significantly different, an artificial signal is put into the chart recorder and the recorder recalibrated. If necessary, gauges are pulled and reset or replaced.

DISPOSAL WELL 2: Well Number 2 was drilled 8/12/84 to a depth of 1106 feet with a 13-1/4 bit. At this depth, 9-5/8 inch 36 pound, K-55 surface pipe was set and cemented to surface with 575 sacks of HOWCO Lite with 2% calcium chloride and 1/4 pound flosele and 200 sacks class G cement with 2% calcium chloride and 1/4 pound flosele. After waiting on cement, the hole was drilled to the present total depth of 6335 feet with 8-3/4

inch bit. Seven inch, 23 pound, K-55 casing was then set and cemented with 720 sacks of 50/50 pozmix cement with 10% salt and 2% gel in a first stage of a two stage cementing operation. The second stage used 1450 sacks of 50/50 pozmix cement with 10% salt and 2% gel and placed cemented from 3666 feet to the surface. 500 gallons of mud flush was used ahead of both stages.

Well 2 was perforated and acidized in four zones. These zones were 6120 to 6202, 6060 to 5943 to 6002, and 5830 to 5850. After perforating and acidizing, 5750.32 feet of 10.5 pound K-55 internal plastic coated casing was run in as tubing set in a Baker model AL-2 large bore packer set at 5763 feet.

Well 2 was also hydrofraced and propped to improve injectability. Mechanical integrity was demonstrated March 21, 1990 by running a radioactive tracer log and temperature survey.

D. Proper Operation and Maintenance

The permittee is required to conduct the operation in accordance with statements, representations and procedures presented in the complete permit application and supporting documents, as accepted and approved by the administrator.

The permittee is required at all times to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve permit compliance. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate quality assurance procedures.

The subsurface discharge (injection) authorized by permit shall be consistent with the conditions and content of the permit; 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.

E. Entry and Inspection

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

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate rules and regulations of the Department, any substances or parameters at any location.

F. Environmental Monitoring Program for Groundwaters of the State

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall prepare records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation to be retained for a period of at least 3 years after closure of the facility.
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 date(s) analyses were performed;
  - d. Names of individuals who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.
4. The prescribed program for this permitted activity is as follows:

Environmental Monitoring

The Coastal Water Well #15 (State Engineer Permit No. U.W. 36518) In the NW1/4 SE1/4 of Section 17 shall be sampled on a quarterly basis unless data indicate a need for more frequent sampling and analysis.

Parameters for analysis shall include, at a minimum:

Nitrate as NO <sub>3</sub>	Ammonia as NH <sub>3</sub>	Urea
Chromium +6	Total Dissolved Solids	Field pH
Total Chromium	Field Conductivity	

Proper sampling and analytical procedures shall be followed on all sampling required under this permit. In particular, this well shall be purged of a minimum of 3 casing volumes of water prior to taking the analysis sample. Analysis shall be reported to the Water Quality Division with each quarterly report required under this permit.

G. Requirements for Monitoring the Discharge

Discharge (injection) volume and/or pressure shall be controlled and monitored to prevent fracturing of confining strata.

Volume and pressure shall be monitored continuously by means of recording charts on the flow meters and pressure gages. The pressure on the annulus between the injection tubing (the 4-1/2 inch casing) and the long string casing shall also be monitored continuously by means of a pressure recording chart. A pressure kill switch is required on the injection tubing. This switch shall be set to shut in the well if the maximum pressure is exceeded.

The annulus shall be pressurized at a pressure of 400 psig and held constantly. Pressure swings in the annulus under certain operating conditions are normal and shall not be considered a permit violation. As part of the quarterly report of operation, any addition of fluid to the annulus shall be reported. Addition of fluid to the annulus is also a reportable event under section I.6 of this permit since it may indicate a loss of mechanical integrity. A high pressure kill switch is required on the annulus set to shut in the well if the annulus pressure increases to near the injection pressure.

The wastewater shall be sampled and analyzed once a quarter for the following parameters:

Ammonium Nitrate (NH <sub>4</sub> NO <sub>3</sub> )	Nitrate (NO <sub>3</sub> )
Ammonia (NH <sub>3</sub> )	Urea
Chromium +6	Total Dissolved Solids
pH	Total Chromium

COASTAL shall propose specific test procedures and receive WQD acceptance for these analyses and use the same procedure for the life of this permit. The sample for analysis shall be a composite sample taken over a minimum of 3 weeks time

At least once a year, and more frequently as the Administrator may require based on the technical evidence, the permittee shall shut in each of these wells to perform a valid pressure fall off test. The test shall be considered complete when the pressure recording shows a line asymptotic to a horizontal line or the pressure declines to zero. In general, this test does not require a bottom hole recording device. The Water Quality Division may require this device if the injection history over the previous year shows unusual characteristics that warrant such a procedure.

The quarterly report of operations for these wells shall include the following information:

- a. The minimum, average, and maximum daily injection rate for each of the two wells, for each month of the quarter. The page showing the maximum injection rate shall also show the maximum permitted injection rate for comparison.

- b. The minimum, average, and maximum daily injection pressure for each of the two wells for each month of the quarter. The page showing the maximum injection pressure shall also show the maximum permitted injection rate for comparison.
- c. The total injection volume in gallons for each month of the quarter, and the total cumulative injected volume for each of the two wells.
- d. The maximum and minimum annulus pressure for each month of the quarter.
- e. Any permit exceedences within the quarter.
- f. Any tests run during the quarter. This includes but is not limited to the results of any Mechanical Integrity Tests, Pressure Falloff Tests, Step Injection Tests, or any well workovers.
- g. The analytical results of sampling for the injected water quality and the quality of water in Coastal Well 15.
- h. Quarterly reports are due in the Cheyenne office of the Water Quality Division no later than 30 days after the end of each calendar quarter. The permittee is free to propose other fiscal quarters and to report on these quarters with prior approval of the Water Quality Division.

The annual report of operations on these wells shall include the fourth quarterly report and the following additional information.

- a. A graphical representation of the injection pressure and volume for the previous five year's operation. This graph shall have the dates of the year on the abscisa and the pressure and volume as the ordinate.
- b. Graphical representations of the quality of the injected fluid over time. These graphs shall show the injected quality for the previous five years operation and shall be prepared on appropriate scales to show the variation.
- c. Graphical representation of the quality of water in Coastal Well 15 over time.

#### H. Test Procedures

Test procedures for the determination of water quality parameters and constituents shall be in accord with provisions of Water Quality Rules and Regulations Chapter VIII, Section 7.

I. Records and Reports

1. 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, for a period of at least 3 years from the date of the report or application.
2. The permittee shall give notice to the administrator as soon as possible of any planned physical alterations or additions to the permitted facility.
3. 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.
4. Monitoring results shall be reported at intervals specified in Section C and/or Section G of this permit.
5. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
6. The permittee shall report any noncompliance which may endanger health or the environment, orally within 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 groundwaters of the state.

A written submission shall be provided within 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; such reports shall contain the information listed in 6. above.
8. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the administrator, it shall promptly submit such facts or information.
9. The permittee shall retain all records concerning the nature and composition of injected fluids until 5 years after completion of any specified plugging and abandonment procedures. The administrator may

require the owner/operator to deliver the records to the administrator at the conclusion of the retention period.

10. A subsurface discharge (injection) well may not commence subsurface discharge (injection) until, following public notice and an opportunity for hearing, a groundwater pollution control permit has been issued by the department for the proposed operation, and:
  - a. Well construction is complete and the permittee has submitted notice of completion of construction to the administrator, and
  - b. The administrator has inspected or otherwise reviewed the subsurface discharge (injection) well and finds it in compliance with the conditions of the permit; or the permittee has not received notice from the administrator of intent to inspect or otherwise review the facility within 13 days of the notice of a. above, in which case prior inspection or review is waived, and
  - c. Well mechanical integrity testing has been proven or demonstrated to the satisfaction of the administrator.
11. Annual reports shall be submitted to the administrator within 30 days following the anniversary date of the permit.
12. A comprehensive report for an aborted or curtailed operation authorized by this permit shall be submitted to the administrator within 30 days of complete termination of the injection (discharge) or associated activity, in lieu of an annual report.

J. Permit Actions

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 the permit;
2. Obtaining a permit by misrepresentation or failure of the discharge well or system.

Each permit is reviewed at least once every 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 is issued.

A permit may be modified in whole or part in order to apply more, or less, stringent standards; or prohibitions for a toxic or other substance present in the permittee's discharge, as may be ordered by the council.

This operation (permit) can be terminated by authority of the administrator for one or more permit violations.

Public notice of the permit review and request for public comment will be made every 10 years by the administrator.

K. Mechanical Integrity

Each discharge well and associated discharge facilities is required to have mechanical integrity which demonstrates the unimpaired condition of the well and facilities. The approved procedures for demonstrating the mechanical integrity for the well and facilities handling the discharge authorized by this permit consist of:

The operation (discharge) of any well or system will terminate immediately if mechanical integrity of the well or system fails and/or a leak or unauthorized fluid movement occurs. The discharge shall be discontinued until mechanical integrity has been restored and permission to continue the discharge has been obtained from the administrator.

