

ing 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, Wyoming 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.

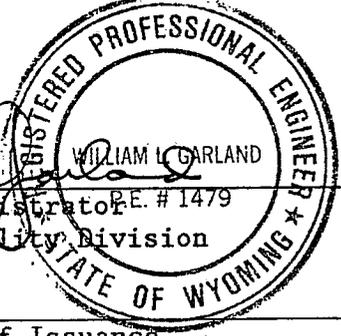
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

AUTHORIZED BY:

William L. Garland

Administrator, P.E. # 1479
Water Quality Division
07-09-86

Date of Issuance

A circular seal for a Registered Professional Engineer in the State of Wyoming. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "STATE OF WYOMING" at the bottom, separated by two stars. The center of the seal contains the name "WILLIAM L. GARLAND" and "P.E. # 1479".

Ralph Wood

Director
Dept. of Environmental Quality

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

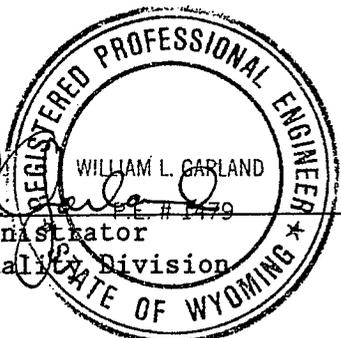
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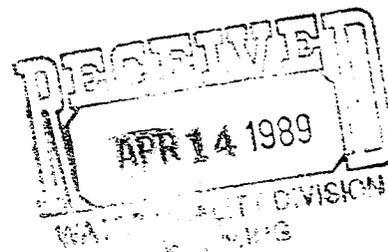
AUTHORIZED BY:


William L. Garland
Administrator
Water Quality Division
07-09-86
Date of Issuance

Robert Wood
Director
Dept. of Environmental Quality

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

MEMORANDUM



TO: FILE
FROM: Sterling Roberts *SR*
DATE: April 12, 1989
SUBJECT: Old Construction projects

The following construction projects have been cancelled or withdrawn. The following list indicates the status of these projects.

<u>Permit Number</u>	<u>Facility Name</u>	<u>Status</u>
81-624	Battle Mt. Lodge	Plans returned to applicant. Owner bankrupt. Drop from files
81-786	American Hunter New Fork #2	Project was cancelled. Drop from files.
84-029	Thomson Reserve	Plans cancelled 5/16/86 as per letter from applicant.
86-016	Long Tree Timber	Plans returned to applicant. Drop from files.
<i>See</i> <u>86-203</u>	Beverly Subdiv.	Plans returned to applicant. Drop from files.

CONVERSATION

DATE 3/27/89

NAME Mike?

COMPANY _____

ADDRESS _____

PHONE NO. _____

TOPIC: _____

C O N V E R S A T I O N

Called re: letter on Beverly Subdivision #86-203
dated 3/13/89

He claims that the subdivision has in fact been built.
He also ~~is~~ said that the Yellow Creek Center Subdivision
#2 referenced in the review of 8/6/86 was permitted
in 1987.

He said something about part of this not being
owned ^{by} the responsibility of Yellow Creek Ranch Co.

I suggested he call Lander & talk to Bill
Locke.

SIGNATURE Norma



THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR



Department of Environmental Quality

210 Lincoln Street • Lander, Wyoming 82520

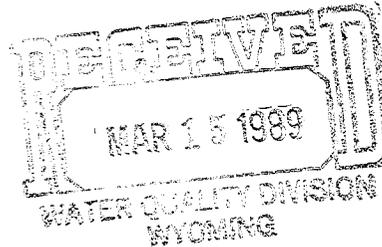
Air Quality Division
(307) 332-3144

Land Quality Division
(307) 332-3047

Solid Waste Management Program
(307) 332-3144

Water Quality Division
(307) 332-3144

March 13, 1989



~~Yellow Creek Ranch Co.
170 Yellow Creek Rd
Evanston, WY 82930~~

RE: Beverly Subdivision Ref. No. 86-203R

Dear Sir:

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/sr/anc

✓cc: Norma Coulson, DEQ/WQD, Cheyenne

REVIEW OF PLANS AND SPECIFICATIONS
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: Beverly Subdivision

ENGINEER: Mark E. Babbitt
Great Basin Engineering, Inc.
P.O. Box 9307
Ogden, UT 84409

OWNER: Yellow Creek Ranch Co.
170 Yellow Creek Rd.
Evanston, WY 82930

WATER QUALITY DIVISION REFERENCE NUMBER: 86-203R

REVIEWING ENGINEER: Bill Locke, P.E. *BL*

DATE OF REVIEW: August 6, 1986

ACTION: Not authorized.