At a minimum of once every five years or more frequently if required by the Administrator, the permittee shall demonstrate the continued sound and unimpaired conditions of all components of both of these wells. This demonstration shall consist of two parts as follows:

- a. The permittee shall demonstrate that the casing, tubing and packer remain in a condition to hold pressure without significant leaks. This shall be demonstrated by holding a pressure of 1,200 psig on the annulus between the long string casing and the tubing for a minimum of 15 minutes time. During this time, the annulus pressure should not drop perceptably. If a perceptable drop in pressure occurs, the annulus shall be repressured to 1,200 psig and held for 15 minutes. During this second test, no perceptable drop in pressure should occur. This part of the test will be considered successful if no more than 50 psi of pressure loss occurs. If there is a perceptable loss in pressure of less than 50 psig, the Water Quality Division may require more frequent tests.
- b. The second part of the mechanical integrity test involves proving that there is no flow behind the casing upward from the receiver. This requires logging by two methods, temperature logging and some form of a radioactive tracer log. The temperature log shall be run with the well shut in and shall be recorded while the tool is lowered into the hole.

These mechanical integrity tests shall be performed after notifying the Water Quality Division at least 30 days in advance so that a Water Quality Division inspector may witness these tests.

The demonstration of mechanical integrity may be accomplished by substitution of logging procedures other than these provided prior approval is obtained from the Administrator. Additional logs may be run without prior approval.

L. Abandonment

The permittee shall notify the administrator at least 180 days before well abandonment. Immediately following the permanent cessation of subsurface discharge or related activity, or where a well has not been completed, the applicant/permittee shall notify the director and follow the procedures prescribed by the director for plugging and abandonment or the discontinuance of related activities:

The following abandonment procedure shall be followed for each of the two wells:

A squeeze cementing operation shall be run with the cement retainer set within 20 feet of the top perforations. This cementing operation shall pump a minimum of 120 sacks of 50/50 pozmix cement with 2% allowed gel. Following displacement of the tubing and initial set of the cement, the retainer shall be set again at a depth of 2,500 feet and an additional 800 sacks of similar cement shall be emplaced. The hole shall then be filled with high solids natural bentonite mud having a 10 minute gel strength of at least 20 pounds per 100 square feet and a filtrate volume not to exceed 13.5 cc. Following this operation, the top 500 feet of the hole shall be filled with cement as above and a standard dry hole marker shall be installed on the surface welded to the long string pipe.

In no case shall the abandonment procedure be less stringent than required by the Wyoming Oil and Gas Conservation Commission for the abandonment of producing oil wells at the time of abandonment. In no case shall the abandonment procedure be less stringent than required by the EPA nationwide for class 1 non-hazardous waste wells at the time of abandonment.

Anytime that either of these wells fails a Mechanical Integrity Test, and remedial measures fail to return the well to full compliance, injection shall be stopped immediately in that well, and abandonment of that well shall be undertaken within six calendar months of the date of the failed MIT. If it becomes necessary to abandon either of these wells because of this condition, a replacement well may be drilled under this permit provided that a drilling, casing and cementing plan is submitted and approved by the Water Quality Division prior to construction of any replacement well. In addition, all permit constraints shall apply to any replacement well equally as they would to either of the existing wells. Any replacement well shall be located within 500 feet of the well it is replacing.

M. Duties of the Permittee

It is a duty of the permittee to:

1. Comply with all permit conditions;
2. Halt or reduce activity -- it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the permit conditions;

3. Take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;
4. Furnish to 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; and furnish to the administrator, upon request, copies of records required to be kept by this permit.

N. Financial Responsibility

The permittee is required to maintain financial responsibility and resources in form approved by the director, to close, plug and abandon the discharge operation in a manner prescribed by the director.

The required Certificate of Financial Responsibility has been submitted by the permittee.

O. Special Measures the Director Finds Necessary:

This permit replaces permits 81-966R and 84-009R issued by the Water Quality Division. This permit does not affect permits issued by other state agencies for these wells.

P. Special Permit Conditions:

Pollution or waste which migrates into an aquifer containing a usable groundwater of the state is a violation of the permit.

Mechanical integrity -- operations terminate immediately if mechanical integrity of well or system fails and/or a leak or unauthorized fluid movement occurs.

Q. Signatories Requirement

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 described 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 an authorized representative.

Any person signing a report or other requested information shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

R. Noncompliance

Any permit noncompliance constitutes a violation of the permit.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification or planned changes or anticipated noncompliance, does not stay any permit condition.

S. Permit Transfer

The owner/operator of record (permittee) is always responsible for permit compliance. A permit holder cannot transfer his permit without approval of the department director.

T. Responsibilities

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.

U. Property Rights

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

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.

RL/nc

RF

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 89-193R

Daisy Cleaners LUST Site  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Energy Distributing Co.

P.O. Box 1340

Casper, WY 82602

to install groundwater monitor wells according to the procedures and conditions of the application No. 89-193R. The facility is located in SW 1/4 NE 1/4 NE 1/4 Section 34, T1N R4E WRM in the County of Fremont, in the State of Wyoming. This permit shall be effective for a period of two (2) years (five (5) years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or insures that the permitted facility, when constructed, will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the State does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

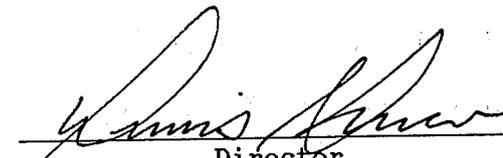
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 210 Lincoln, Lander, WY 82520; telephone, 332-3144.

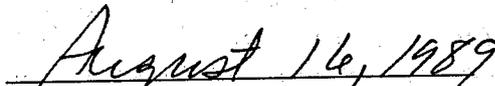
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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

AUTHORIZED BY:

  
Administrator  
Water Quality Division

  
Director  
Dept. of Environmental Quality

  
Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

#### Conditions for Monitoring Wells

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-193R. Additional wells meeting the requirements of the application this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical

limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.

3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.
6. In addition to the well construction information submitted with the permit application, the following items relating to well construction must be addressed when the wells are installed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine grained material into the well the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - g. A protective casing and locking cap is strongly recommended;

- h. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - i. A seal of bentonite or bentonite grout is required from the surface to at least one foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - j. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
- a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level and product thickness measurements;
  - f. Sample collection procedures;
  - g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.

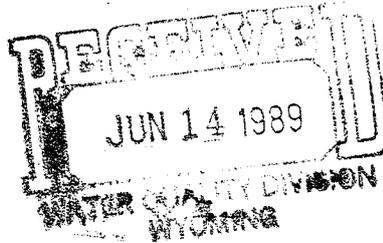
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed for parameters listed in the permit to construct application #89-193R.
11. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.

JH/anc

THE STATE



OF WYOMING



## Department of Environmental Quality

Air Quality Division  
(307) 332-3144

Land Quality Division  
(307) 332-3047

Solid Waste Management Program  
(307) 332-3144

Water Quality Division  
(307) 332-3144

June 7, 1989

Mr. Bob Ablondi  
Jorgenson Engineers  
P.O. Box 1142  
Jackson, WY 83001

RE: Trails End Dude Ranch  
WQD Ref. No. 89-194

Dear Bob:

I am returning the plans to the above referenced project because all flows are domestic wastewater and less than 2000 gpd. This project should be reviewed by Dick Worl.

If you have any questions do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Steve P. Gerber".

Steve P. Gerber, P.E.  
Northwest District Supervisor

SPG/anc

cc: Dick Worl  
LPS

R.F.

PERMIT TO CONSTRUCT

PERMIT NO. 89-195  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

HOMAX OIL SALES, INC. - SOUTH POPLAR SITE

This permit hereby authorizes the applicant:

Mr. Jim Homer  
605 South Poplar  
Casper, WY 82601

to construct, install or modify groundwater monitoring wells and soil boring according to the procedures and conditions of the application number 89-195. The facility is located in Section 9, T33N, R79W, SWNW $\frac{1}{4}$  in the county of Natrona, in the State of Wyoming. This permit shall be effective for a period of two (2) years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

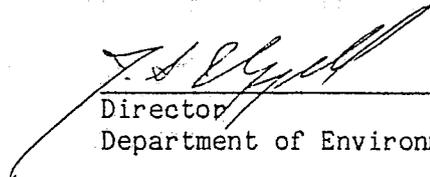
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

June 27 1989  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

Special Conditions for Permit to Construct 89-195

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-195. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

Conditions to Permit 89-195 (continued)

6. In addition to the well construction information submitted with the permit application, the following items relating to well construction shall be implemented when the wells are constructed, installed and developed:
  - a. After the bentonite has been placed in the annular space, it shall be hydrated to ensure a proper seal;
  - b. The borehole diameter shall be at least four inches larger in diameter than the casing diameter;
  - c. The screened interval shall extend at least two or three feet above the highest expected seasonal groundwater level and at least five feet below the lowest expected groundwater level. Factory slotted casing is recommended for the perforated interval;
  - d. If PVC casing is used, only threaded PVC casing is acceptable. Under no circumstances are PVC glue or plastic welding solvents to be used to join casings;
  - e. To minimize the entrance of fine-grained material into the well, the filter pack shall be designed to be compatible with the perforation size and the geologic materials encountered within the perforated interval;
  - f. A top and bottom cap shall be installed to prevent sediment and surface water from entering the well;
  - g. A protective casing and locking cap is strongly recommended;
  - h. The monitoring well shall be developed by the use of a pump or bailer so that representative groundwater samples can be collected;
  - i. A seal of bentonite or bentonite grout is required from the surface to a foot or two above the top perforation. Protective casing shall be cemented into a sloping concrete cap; and
  - j. All monitor wells shall be designed so that they contain a minimum of 3 feet of water at all times.
7. DEQ/WQD personnel shall be given at least two weeks notice prior to the installation of the monitor wells and sample collection so that DEQ/WQD personnel may be on-site if deemed necessary.
8. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
  - a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrolic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level and product thickness measurements;
  - f. Sample collection procedures;

Conditions to Permit 89-195 (continued)

- g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
9. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
10. All monitor wells associated with this facility shall be sampled and the wastewater analyzed one time for the parameters listed below:
- BETX, TPH
- The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.
11. All inventory records for a year prior to the report of a spill shall be submitted to the DEQ/WQD within 15 days of receipt of this permit. Reconciled inventory records with the volume of the spill specified shall be submitted to the DEQ/WQD within 45 days of receipt of this permit.
12. The results of any analyses conducted on soil or water removed from these wells or boreholes shall be provided to the department as soon as they are available.
13. If the groundwater monitoring wells are to be drilled in locations other than that show in the permit application, prior approval shall be obtained from the WQD.

DM/jn

cc: Jake Strohman, DEQ/WQD

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-196  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

PP&L Jim Bridger FGD Evaporation Pond Modification

This permit hereby authorizes the applicant:

Pacific Power & Light Co.  
920 SW Sixth Avenue, 800 PFFC  
Portland, OR 97204

to construct, install or modify the FGD evaporation pond such that the maximum water level may be increased from 6694 to 6697 feet according to the procedures and conditions of the application number 89-196. The facility is located in S35, T21N, R101W in the county of Sweetwater, in the State of Wyoming. This permit shall be effective for a period of two years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

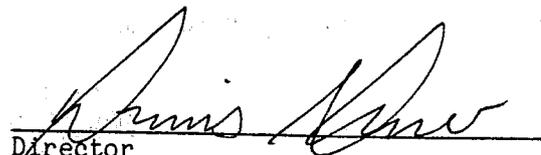
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

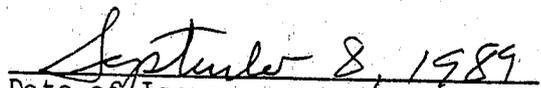
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation.

The 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.

AUTHORIZED BY:

  
Administrator  
Water Quality Division

  
Director  
Department of Environmental Quality

  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

#### CONDITIONS TO PERMIT TO CONSTRUCT #89-196

The permit is issued with the requirements that the permittee abide by the following conditions:

1. Once the pond expansion has been completed, the owner shall provide the Department of Environmental Quality, Water Quality Division (DEQ/WQD) with the as built drawings for the pond area.
2. The results of any analyses conducted on soil or water from this facility will be provided to the DEQ/WQD as soon as they are available.
3. The permittee shall continue to sample the existing monitoring wells (as required via permit No. 85-559RRR) without interruption.
4. In the event that construction should affect the placement of any existing wells, DEQ/WQD shall be notified. DEQ/WQD approval shall be given for the abandonment of wells and the location and construction of replacement wells.

ELJ/nc



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



# Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration (307) 777-7937	Air Quality Division (307) 777-7391	Land Quality Division (307) 777-7756	Solid Waste Management Program (307) 777-7752	Water Quality Division (307) 777-7781
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June 23, 1989

Larry E. Severson  
4599 Ironhorse  
Burns, Wyoming 82053

RE: Permit to Construct Application Number 89-197

Dear Mr. Severson:

The Department of Environmental Quality, Water Quality Division, has reviewed your application (#89-197) for a permit to construct a commercial septic system for your two single family residences at S34, T14N, R63W, Laramie County. The Water Quality Division has determined that the system meets the minimum design standards.

Nothing in this letter constitutes an endorsement of the construction or the design of the facility described herein. This letter indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for and does not in any way guarantee the performance of the activities allowed under this letter. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this letter, the state does not in any way waive its sovereign immunity.

Since your system has already been constructed, a permit to construct cannot be issued. This letter is your record that the commercial septic system as installed meets minimum state specifications and has been approved by the Wyoming Department of Environmental Quality, Water Quality Division.

In the future if you are to build a septic system, you must apply for a permit to construct prior to construction to avoid enforcement action.

Sincerely,

William L. Garland  
Administrator  
Water Quality Division

WLG/DM/jn

cc: Gary Hickman, Laramie County City-County Health



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756  
FAX (307) 634-0799

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781  
FAX (307) 777-5973

May 17, 1991

Don Law, President  
Prima Exploration, Inc.  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237

RE: C-H Minnelusa Unit Water Injection Well 6  
Permit UIC 89-198, Class I  
Campbell County, Wyoming

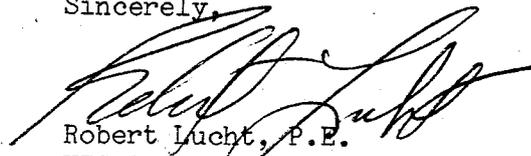
Dear Mr. Law:

Enclosed please find one copy of the annual inspection report for the inspection conducted on May 8, 1991. This inspection covered only the field inspection, the office portion of that inspection will be conducted during the week of July 10, 1991. The office portion of the inspection is to insure that all reports are being submitted correctly with the information being collected in the field, and that all required records are being kept.

The field inspection did reveal certain problems with housekeeping. The meters inside the injection plant are presently hanging by the insulated wires only. These meter housings should be replaced with new parts for the Halliburton model MC-II meters. The back door into the injection plant is not locked, but is propped closed with a board. The permit requires that you maintain site security to prevent unauthorized disposal into your system. As presently structured, there is nothing to prevent any hauler from placing almost any type of waste into your system. Any hauler could connect to any one of the three intake ports, and access the interior machinery to unload his truck. This needs to be corrected.

The housekeeping in and around the injection plant leaves much to be desired. Please see photographs attached to the inspection report. The floor which this department required last year is doing its job and is preventing groundwater contamination from spills inside the plant. The plant itself would function more reliably and with better safety to your employees if the housekeeping was significantly better. Please have this plant cleaned up and kept clean in the future.

Sincerely,



Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

RL/jt

Enclosures

xc: Jake Strohman  
Barb Conklin, EPA Region VIII

Kieth Youst (w/o photos)  
P.O. Box 32  
Moorcroft, Wyoming 82721

STATE OF WYOMING  
DEPARTMENT OF ENVIRONMENTAL QUALITY/WATER QUALITY DIVISIONUIC Class I Wastewater Disposal Well  
Well Inspection ReportWDEQ Inspector Robert F. Lucht, P.E. Title UIC Program SupervisorFacility Name: PRIMA EXPLORATION INC.  
CH Minnelusa Unit #6  
7800 East Union Blvd., Suite 605  
Denver, Colorado 80237  
(303) 686-4313Inspection Date: May 8, 1991Well Name/Number C-H Minnelusa Unit #6 UIC Permit Number: UIC 89-198

Well Site Inspection The well site itself is clean with no evidence of recent spillage. The wellhead appears to be properly maintained. The wellhead itself has some oil on the outside, and is not painted, but there does not appear to be any leakage. Oil on the outside was probably on the fittings when they were installed during the last workover.

Flow MeasurementInjection Rate:

Type of Device: There are three Halliburton model MC-II flow meters installed on the lines where the trucks unload into the system. These flowmeters are used to meter the water from individual haulers for billing purposes. Two of these meters have broken housings and are connected only by the wires that send the signal. They appear to be in working order. There is a fourth Halliburton MC-II on the wellhead set up to measure whatever goes down the well. All of these meters are standard turbine type meters.

Manufacturers Name/ Model Number: Meter serial number MC-1040662 is used by Ellis Water Service, Meter serial number MC-1040663 is used by Semlok. Meter serial number MC-1040664 is presently used by Wyoming Welding, but may be used by others in the future. The meter on the wellhead is serial number MP-1009554.

Description of Measurement: All meters are standard turbine meters which include a digital readout and a totalizer. Readings are manually recorded daily.

Remarks The mounting brackets or housings for two of the meters at the unloading terminal need to be replaced.

Injection Pressure:

Type of Device: Standard helical coil tube pressure recorder.

Manufacturers Name/ Model Number: Barton Serial Number 202E-387511. This is the same recorder as last year.

Description of Measurement: Injection fluid is hydraulically connected to the meter through a very small diameter stainless steel line. This line ends with a stainless steel coiled tube which is force to unwind very slightly by increases in pressure. The coil tube is mechanically connected to a pen on the chart recorder. 0 to 3000 psig is recorded on a seven day chart. This is a two pen recorder, presently using only one pen for injection pressure. The well has been on a vacuum, but is now beginning to show pressure.

Remarks Chart recorder is mounted on a movable stand near the injection lines in the plant. The pressures recorded actually include the head loss imposed by the flow line to the well. Prima has been informed that this is all right, but the pressure limitations in the permit apply to this recording. This makes the permit very conservative because of the head loss to the well which is not taken into account in the permit pressure limitation. Prima may have to move this recorder to the wellhead if pressure limitations ever become a problem.

Annulus Pressure

Type of Device: Standard helical coil pressure recorder.

Manufacturers Name/ Model Number: Foxboro Type NI SP serial number 95805 on the case, 899439 on the chart drive, and 959716 on the coil tube. This is the same recorder as last year.