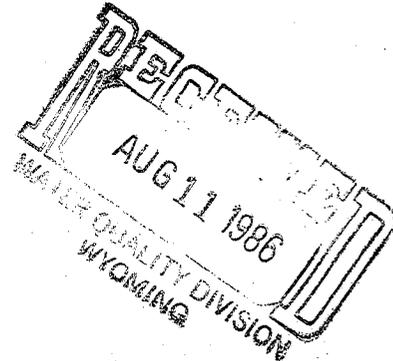
COMMENTS:

A permit to construct will not be issued for the above referenced project until as-built plans and specifications are received and approved by this office for the Yellow Creek Center Subdivision No. 2. A certified letter requesting this information was received by Mr. Jim Henderson at Yellow Creek Ranch Co. on November 29, 1985.

On December 16, 1985 submittal was made to this office by Great Basin Engineering. A review of the submittal was made by this office on December 23, 1985 and a request made of Great Basin to up-date the plans to reflect as-built information and have a Professional Engineer stamp the drawings. On March 17, 1986 a similar request was made of Great Basin Engineering. Apparently, Great Basin is experiencing some problems in securing the as-built drawings from the contractor. This issue must be resolved before a permit to construct will be issued for the Beverly Subdivision.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

BL/jw



ing 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.

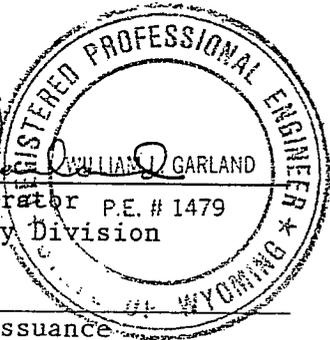
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Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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 D. GARLAND
Administrator P.E. # 1479
Water Quality Division
9-25-86
Date of Issuance




Director
Dept. of Environmental Quality

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

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AUTHORIZED BY:

William L. Garland
Administrator
Water Quality Division
P.E. # 1479
Date of Issuance July 29, 1986



Ralph Wood
Director
Dept. of Environmental Quality

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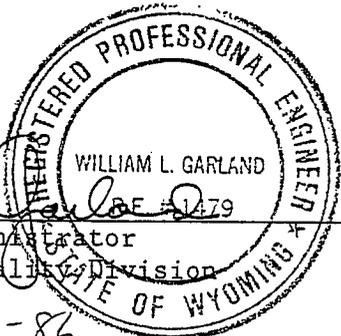
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AUTHORIZED BY:

William L. Garland

Administrator
Water Quality Division
8-8-86

Date of Issuance



Ronald Wood

Director
Dept. of Environmental Quality

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

REVIEW OF PLANS AND SPECIFICATIONS

Werner

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN STREET
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: Riverton, Airport Well #3

ENGINEER: Anderson & Kelly
P.O. Box 29
Laramie, Wyoming 82070

OWNER: City of Riverton
P.O. Box 1700
Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 86-207

REVIEWING EVALUATOR: Steve P. Gerber, P.E.

DATE OF REVIEW: July 10, 1986

ACTION: NOT AUTHORIZED.

COMMENTS: A review of the above referenced project has been completed. The following items must be addressed and/or resolved before a permit can be issued.

1. Specifications for well disinfection are required. Disinfection procedures shall in AWWA A-100 for disinfection of wells.
2. What is the design pumping rate? The test pump shall be capable of pumping at 1.5 times the design pumping rate. The test shall be continuous for 24 hours or until stabilized drawdown has continued for at least 6 hours.
3. The method to determine plumbness and alignment is inadequate. The well shall be tested for alignment and plumbness in accordance with AWWA A-100.
4. Discuss the need for specifications to handle the situation where the well penetrates more than one aquifer.
5. All permanent well casing shall be surrounded by a minimum of 2 inches of grout. Your detail is only requiring 1 5/16 inches of grout.

cc. Running Record
Chrono
Plans (3)

7-30-86
hnc

PERMIT TO CONSTRUCT

Permit No. 86-208
See Special Conditions

- New
- Renewal
- Modified

Munford Ridge
(Name of Facility)

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

Exxon Company, USA

P O Box 1600

Midland, TX 79702

to construct, install, or modify a drilling fluids reserve pit facility according to the procedures and conditions of the application No. 86-208. The facility is located in S21, T13N, R117W in the County of Uinta, in the State of Wyoming. This permit shall be effective for a period of one (1) 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.