Description of Measurement: 7 day chart recorder

Remarks Annulus has recently been set up with a nitrogen blanket down in the casing. Part of the packer fluid was withdrawn to allow a few feet of nitrogen to be placed at the top of the well to dampen out pressure swings.

**Record Review** (A RECORD REVIEW HAS NOT BEEN CONDUCTED DURING THIS INSPECTION. AN INSPECTION HAS BEEN SCHEDULED IN JULY TO REVIEW THE RECORDS KEPT IN THE DENVER OFFICE.)

Injection Rate:

Records Reviewed

From \_\_\_\_\_ Month \_\_\_\_\_ Year Through \_\_\_\_\_ Month \_\_\_\_\_ Year  
Other \_\_\_\_\_ Month \_\_\_\_\_ Year Through \_\_\_\_\_ Month \_\_\_\_\_ Year

Remarks: \_\_\_\_\_

Injection Pressure:

Records Reviewed

From \_\_\_\_\_ Month \_\_\_\_ Year Through \_\_\_\_\_ Month \_\_\_\_ Year  
Other \_\_\_\_\_ Month \_\_\_\_ Year Through \_\_\_\_\_ Month \_\_\_\_ Year

Remarks: \_\_\_\_\_

Annulus Pressure:

Records Reviewed

From \_\_\_\_\_ Month \_\_\_\_ Year Through \_\_\_\_\_ Month \_\_\_\_ Year  
Other \_\_\_\_\_ Month \_\_\_\_ Year Through \_\_\_\_\_ Month \_\_\_\_ Year

Remarks: \_\_\_\_\_

Maintenance Records:

Remarks: \_\_\_\_\_

Calibration Records:

Remarks: \_\_\_\_\_

Sample Collection Quality Assurance:

Sample Collection Procedure \_\_\_\_\_

Sample Analysis Procedure \_\_\_\_\_

Water Quality Analytical Results:

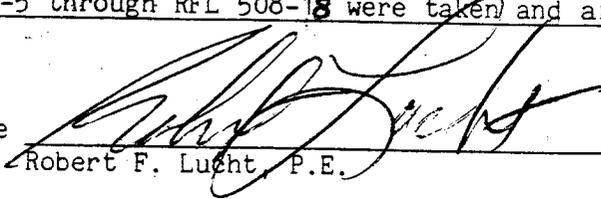
Parameter Exceeding Permit Limits \_\_\_\_\_

Explanation \_\_\_\_\_

Remedial Action \_\_\_\_\_

Additional Comments The housekeeping in and around the injection plant is poor. Prima has installed a concrete floor since the last annual inspection at WQD request. This concrete floor has a 6 inch curb all around and is catching most, if not all leaks. The walls, floor and machinery all have oil splattered on them from carelessness in unloading and changing filters. Prima should require better housekeeping from its employees, but there are no present violations. All cross connections with the class II system have been removed. Prima uses Nalco 3656, Nalco 1153, and Nalco 3910 which are corrosion and scale inhibitors and a biocide in the injection stream. Pictures number RFL 508-5 through RFL 508-18 were taken and are included with this report.

WDEQ Inspector Signature

  
Robert F. Lucht, P.E.



THE STATE OF WYOMING



MIKE SULLIVAN  
GOVERNOR

# Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756  
FAX (307) 634-0799

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781  
FAX (307) 777-5973

January 8, 1991

Don Law, President  
Prima Exploration, Inc.  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237

RE: C-H Minnelusa Unit Water Injection Well 6,  
Permit UIC 89-198, Class I  
Campbell County, Wyoming

Dear Mr. Law:

Enclosed please find one copy of the analyses on the injected wastewater taken during the last annual inspection on 6/27/90. These analyses show that the wastewater contains the components which one would expect in oilfield produced water, namely Benzene, Ethylbenzene, Toluene, Xylenes, and Phenols. These waste streams also contained traces of silver on the day sampled.

This injectate shows unexpectedly high levels of both lead and cadmium. Under the above referenced permit, this department can require monitoring of the injectate. With this letter we are requiring that you sample the injectate stream quarterly and analyze for lead, cadmium, phenols and silver. Due to the lead time required for these analyses, samples should be taken no later than the end of the first month of each calendar quarter.

Sincerely,

Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

RL/jt

xc: Jake Strohman  
Kieth Youst  
P.O. Box 32  
Moorcroft, Wyoming 82721



THE STATE OF WYOMING



MIKE SULLIVAN  
GOVERNOR

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Water Quality Division  
(307) 777-7781

July 6, 1990

Don Law, President  
Prima Exploration, Inc.  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237

RE: C-H Minnelusa Unit Water Injection Well 6,  
Permit UIC 89-198, Class I  
Campbell County, Wyoming

Dear Mr. Law:

This letter will serve to document this department's approval for your disposal of wastes from Energy Brothers Technology, Inc., for 1 year from the date of this letter. The analyses represented by Energy Brothers analyses number WSX-00625-0920/X999-91 and WSK-00625-0920/X999-TK501B are typical of this waste, and they show that this waste is not characteristic hazardous waste as defined by 40 CFR 261. This approval for disposal of these wastes applies only for the deep injection of these wastes in the single well referenced above. These wastes shall not be injected into any other well, nor shall they be discharged to the surface or placed in any holding pond.

You should be aware that Energy Brothers wastes have included very high suspended solids in the past. For your own protection, you should require that Energy Brothers provide you with a suspended solids analyses on every load.

Sincerely,

Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

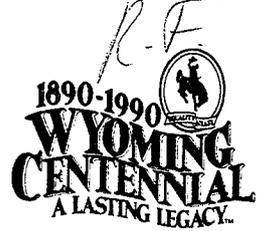
RL/jt

xc: Jake Strohmman  
Keith Youst



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



# Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

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FAX (307) 634-0799

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

October 22, 1990

Don Law, President  
Prima Exploration, Inc.  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237

RE: C-H Minnelusa Unit Water Injection Well 6,  
Permit UIC 89-198, Class I  
Campbell County, Wyoming

Dear Mr. Law:

On October 17, 1990, this department conducted a followup inspection of the above referenced facility to determine if all aspects of our letter of violation dated July 3, 1990 have been satisfied. This inspection revealed that all changes requested in that letter have been made and this facility is in compliance with all aspects of the above referenced permit. Enclosed for your files, please find a copy of the inspection report.

Sincerely,

Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

RL/jt

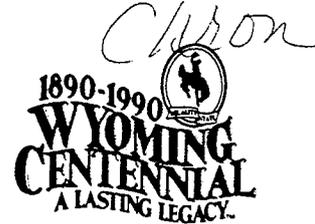
xc: Jake Strohman

Kieth Youst  
P.O. Box 32  
Moorcroft, Wyoming 82721



THE STATE OF WYOMING

MIKE SULLIVAN  
GOVERNOR



## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

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FAX (307) 634-0799

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

May 30, 1990

Don Law, President  
Prima Exploration, Inc.  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237

RE: ~~C-H Minnelusa Unit~~ Water Injection Well 6  
Permit UIC 89-198, Class I  
Campbell County, Wyoming

Dear Mr. Law:

I would like to schedule an annual inspection of the above mentioned facility, on Tuesday, June 26, 1990. I will meet your pumper, Mr. Keith Youst at the wellhead on June 26 at 08:00 AM. This inspection will cover all aspects of the operation of this well. During this inspection, I will want to see records of the pressure fall off curve required on page 5 of the permit. I will also want to see all required instrumentation in place and operating. If at all possible, I want to see the well actually injecting fluid so that tests can be made of the various devices on the well. I will also need to sample the injectate at that time for compliance with the permit. Provision needs to be made to take samples of the injectate.

An annual inspection of a class I well also requires that we observe the records being kept on this well. Since these records are kept in your Denver office, I will schedule an inspection of them sometime when I will be in Denver anyway.

Sincerely,

  
Robert Lucht, P.E.  
UIC Program Supervisor  
Water Quality Division

RL/jt

xc: Jake Strohmman, DEQ/WQD  
Keith Youst  
P.O. Box 32  
Moorcroft, Wyoming 82721

nd

DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE OF WYOMING  
GROUNDWATER POLLUTION CONTROL PERMIT  
AUTHORIZATION TO DISCHARGE INTO UNDERGROUND RECEIVERS  
(Permit to Inject)

(X) New

Permit Number: UIC 89-198  
UIC CLASS I

( ) Modified

In compliance with the Wyoming Environmental Quality Act (W.S. 35-11-101 through 1104, specifically 301(a)(i) through (iv), Laws 1973, Ch. 250, Section 1) and Water Quality Rules and Regulations Chapter IX (September 4, 1980),

PRIMA EXPLORATION  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237  
(303) 779-0402

is authorized to operate

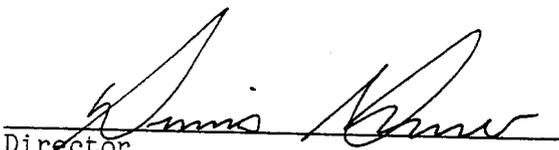
The C-H Minnelusa Unit WI #6 commercial injection well located in the NW 1/4 SE 1/4 of Section 2, Township 52 North, Range 70 West of the 6th P.M. in Campbell County, Wyoming as a commercial well for the disposal of oil-field produced water and other industrial wastes according to procedures and conditions of the application UIC 89-198 and requirements and other conditions of this permit.

This permit shall become effective on date of issuance.



\_\_\_\_\_  
Administrator  
Water Quality Division  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002  
Phone: (307) 777-7781

Sept 8, 1989  
Date

  
\_\_\_\_\_  
Director  
Department of Environmental Quality  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002

September 8, 1989  
Date

A. Discharge (Injection) Zone and Area of Review

The injection zone is the entire Minnelusa Formation, and consists of the perforated intervals 7,553 to 7,632 below the surface. Injection and disposal into any subsurface interval outside of the Minnelusa Formation is not authorized. Discharge to the surface is not authorized by this permit. Construction of any holding pond on the surface is specifically not authorized by this permit.

B. Groundwater Classification

The water in the injection zone is Class VI:

1. Groundwater is located so as to make normal use economically and technologically impractical;
2. Groundwater in the receiving formations is associated with accumulations of hydrocarbons;
3. This well was used for the injection of oil-field produced water, as authorized by the Wyoming Oil and Gas Conservation Commission;
4. The groundwater quality in the injection zone is in excess of 24,000 ppm in total dissolved solids.

C. Authorized Operations

The permittee is authorized to inject into the Minnelusa formation through perforations at 7,553-7,632 feet below the surface, oil-field produced waters (sic 13) and other industrial wastes. Existing sources of produced water have been identified in the application. New sources will be identified prior to injection.

The permittee is authorized to inject certain other industrial wastes providing:

1. Hazardous waste as identified by EPA under 40 CFR 261.3 is not allowed under any circumstances.
2. Prior to injection of any other industrial waste, permittee shall submit, in writing, a complete organic and in-organic chemical analysis for each waste to be injected and the duration of this injection.
3. Injection shall not commence without authorization of the Administrator.

The maximum discharge (injection) pressure shall not exceed 1,620 psi at the surface. A step injection test shall be conducted during the first six months of operation under this permit. After this test is run, the permittee shall limit the injection pressure to 90% of the calculated fracture pressure as measured on the surface.

The discharge (injection) rate will vary. Permittee shall obtain approval for a rate in excess of 3,240 barrels per day (136,080 gallons per day) of all wastes to be disposed of. After the step rate test is run, the maximum volume permitted under this permit shall be equal to the volume which can be injected at the maximum injection pressure as determined by the step rate test in the above paragraph.

If at any time, the maximum authorized pressure or rate is exceeded, permittee shall report this fact to the Administrator or his representative orally within 24 hours of knowledge of the fact.

A written submission shall be provided within five days of the time permittee becomes aware of the circumstance. Permittee is required to monitor the injection and annulus pressures and injection rate continuously.

D. Proper Operation and Maintenance

The permittee is required to conduct the operation in accordance with statements, representations and procedures presented in the complete permit application and supporting documents, as accepted and approved by the administrator.

The permittee is required at all times to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve permit compliance. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate quality assurance procedures.

The subsurface discharge (injection) authorized by permit shall be consistent with the conditions and content of the permit; 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.

E. Entry and Inspection

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

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate rules and regulations of the Department, any substances or parameters at any location.

F. Environmental Monitoring Program for Groundwaters of the State

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall prepare records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation to be retained for a period of at least 3 years after closure of the facility.
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 date(s) analyses were performed;
  - d. Names of individuals who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.
4. The prescribed program for this permitted activity is as follows:

The injection zone (Minnelusa Formation) is an oil producing formation overlain by the Opeche Shale Formation and the Minnekahta Limestone Formation which together provide an impermeable layer more than four times thicker than the injection zone. The cover of all formations separating this injection zone from the deepest source of usable water (Fox Hills Formation) is 5,440 feet, thus providing far in excess of ten times the injection zone thickness in total cover. Because of the very great depth of the injection zone, a monitoring program is not necessary.

G. Requirements for Monitoring the Discharge

Discharge (injection) volume and/or pressure shall be controlled and monitored to prevent fracturing of confining strata.

Injection and annulus pressures and injection rate (volume) shall be monitored continuously. Records of maximum daily injection pressure and volumes shall be kept and be available for inspection by representatives of the Water Quality Division.

At least once a year, or more often if the Administrator requires, the permittee shall shut in this well and observe a pressure fall off curve. This test shall be considered complete when the injection pressure becomes asymptotic to a horizontal line or reaches a vacuum on the surface, whichever occurs first. This test generally can be conducted using the instrumentation on the well, however special conditions such as documented events showing abnormal pressure/volume relationships may require that the test be done using a bottom hole pressure recording device.

A quarterly report is required to be submitted within 30 days of the end of each calendar quarter. This report shall contain:

1. The maximum and minimum daily injection pressure (not an average pressure but an instantaneous pressure) and maximum and minimum daily injection volume for each month within the quarter, and the dates that these maximums and minimums were reached. The accumulated total volume of waste injected for each month and the accumulated total volume injected to date.
2. The maximum and minimum daily annulus pressure.
3. A typical analysis of each new source of oil-field produced water. These analyses should include major cations and anions, pH, and TDS. A more detailed analysis may be required by the Water Quality Division if circumstances warrant such action.
4. A complete organic and in-organic analysis and volume of any waste other than oil-field produced water. No waste other than oil-field produced water may be injected without prior written authorization from the administrator.
5. Total volumes of formation produced water disposed of is required. A list of leases that produced water is also required.
6. Any non-compliance, MIT, or significant event during the quarter. If quarterly reports should eventually show a record of being submitted late, the Administrator may substitute more stringent monthly report requirements.
7. The average injection pressure for each month calculated by averaging the maximum pressures for each day.

The annual report shall consist of the 4th quarterly report along with a summary of the year's operation. This summary shall include the maximum injection pressure for the year and the date on which it was reached, the maximum injected volume for the year and the date on which it was reached; the total volume of oil-field produced waters injected and the total volume of all other wastes injected. The annual report shall include significant events for the year such as Mechanical Integrity Tests, and any noncompliance with permit conditions.

H. Test Procedures

Test procedures for the determination of water quality parameters and constituents shall be in accord with provisions of Water Quality Rules and Regulations Chapter VIII, Section 7.

I. Records and Reports

1. 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, for a period of at least 3 years from the date of the report or application.
2. The permittee shall give notice to the administrator as soon as possible of any planned physical alterations or additions to the permitted facility.
3. 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.
4. Monitoring results shall be reported at intervals specified in Section C and/or Section G of this permit.
5. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
6. The permittee shall report any noncompliance which may endanger health or the environment, orally within 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 groundwaters of the state.

A written submission shall be provided within 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; such reports shall contain the information listed in 6. above.

8. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the administrator, it shall promptly submit such facts or information.
9. The permittee shall retain all records concerning the nature and composition of injected fluids until 5 years after completion of any specified plugging and abandonment procedures. The administrator may require the owner/operator to deliver the records to the administrator at the conclusion of the retention period.
10. A subsurface discharge (injection) well may not commence subsurface discharge (injection) until, following public notice and an opportunity for hearing, a groundwater pollution control permit has been issued by the department for the proposed operation, and:
  - a. Well construction is complete and the permittee has submitted notice of completion of construction to the administrator, and
  - b. The administrator has inspected or otherwise reviewed the subsurface discharge (injection) well and finds it in compliance with the conditions of the permit; or the permittee has not received notice from the administrator of intent to inspect or otherwise review the facility within 13 days of the notice of a. above, in which case prior inspection or review is waived, and
  - c. Well mechanical integrity testing has been proven or demonstrated to the satisfaction of the administrator.
11. Annual reports shall be submitted to the administrator within 30 days following the anniversary date of the permit.
12. A comprehensive report for an aborted or curtailed operation authorized by this permit shall be submitted to the administrator within 30 days of complete termination of the injection (discharge) or associated activity, in lieu of an annual report.

J. Permit Actions

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 the permit;
2. Obtaining a permit by misrepresentation or failure of the discharge well or system.

Each permit is reviewed at least once every 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 is issued.

A permit may be modified in whole or part in order to apply more, or less, stringent standards; or prohibitions for a toxic or other substance present in the permittee's discharge, as may be ordered by the council.

This operation (permit) can be terminated by authority of the administrator for one or more permit violations.

Public notice of the permit review and request for public comment will be made every 10 years by the administrator.

K. Mechanical Integrity

Each discharge well and associated discharge facilities is required to have mechanical integrity which demonstrates the unimpaired condition of the well and facilities. The approved procedures for demonstrating the mechanical integrity for the well and facilities handling the discharge authorized by this permit consist of:

At a minimum of once every five years and more frequently if required by the Department of Environmental Quality, Water Quality Division, the permittee shall demonstrate the continued sound and unimpaired condition of all components of the injection well by mechanical integrity testing. An injection well has mechanical integrity if there is no significant leak in the casing, tubing and packer; and there is no significant movement of injected fluids through vertical channels adjacent to the well bore.

The absence of leaks will be determined by holding 1,500 psi on the annulus for 15 minutes. The last annulus pressure test was run October 27, 1986. The next annulus pressure test is due on or before October 27, 1991.

At a minimum of once every five years and more frequently if required by the administrator, the permittee shall prove the absence of fluid movement through vertical channels. The absence of fluid movement through vertical channels will be determined by an injection well profile (radioactive tracer log), or a temperature log, or other acceptable method. A Cement Bond Log was run December 13, 1982 showing that there is adequate cement to preclude flow behind the casing.