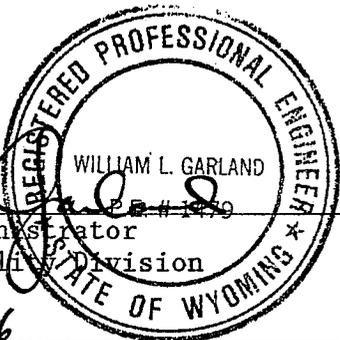
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions 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, Herschler Building, 122 W. 25th, Cheyenne, Wyoming 82002; telephone, 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 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
July 29, 1986
Date of Issuance


Director
Dept. of Environmental Quality

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

This permit authorizes you to dispose of 1,495,662 gallons of drilling fluid wastewater on the surrounding 12 acres a total liquid application of 4.6 inches.

CONDITIONS TO PERMIT TO CONSTRUCT NO. 86-208

1. Wastewater 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% for vehicular application or 15% for spray irrigation or irrigation by gated pipe on the contour. Vegetated areas of the site shall not be spray-irrigated where possible plant leaf injury may result from salt residue.
3. Wastewater 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, 210 Lincoln, Lander, WY 82520, 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 and must be informed how much wastewater will be applied (number of truckloads), the specific site of application (to the nearest 1/4 section) and time of application.

✓
me

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-209
SEE CONDITION ON BACK

Country Boarding Home
(Name of Facility)

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

Utah and Carol Webb

Route 1, Box 24

Torrington, WY 82240

to construct, install, or modify a commercial subsurface wastewater treatment and disposal facility according to the procedures and conditions of the application No. 86-209. The facility is located in SW1/4 SW1/4 Section 13, T24N, R61W in the County of Goshen, 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, Herschler Building, 122 W. 25th, Cheyenne, Wyoming 82002; telephone, 777-7781.

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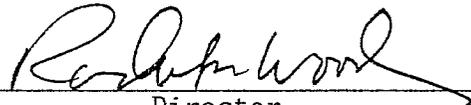
AUTHORIZED BY:



Administrator
Water Quality Division
7-11-86

Date of Issuance





Director
Dept. of Environmental Quality

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

Condition to Permit to Construct #86-209

The permittee shall notify Harold D. Anderson, Goshen County Sanitarian, P.O. Box 1132, County Courthouse, Torrington, Wyoming 82240, phone number 532-5002, of the estimated day of completion of this project. Inspection of the installed system is required prior to backfilling.

cc: Russell Schamel, 4 U 2 Engineering, P.O. Box 99, Torrington, WY 82240
Harold D. Anderson



THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

September 25, 1986

Town of Encampment
P.O. Box 5
Encampment, WY 82325

RE: Encampment Wastewater Treatment Plant, Pilot Study, DEQ/WQD Ref. No. 86-210R

Dear Mayor Davis:

Your application is considered inactive and is being returned in response to Theodore Coyer's letter of September 17, 1986.

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 this project has already been constructed, it is your responsibility to immediately contact this office for further instruction. If you wish to reconsider construction of this facility, then application procedures pursuant to Chapter III, Water Quality Rules & Regulations, must be followed.

Sincerely,

William L. Garland
William L. Garland
Administrator

WLG/TSN/nc

cc: Ted Coyer
Probity Engineering, p.c.
P.O. Box 845
Loveland, CO 80539

Probity Engineering, p.c.

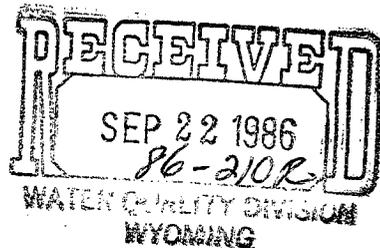
Theodore D. Coyer, P.E.

1111/E/Virhphi/hwy/
Cheyenne/Wybrt/d 82001
P.O. Box 845
Loveland, Co. 80539

Principal
(307) 682-5826
(303) 663-5687

September 17, 1986

Thomas S. Norman
Wyoming Department of Environmental Quality
Water Quality Division
Herschler Building
Cheyenne, Wyoming 82002



Re: Encampment Water Treatment Plant-Pilot Study
DEQ Reference No; 86-210

Dear Tom:

Please be advised that the proposed water treatment plant pilot study at Encampment, Wyoming has been terminated. Therefore the request for a construction permit is hereby withdrawn.

Sincerely,

Theodore D. Coyer
Theodore D. Coyer, P.E.

TDC/djc

cc: Town of Encampment

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
Herschler Building, 4 West, 122 West 25th
Cheyenne, Wyoming 82002

PROJECT: Encampment Water Treatment Plant - Pilot Study

ARCHITECT OR ENGINEER: Ted Coyer, Probit Engineering
1111 E. Lincolnway, Cheyenne, WY 82001

APPLICANT: Town of Encampment
P O Box 5, Encampment, WY 82325

WATER QUALITY DIVISION REFERENCE NUMBER: 86-210

REVIEWING ENGINEER: Thomas S. Norman, Southeast District Engineer

DATE OF REVIEW: 07-14-86

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

The basis of water treatment is to provide multiple barriers. The 3M filters raise a concern in that although they remove Giardia, there is no documentation on coliform removal. If coliforms are not removed, then only one barrier is available for treatment and that is chlorination. Therefore, as part of the pilot study, the effectiveness of total coliform removal must be documented. Both raw and filter effluent should be sampled for total coliform.

pjb



THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR



Department of Environmental Quality

Administration
(307) 777-7937

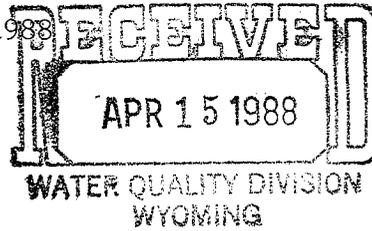
Air Quality Division
(307) 777-7391

Land Quality Division
(307) 777-7756

Solid Waste Management Program
(307) 777-7752

Water Quality Division
(307) 777-7781

April 12, 1988



1
Kevin D. Jones
516 Sage Street
Evanston, WY 82930

RE: Meadow Park Village Subdivision - Plat C, DEQ Ref No. 86-211

Dear Mr. Jones:

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/jw
cc: IPS Section, DEQ/WQD, Cheyenne

REVIEW OF PLANS AND SPECIFICATIONS
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: Meadow Park Village Subdivision - Plat-C

ENGINEER: Kevin D. Jones
516 Sage Street
Evanston, Wyoming 82930

OWNER: Michael J. Sims
565 County Road 107
Evanston, Wyoming 82930

WATER QUALITY DIVISION REFERENCE NUMBER: 86-211

REVIEWING ENGINEER: Bill Locke, P.E. *BL*

DATE OF REVIEW: July 7, 1986

ACTION: Not authorized.

COMMENTS: A formal review will not be made on the above referenced project until an adequate response has been received to Jack Bedessem's letter to Michael J. Sims dated June 6, 1986. The reference letter required a written response with 15 days, outlining a detailed plan and schedule for bringing the wastewater collection and treatment system into compliance with Water Quality Rules and Regulations. Because Plat-C improvements are simply an extension of the existing system, we feel we cannot act on Plat-C until problems with the existing system are resolved. Should you have any questions or comments please contact Jack Bedessem or myself.

5/2

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 86-212R

Pinedale Water Distribution Improvements
(Name of Facility)

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

Town of Pinedale
P.O. Box 709
Pinedale, WY 82941

to construct, install, or modify a replace small existing mains with new 6"
and 8" diameter mains

facility according to the procedures and conditions of the
application No. 86-212R. The facility is located in
Sec. 33, T34N, R109W

in the County of Sublette,
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.

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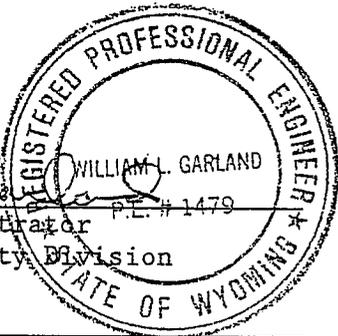
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AUTHORIZED BY:



Administrator
Water Quality Division
8-20-86
Date of Issuance





Director
Dept. of Environmental Quality

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

Norma

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION

210 LINCOLN

LANDER, WYOMING 82520

PHONE: (307) 332-3144

PROJECT: Pinedale Water Distribution Improvements

ENGINEER: Phil Essington
Rio Verde Engineering
P.O. Box 67
Pinedale, WY 82941

OWNER: Town of Pinedale
P.O. Box 709
Pinedale, WY 82941

WATER QUALITY DIVISION REFERENCE NUMBER: 86-212

REVIEWING ENGINEER: Bill Locke, P.E. *BL*

DATE OF REVIEW: July 18, 1986

ACTION: Not authorized.