The casing/tubing annulus must be filled with water mixed with a corrosion inhibitor. Records of any fluids added to the annulus must be kept and submitted along with the quarterly report. The casing/tubing annulus shall be pressurized to 400 psi and this pressure held permanently. Any drop or gain in pressure that is sustained for 24 hours or more shall be reported to Water Quality Division immediately. A description of the fluid in the casing/tubing annulus shall be provided with the first quarterly report.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of the permittee in the exercise of the activities allowed under this permit. The permittee understands that it is solely responsible to any third party for any liability arising from the construction or operation of the facility described herein. By issuance of this permit, the state does not in any way waive its sovereign immunity.

The C-H Minnelusa Unit WI #6 well was spudded in on November 22, 1982 and drilled to a depth of 7,685 feet. The well was perforated from 7,553 to 7,600 feet and completed as a water injection well. On August 2, 1984 additional Minnelusa Formation perforations were added from 7,600 to 7,632 feet. A cement bond log run on October 27, 1986 indicates that there is good to excellent cement bonding from 5,632 feet to the TD of the hole.

The operation (discharge) of any well or system will terminate immediately if mechanical integrity of the well or system fails and/or a leak or unauthorized fluid movement occurs. The discharge shall be discontinued until mechanical integrity has been restored and permission to continue the discharge has been obtained from the administrator.

L. Abandonment

The permittee shall notify the administrator at least 180 days before well abandonment. Immediately following the permanent cessation of subsurface discharge or related activity, or where a well has not been completed, the applicant/permittee shall notify the director and follow the procedures prescribed by the director for plugging and abandonment or the discontinuance of related activities:

Water Quality Division abandonment requirements shall be coordinated with requirements of the Wyoming Oil and Gas Conservation Commission (WOGCC). In no case shall the required abandonment procedure be less than that required by WOGCC at the time of abandonment.

The Water Quality Division will require that a squeeze cementing operation be performed through the perforated interval, until no additional cement can be pumped. Fracture pressure of 1,620 psi shall not be exceeded during this squeeze. After removing the tubing and packer, 200 sacks of cement shall be spotted on the bottom of the hole. In no case shall surface casing be recovered. If possible and desired, the remaining production casing may be cut above the bottom plug and recovered. If this is done, the well bore shall be mudded up to meet the requirements of 35-11-404 of the Environmental Quality Act and Land Quality Regulations, Chapter 15. A standard, dry hole marker shall be erected over the abandoned well. The surface casing shall be blind flanged at the braden head flange and the dry hole marker can be welded to this flange.

There is a possibility that the operator of this well may wish to re-permit the well in the future as a class II well under the jurisdiction on the Wyoming Oil and Gas Conservation Commission. Prior to any action of this nature, the permittee shall prove the mechanical integrity of the well at the time of the change using all tests required for a five year MIT. After approval of the application by the Wyoming Oil and Gas Conservation Commission, this permit will be canceled. If operations cease, the applicant must make application to the OGCC within six months time or permanently abandon the well.

M. Duties of the Permittee

It is a duty of the permittee to:

1. Comply with all permit conditions;
2. Halt or reduce activity -- it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the permit conditions;
3. Take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;
4. Furnish to 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; and furnish to the administrator, upon request, copies of records required to be kept by this permit.

N. Financial Responsibility

The permittee is required to maintain financial responsibility and resources in form approved by the director, to close, plug and abandon the discharge operation in a manner prescribed by the director.

The Certificate of Financial Responsibility has been submitted as required. The applicant has shown sufficient resources to insure that this well will be properly plugged and abandoned.

O. Special Measures the Director Finds Necessary:

This site is secured with locks on both the injection building and on the valves leading to the holding tank. Anytime operations are suspended for any reason, whether because of an order by the Water Quality Division, a failure of any test, or because the operator chooses to cease accepting water, these locks must be securely in place.

Anytime that operations are conducted without the continuous monitoring devices specified in Section G above the permittee shall record all of the required information manually. These records shall include a minimum of twice a day readings on a volume totalizer and twice a day readings of both

the injection pressure and the annulus pressure. Operations shall not be conducted under this provision unless the recording devices are being calibrated, repaired or maintained in some way that requires their removal to a maintenance shop.

P. Special Permit Conditions:

Pollution or waste which migrates into an aquifer containing a usable groundwater of the state is a violation of the permit.

Mechanical integrity -- operations terminate immediately if mechanical integrity of well or system fails and/or a leak or unauthorized fluid movement occurs.

Q. Signatories Requirement

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 described 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 an authorized representative.

Any person signing a report or other requested information shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals

immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

R. Noncompliance

Any permit noncompliance constitutes a violation of the permit.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification or planned changes or anticipated noncompliance, does not stay any permit condition.

S. Permit Transfer

The owner/operator of record (permittee) is always responsible for permit compliance. A permit holder cannot transfer his permit without approval of the department director.

T. Responsibilities

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.

U. Property Rights

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

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.

/nc



MIKE SULLIVAN  
GOVERNOR

## Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

Administration  
(307) 777-7937

Air Quality Division  
(307) 777-7391

Land Quality Division  
(307) 777-7756

Solid Waste Management Program  
(307) 777-7752

Water Quality Division  
(307) 777-7781

June 7, 1989.

Donald J. Law, President  
Prima Exploration, Inc.  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237

RE: C-H Minnelusa Unit WI #6  
Permit UIC 89-198 class 1I  
Campbell County, Wyoming

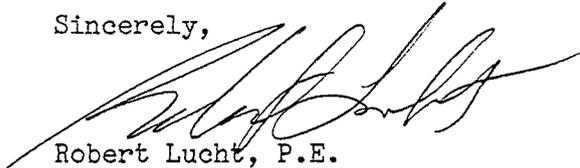
Dear Mr. Law:

I am sending you a very rough draft of a permit for this well. As you are aware, the permit application is not complete at this time. I will wait from the rest of the permit materials before proceeding with the submission of this application to other review agencies. Please read the draft permit carefully. In a few cases there are x's to show where I need a number or some information. If you would fill in these blanks it will make the process proceed quickly as soon as the remainder of the material is here.

In particular, I cannot proceed without a signed GPC-8 form showing the financial responsibility and the last three years financial statements at a minimum. In case I have not provided this form previously, I am enclosing this form now.

The draft permit enclosed is almost complete. Your submission of the remaining permit documents will insure that the public notice period can start quickly. Please be aware that the permit should be in final form before the public notice starts. If you want any changes in language or if you don't understand any aspect of this permit please get this cleared up before we start the public comment period.

Sincerely,



Robert Lucht, P.E.  
UIC Program Principal  
Water Quality Division

RL/jn

xc: Jake Strohman, DEQ/WQD

**DRAFT**

DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE OF WYOMING  
GROUNDWATER POLLUTION CONTROL PERMIT  
AUTHORIZATION TO DISCHARGE INTO UNDERGROUND RECEIVERS  
(Permit to Inject)

(X) New

Permit Number: UIC 89-198  
UIC CLASS I

( ) Modified

In compliance with the Wyoming Environmental Quality Act (W.S. 35-11-101 through 1104, specifically 301(a)(i) through (iv), Laws 1973, Ch. 250, Section 1) and Water Quality Rules and Regulations Chapter IX (September 4, 1980),

PRIMA EXPLORATION  
7800 East Union Avenue, Suite 605  
Denver, Colorado 80237  
(303) 779-0402

is authorized to operate

The C-H Minnelusa Unit WI #6 commercial injection well located in the NW 1/4 SE 1/4 of Section 2, Township 52 North, Range 70 West of the 6th P.M. in Campbell County, Wyoming as a commercial well for the disposal of oil field produced water and other industrial wastes according to procedures and conditions of the application UIC 89-198 and requirements and other conditions of this permit.

This permit shall become effective on date of issuance.

\_\_\_\_\_  
Administrator  
Water Quality Division  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002  
Phone: (307) 777-7781

\_\_\_\_\_  
Date

\_\_\_\_\_  
Director  
Department of Environmental Quality  
Herschler Building, 122 W. 25th  
Cheyenne, WY 82002

\_\_\_\_\_  
Date

A. Discharge (Injection) Zone and Area of Review

The injection zone is the entire Minnelusa Formation, and consists of the perforated intervals 7,553 to 7,632 below the surface. Injection and disposal into any subsurface interval outside of the Minnelusa Formation is not authorized. Discharge to the surface is not authorized by this permit. Construction of any holding pond on the surface is specifically not authorized by this permit.

B. Groundwater Classification

The water in the injection zone is Class VI:

1. Groundwater is located so as to make normal use economically and technologically impractical;
2. Groundwater in the receiving formations is associated with accumulations of hydrocarbons;
3. This well was used for the injection of oil-field produced water, as authorized by the Wyoming Oil and Gas Conservation Commission;
4. The groundwater quality in the injection zone is in excess of 24,000 ppm in total dissolved solids.

C. Authorized Operations

The permittee is authorized to inject into the Minnelusa formation through perforations at 7,553-7,632 feet below the surface, oil field produced waters (sic 13) and other industrial wastes. Existing sources of produced water have been identified in the application. New sources will be identified prior to injection.

The permittee is authorized to inject certain other industrial wastes providing:

1. Hazardous waste as identified by EPA under 40 CFR 261.3 is not allowed under any circumstances.
2. Prior to injection of any other industrial waste, permittee shall submit, in writing, a complete organic and in-organic chemical analysis for each waste to be injected and the duration of this injection.