COMMENTS:

A preliminary review of the above referenced plans and specifications has been completed. The following items must be addressed before a permit to construct will be issued:

1. All plans and specifications must be signed and/or stamped by a Wyoming Professional Engineer.
2. A minimum separation of 1.5 feet between water and sewer lines at crossing should be specified on the plans. If this separation cannot be obtained a casing pipe will be required.
3. On sheet 4, a 10 foot separation is required between the new water line and the drain line from the law enforcement building.
4. Sheet 5. A 10 foot separation is required between the new water line and to two manholes at the west end of Charles Street. Also, what is the bleeder to manhole at the left side of this sheet?
5. What is the depth of cover for the new water lines?
6. The hydrostatic pressure test, line disinfection and line flushing should be specified on the plans.
7. How will temporary water service be provided to residences during construction?

Review of Plans & Specs.

Ref. No. 86-212

Page Two

8. All services must have a check valve in line or at the water meter.

9. Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

BL/jw

me

PERMIT TO CONSTRUCT

New

Permit No. 86-213R

Renewal

Modified

Dubois Hatchery Sewage Collection and Disposal System
(Name of Facility)

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

Wyoming Game and Fish Department
5400 Bishop Boulevard
Chevenne, WY 82002

to construct, install, or modify a sewage collection system pumping chamber,
and elevated mound disposal field

facility according to the procedures and conditions of the

application No. 86-213R. The facility is located in

Sec. 21, T41N, R106W

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 dur-

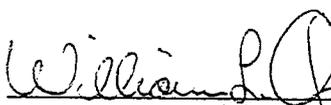
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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, Wyoming 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
8-20-86
Date of Issuance





Director
Dept. of Environmental Quality

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

PERMIT TO CONSTRUCT

PERMIT NO. 86-214
See Conditions

X New
Renewal
Modified

Owl Canvon Recycling Park

This permit hereby authorizes the applicant:

Jim Willey
4 Prairie
Moorcroft, WY 82713

to construct, install or modify an oil field waste disposal facility according to the procedures and conditions of the application number 86-214. The facility is located in S31, T50N, R69W in the county of Cambell, 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.

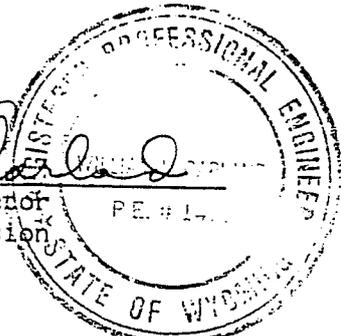
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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

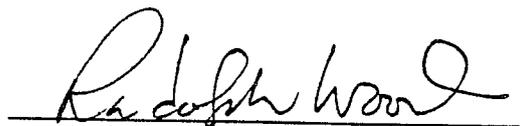
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation.

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 Director
Water Quality Division




Department of Environmental Quality

9-3-87

Date of Issuance

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

Conditions to Permit to Construct # 86-214

1. Construction of the facility authorized by this permit shall not be initiated until sixty (60) days after the date of issuance. In the event that the decision to issue the permit is appealed to the Environmental Quality Council, construction shall not be initiated until such time as the council rules on any request to stay construction until the appeals process is completed.
2. Access to the proposed facility shall be by means of the alternate access road as identified in the "Supplemental Report, Owl Canyon Recycling Park."
3. An operation and maintenance manual should be prepared and kept onsite. It should contain a) details of piping and facility appurtenances to ease evaluation for repairs, b) specifications and maintenance schedule for any mechanical equipment onsite, c) a spill contingency plan including a list of notifications required should a spill occur and contacts for cleanup contractors, d) schedules for monitoring requirements (wells and seepage collection) and blank forms to log when inspections and sampling activities were conducted, e) sampling procedures. A draft copy of the manual shall be submitted to DEQ for review at 50 percent completion of construction. Approval of the final operation and maintenance manual is required prior to facility start-up.
4. All construction quality control testing results shall be submitted to the Water Quality Division District Office in Sheridan on a weekly basis. Submittal shall include moisture-density curves, compaction, permeability, exfiltration and air testing results. Submittals shall identify the location of testing and descriptions of remedial action resulting should test results not meet the approved specifications.
5. The construction inspector shall maintain daily reports of construction activities. The reports shall describe, in detail, each day's progress, work force, work conditions, materials encountered, deviations from plans and

Conditions to Permit 86-214 (continued)

specifications, etc. The daily reports shall be submitted to the Water Quality Division District Office on a weekly basis.