Injection shall not commence without authorization of the Administrator.

The maximum discharge (injection) pressure shall not exceed 1,620 psi at the surface. A step injection test shall be conducted during the first six months of operation under this permit. After this test is run, the permittee shall limit the injection pressure to 90% of the calculated fracture pressure as measured on the surface.

The discharge (injection) rate will vary. Permittee shall obtain approval for a rate in excess of 3,240 barrels per day (136,080 gallons per day) of all wastes to be disposed of. After the step rate test is run, the maximum volume permitted under this permit shall be equal to the volume which can be injected at the maximum injection pressure as determined by the step rate test in the above paragraph.

If at any time, the maximum authorized pressure or rate is exceeded, permittee shall report this fact to the Administrator or his representative orally within 24 hours of knowledge of the fact.

A written submission shall be provided within five days of the time permittee becomes aware of the circumstance. Permittee is required to monitor the injection and annulus pressures and injection rate continuously.

D. Proper Operation and Maintenance

The permittee is required to conduct the operation in accordance with statements, representations and procedures presented in the complete permit application and supporting documents, as accepted and approved by the administrator.

The permittee is required at all times to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve permit compliance. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate quality assurance procedures.

The subsurface discharge (injection) authorized by permit shall be consistent with the conditions and content of the permit; 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.

E. Entry and Inspection

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

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the appropriate rules and regulations of the Department, any substances or parameters at any location.

F. Environmental Monitoring Program for Groundwaters of the State

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall prepare records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation to be retained for a period of at least 3 years after closure of the facility.
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 date(s) analyses were performed;
  - d. Names of individuals who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.
4. The prescribed program for this permitted activity is as follows:

The injection zone (Minnelusa Formation) is an oil producing formation overlain by the Opeche Shale Formation and the Minnekahta Limestone Formation which together provide an impermeable layer more than four times thicker than the injection zone. The cover of all formations separating this injection zone from the deepest source of useable water (Lance Formation) is xxxx feet, thus providing far in excess of ten times the injection zone thickness in total cover. Because of the very great depth of the injection zone, ~~and the relatively little use that near surface waters are being put,~~ a monitoring program is not necessary.

G. Requirements for Monitoring the Discharge

Discharge (injection) volume and/or pressure shall be controlled and monitored to prevent fracturing of confining strata.

Injection and annulus pressures and injection rate (volume) shall be monitored continuously. Records of maximum daily injection pressure and volumes shall be kept and be available for inspection by representatives of the Water Quality Division.

At least once a year, or more often if the Administrator requires, the permittee shall shut in this well and observe a pressure fall off curve. This test shall be considered complete when the injection pressure becomes asymptotic to a horizontal line or reaches a vacuum on the surface, whichever occurs first. This test generally can be conducted using the instrumentation on the well, however special conditions such as documented events showing abnormal pressure/volume relationships may require that the test be done using a bottom hole pressure recording device.

A quarterly report is required to be submitted within 30 days of the end of each calendar quarter. This report shall contain:

1. The maximum and minimum daily injection pressure (not an average pressure but an instantaneous pressure) and maximum and minimum daily injection volume for each month within the quarter, and the dates that these maximums and minimums were reached. The accumulated total volume of waste injected for each month and the accumulated total volume injected to date.
2. The maximum and minimum daily annulus pressure.
3. A typical analysis of each new source of oil-field produced water. These analyses should include major cations and anions, pH, and TDS. A more detailed analysis may be required by the Water Quality Division if circumstances warrant such action.
4. A complete organic and in-organic analysis and volume of any waste other than oil-field produced water. No waste other than oil-field produced water may be injected without prior written authorization from the administrator.
5. Total volumes of formation produced water disposed of is required. A list of leases that produced water is also required.
6. Any non-compliance, MIT, or significant event during the quarter. If quarterly reports should eventually show a record of being submitted late, the Administrator may substitute more stringent monthly report requirements.
7. The average injection pressure for each month calculated by averaging the maximum pressures for each day.

The annual report shall consist of the 4th quarterly report along with a summary of the year's operation. This summary shall include the maximum injection pressure for the year and the date on which it was reached, the maximum injected volume for the year and the date on which it was reached; the total volume of oilfield produced waters injected and the total volume of all other wastes injected. The annual report shall include significant events for the year such as Mechanical Integrity Tests, and any noncompliance with permit conditions.

H. Test Procedures

Test procedures for the determination of water quality parameters and constituents shall be in accord with provisions of Water Quality Rules and Regulations Chapter VIII, Section 7.

I. Records and Reports

1. 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, for a period of at least 3 years from the date of the report or application.
2. The permittee shall give notice to the administrator as soon as possible of any planned physical alterations or additions to the permitted facility.
3. 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.
4. Monitoring results shall be reported at intervals specified in Section C and/or Section G of this permit.
5. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
6. The permittee shall report any noncompliance which may endanger health or the environment, orally within 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 groundwaters of the state.

A written submission shall be provided within 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; such reports shall contain the information listed in 6. above.

8. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the administrator, it shall promptly submit such facts or information.
9. The permittee shall retain all records concerning the nature and composition of injected fluids until 5 years after completion of any specified plugging and abandonment procedures. The administrator may require the owner/operator to deliver the records to the administrator at the conclusion of the retention period.
10. A subsurface discharge (injection) well may not commence subsurface discharge (injection) until, following public notice and an opportunity for hearing, a groundwater pollution control permit has been issued by the department for the proposed operation, and:
  - a. Well construction is complete and the permittee has submitted notice of completion of construction to the administrator, and
  - b. The administrator has inspected or otherwise reviewed the subsurface discharge (injection) well and finds it in compliance with the conditions of the permit; or the permittee has not received notice from the administrator of intent to inspect or otherwise review the facility within 13 days of the notice of a. above, in which case prior inspection or review is waived, and
  - c. Well mechanical integrity testing has been proven or demonstrated to the satisfaction of the administrator.
11. Annual reports shall be submitted to the administrator within 30 days following the anniversary date of the permit.
12. A comprehensive report for an aborted or curtailed operation authorized by this permit shall be submitted to the administrator within 30 days of complete termination of the injection (discharge) or associated activity, in lieu of an annual report.

J. Permit Actions

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 the permit;
2. Obtaining a permit by misrepresentation or failure of the discharge well or system.

Each permit is reviewed at least once every 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 is issued.

A permit may be modified in whole or part in order to apply more, or less, stringent standards; or prohibitions for a toxic or other substance present in the permittee's discharge, as may be ordered by the council.

This operation (permit) can be terminated by authority of the administrator for one or more permit violations.

Public notice of the permit review and request for public comment will be made every 10 years by the administrator.

K. Mechanical Integrity

Each discharge well and associated discharge facilities is required to have mechanical integrity which demonstrates the unimpaired condition of the well and facilities. The approved procedures for demonstrating the mechanical integrity for the well and facilities handling the discharge authorized by this permit consist of:

At a minimum of once every five years and more frequently if required by the Department of Environmental Quality, Water Quality Division, the permittee shall demonstrate the continued sound and unimpaired condition of all components of the injection well by mechanical integrity testing. An injection well has mechanical integrity if there is no significant leak in the casing, tubing and packer; and there is no significant movement of injected fluids through vertical channels adjacent to the well bore.

The absence of leaks will be determined by holding 1,500 psi on the annulus for 15 minutes. The last annulus pressure test was run October 27, 1986. The next annulus pressure test is due on or before October 27, 1991.

At a minimum of once every five years and more frequently if required by the administrator, the permittee shall prove the absence of fluid movement through vertical channels. The absence of fluid movement through vertical channels will be determined by an injection well profile (radioactive tracer log), or a temperature log, or other acceptable method. A Cement Bond Log was run December 13, 1982 showing that there is adequate cement to preclude flow behind the casing.

The casing-tubing annulus must be filled with water mixed with a corrosion inhibitor. Records of any fluids added to the annulus must be kept and submitted along with the quarterly report. The casing/tubing annulus shall be pressurized to 400 psi and this pressure held permanently. Any drop or gain in pressure that is sustained for 24 hours or more shall be reported to Water Quality Division immediately. A description of the fluid in the casing/tubing annulus shall be provided with the first quarterly report.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way guarantee the performance of the permittee in the exercise of the activities allowed under this permit. The permittee understands that it is solely responsible to any third party for any liability arising from the construction or operation of the facility described herein. By issuance of this permit, the state does not in any way waive its sovereign immunity.

The C-H Minnelusa Unit WI #6 well was spudded in on November 22, 1982 and drilled to a depth of 7,685 feet. The well was perforated from 7,553 to 7,600 feet and completed as a water injection well. On August 2, 1984 additional Minnelusa Formation perforations were added from 7,600 to 7,632 feet. A cement bond log run on October 27, 1986 indicates that there is good to excellent cement bonding from 5,632 feet to the TD of the hole.

The operation (discharge) of any well or system will terminate immediately if mechanical integrity of the well or system fails and/or a leak or unauthorized fluid movement occurs. The discharge shall be discontinued until mechanical integrity has been restored and permission to continue the discharge has been obtained from the administrator.

L. Abandonment

The permittee shall notify the administrator at least 180 days before well abandonment. Immediately following the permanent cessation of subsurface discharge or related activity, or where a well has not been completed, the applicant/permittee shall notify the director and follow the procedures prescribed by the director for plugging and abandonment or the discontinuance of related activities:

Water Quality Division abandonment requirements shall be coordinated with requirements of the Wyoming Oil and Gas Conservation Commission (WOGCC). In no case shall the required abandonment procedure be less than that required by WOGCC at the time of abandonment.

The Water Quality Division will require that a squeeze cementing operation be performed through the perforated interval, until no additional cement can be pumped. Fracture pressure of 1,620 psi shall not be exceeded during this squeeze. After removing the tubing and packer, 200 sacks of cement shall be spotted on the bottom of the hole. In no case shall surface casing be recovered. If possible and desired, the remaining production casing may be cut above the bottom plug and recovered. If this is done, the well bore shall be mudded up to meet the requirements of 35-11-404 of the Environmental Quality Act and Land Quality Regulations, Chapter 15. A standard, dry hole marker shall be erected over the abandoned well. The surface casing shall be blind flanged at the braden head flange and the dry hole marker can be welded to this flange.

M. Duties of the Permittee

It is a duty of the permittee to:

1. Comply with all permit conditions;
2. Halt or reduce activity -- it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the permit conditions;
3. Take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;
4. Furnish to 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; and furnish to the administrator, upon request, copies of records required to be kept by this permit.

N. Financial Responsibility

The permittee is required to maintain financial responsibility and resources in form approved by the director, to close, plug and abandon the discharge operation in a manner prescribed by the director.

The required Certificate of Financial Responsibility has NOT been submitted TO DATE.

O. Special Measures the Director Finds Necessary:

The site shall be secured with a four strand barb wire fence with a locking gate. This gate shall be locked during any extended period of inactivity.

Anytime that operations are conducted without the continuous monitoring devices specified in Section G above the permittee shall record all of the required information manually. These records shall include a minimum of twice a day readings on a volume totalizer and twice a day readings of both the injection pressure and the annulus pressure. Operations shall not be conducted under this provision unless the recording devices are being calibrated, repaired or maintained in some way that requires their removal to a maintenance shop.

P. Special Permit Conditions:

Pollution or waste which migrates into an aquifer containing a usable groundwater of the state is a violation of the permit.

Mechanical integrity -- operations terminate immediately if mechanical integrity of well or system fails and/or a leak or unauthorized fluid movement occurs.

Q. Signatories Requirement

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 described 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 an authorized representative.

Any person signing a report or other requested information shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

R. Noncompliance

Any permit noncompliance constitutes a violation of the permit.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification or planned changes or anticipated noncompliance, does not stay any permit condition.

S. Permit Transfer

The owner/operator of record (permittee) is always responsible for permit compliance. A permit holder cannot transfer his permit without approval of the department director.

T. Responsibilities

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.

U. Property Rights

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

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.

/jn

RF

PERMIT TO CONSTRUCT

PERMIT NO. 89-199  
SEE SPECIAL CONDITIONS

X New  
Renewal  
Modified

Lynn's Quick Stop, Powell

This permit hereby authorizes the applicant:

Lynn Elwood  
Lynn's Service Inc.  
255 S. Douglas  
Powell, WY 82435

to construct, install or modify 2 large diameter monitor wells for future use as recovery wells and pump testing according to the procedures and conditions of the application number 89-199. The facility is located in SW $\frac{1}{4}$  SE $\frac{1}{4}$  S15, T55N, R99W in the county of Park, in the State of Wyoming. This permit shall be effective for a period of two years (5 years maximum) from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable construction and design standards. The compliance with construction standards and the operation and maintenance of the facility to meet the applicant's engineer's design are the responsibility of the applicant, owner, or operator.

The authority to construct granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the permitted facility, when constructed will meet applicable discharge permit conditions or other effluent or operational requirements.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction—required by the Environmental Quality Act—have been met. The state assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the construction or operation of the facility described herein. By the issuance of this permit, the state does not in any way waive its sovereign immunity.

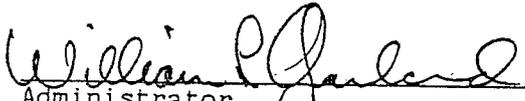
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

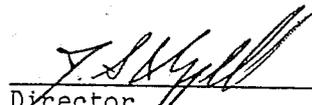
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 4th Floor West, 122 West 25th, Cheyenne, Wyoming 82002; telephone (307) 777-7781.

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 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.

AUTHORIZED BY:

  
\_\_\_\_\_  
Administrator  
Water Quality Division

  
\_\_\_\_\_  
Director  
Department of Environmental Quality

6-29-89  
\_\_\_\_\_  
Date of Issuance

This permit does not supercede the requirements for obtaining any permit from local agencies.

CONDITIONS TO PERMIT TO CONSTRUCT #89-199

1. The groundwater monitoring wells shall be installed in accordance with the conditions of this permit and the plans and specifications submitted in permit to construct application number 89-199. Additional wells meeting the requirements of the application and this permit may be installed if prior approval is received from the Water Quality Division (WQD).
2. Pursuant to Wyoming Water Quality Rules and Regulations, Chapter XI, Section 63(A), a deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as detailed in Chapter XI, Part G. However a sufficient seal shall be installed according to normal engineering practice.
3. After the monitoring wells have fulfilled their useful purpose, they shall be abandoned according to procedures specified in Chapter XI, Part G, Section 70 of Wyoming Water Quality Rules and Regulations. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the WQD. These wells shall not be abandoned without prior written approval from the department.
4. Well caps shall be kept locked at all times other than for monitoring purposes. Any tampering with the monitor wells shall be reported immediately to the division. The wells shall be clearly numbered.
5. The issuance of this permit does not relieve the permittee from obligations to complete the extent of contamination study and any further remedial actions which may be required. Depending on the results of the subsurface

contamination investigation, additional site investigations or remedial measures may be required by the WQD. An adequate number of wells shall be installed to define the extent of contamination.

6. Within 90 days of the issuance of this permit, a report on the subsurface investigation shall be submitted to the WQD. This report shall contain at a minimum:
  - a. A chronology of events leading up to the investigation;
  - b. A site map showing physical features, well locations and elevations;
  - c. Final location, construction details and logs of all monitoring wells;
  - d. Geohydrologic maps and/or cross sections that clearly describe the subsurface distribution of geological materials and groundwater occurrence;
  - e. Water level, product thickness measurements, and pump test data;
  - f. Sample collection procedures;
  - g. Sampling analytical results;
  - h. A map delineating the extent of the subsurface contamination including free product, soil and dissolved groundwater contamination and concentrations;
  - i. A potentiometric surface map showing the direction of groundwater movement; and
  - j. Interpretation of data and conclusions including recommended remedial measures.
7. Proper well evacuation, sample collection, preservation, transportation and chemical analytical procedures shall be completed in accordance with WQD standard procedures.
8. This permit allows the responsible party to install 2 wells and conduct a pump test. Another permit must be applied for and issued by the department prior to startup of the recovery system.

MML/nc

cc: Joby Adams, Delta Environmental Consultants, 2637 Midpoint Dr. Suite F  
Fort Collins, CO 80525  
John Barnes, City of Powell  
Jake Strohman

R.F.

LAND APPLICATION PERMIT

Permit No. 89-200R  
(Ref. 88-097)  
SEE SPECIAL CONDITIONS

COLLINS ROAD DUST CONTROL  
(Name of Facility)

This permit hereby authorizes the applicant (name and address):

Fred L. Oedekoven

481 Recluse Road

Recluse, Wyoming 82725

To land apply produced water to Collins Road for dust control. The application site is located in Section 6, T.55N., R.72W., and Section 30, T.54N., R.72W., in the County of Campbell, in the State of Wyoming. This permit shall be effective for a period of six (6) months from the date of issuance of this permit.

The issuance of this permit provides that the Department of Environmental Quality has evaluated and determined that the application meets minimum applicable standards. The authority to land apply granted by this permit does not mean or imply that the Wyoming Department of Environmental Quality guarantees or ensures that the disposal method will meet applicable State requirements.

Nothing in this permit constitutes an endorsement of the disposal method described herein. This permit indicates only that standards required by the Environmental Quality Act have been met. The State assumes no liability for, and does not in any way guarantee the performance of, the permittee in the exercise of its activities allowed under this permit. The permittee understands that it is solely responsible to any third parties for any liability arising from the disposal method described herein. By the issuance of this permit the state does not in any way waive its sovereign immunity.

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the application site at the above location, for the purpose of compliance with provisions of this permit.

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 regulations.

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

AUTHORIZED BY:

William L. Garland  
Administrator  
Water Quality Division

J. S. [Signature]  
Director  
Dept. of Environmental Quality

6-27-89

Date of Issuance

This permit does not supersede the requirements for obtaining any permit from local agencies.

LAND APPLICATION SPECIAL CONDITIONS

1. Produced water shall be applied at a rate which will not produce runoff or ponding. Application shall not be initiated during the spring runoff period or other periods where saturated soil conditions exist.
2. Produced water application shall be terminated within 300 feet of the definable high water mark of perennial and intermittent drainages, irrigation canals, lakes and reservoirs.
3. This permit is in effect for a period of six months from the date of issuance. Any produced water application after that six month period must be reauthorized by the Water Quality office.
4. This permit is contingent on the applicant receiving approval from the appropriate Federal agency should application occur on Federal lease roads, or should produced water from Federal leases be used for application.

xc: BIM - Buffalo Resource Area

189 N. Cedar

Buffalo, Wyoming 82834