6. Upon completion of construction, written certification by a licensed professional engineer shall be provided that states that the facility was constructed according to the plans and specifications approved under this permit.
7. The groundwater monitor wells shall be monitored quarterly for the following indicator constituents:

Static water level
pH
TDS

Sulfates
Chlorides
Electrical conductivity

If monitoring data indicates a significant degradation of water quality, this list may be expanded.

A quarterly report shall be submitted to the WQD. The report should summarize all monitoring activities. The report shall contain at a minimum.

- a) All monitoring data;
- b) Presence of any fluids in the leak detection system and any analysis of the fluids;
- c) Present water levels in the pits.

Quarterly reports will run to the end of each calendar quarter and are due to the DEQ/WQD within thirty (30) days of that date.

8. Annual samples shall be taken of the pond contents and analyzed for the following:

Aluminum (Al)	Ammonia (NH ₃ -N)
Arsenic (As)	Barium (Ba)
Beryllium (Be)	Boron (B)
Cadmium (Cd)	Chloride (Cl)
Chromium (Cr)	Cobalt (Co)
Copper (Cu)	Cyanide (CN)
Fluoride (F)	Hydrogen Sulfide (H ₂ S)
Iron (Fe)	Lead (Pb)
Lithium (Li)	Manganese (Mn)
Mercury (Hg)	Nickel (Ni)
Nitrate (NO ₃ -N)	Nitrite (NO ₂ -N) (NO ₃ O ₂)-N
Oil and Grease	Phenol
Selenium (Se)	Silver (Ag)
Sulfate (SO ₄)	Total Dissolved Solids (TDS)
Uranium (U)	Vanadium (V)
Zinc (Zn)	pH
Volatile organics (EPA method 624)	

The results of this sampling event shall be submitted with the 3rd quarter report.

9. The seepage collection system shall be inspected on a weekly basis. If fluid is present, the Water Quality Division shall be notified within two working days. The collected fluid shall be sampled for analysis and then pumped into

Conditions to Permit 86-214 (continued)

the evaporation cell. Analysis parameters shall include:

TDS
pH
Chlorides
Sulfates
Electrical conductivity

If collection of fluids persists, a program defining frequency of sampling and sampling parameters will be established to determine if remedial action is necessary.

10. The operator shall maintain a log on site. The log will record the activity at the disposal site and will, at a minimum, include the following:

Date	Oil field operator of source
Name of hauler	Volume of load
Contents of truck	Origin of fluids

These records shall be maintained for inspection by DEQ/WQD personnel.

11. The facility is permitted for disposal of produced water and drilling fluids only. No hazardous wastes as defined by the U.S. EPA shall be placed on this facility. Before any wastes, other than those specified by this permit, may be disposed of in this facility, authorization must be obtained from DEQ/WQD.
12. Upon abandonment of the facility the operator shall
- Allow the pond to dry out naturally or dispose of fluids at a DEQ approved site.
 - Provide for sampling and analysis to completely characterize the dried sludges.
 - Submit a closure plan for review and approval by DEQ.
 - The closure plan shall address the need for continued monitoring if sludges are disposed of in place.
 - Provide for complete reclamation and closure of the facility in accordance with the plan approved by DEQ.
13. The monitoring wells shall not be removed or abandoned without concurrence from the Department of Environmental Quality, Water Quality Division Administrator.
14. The permittee shall submit to the DEQ/WQD the third and fourth baseline sampling analysis of the monitoring wells prior to start up of operation of the facility. Upper control limits (UCL's) will be established for each monitor well to determine if ground water has been impacted. The UCL's will be equal to baseline average plus two standard deviations.

STATEMENT OF DECISION
OWL CANYON RECYCLING PARK
ROZET, WYOMING

Purpose

The purpose of this statement is to notify all interested parties of the decision of the Department of Environmental Quality on an application for a construction permit for the Owl Canyon Recycling Park located near Rozet, Wyoming. A copy of permit No. 86-214 is attached.

Facility Description

The permitted facility is intended to receive produced water and drilling fluid wastes associated with oil field exploration and production activities. The facility will consist of two skim ponds and two evaporation ponds. The wastewater will be totally contained and disposed of by evaporation. The facility will include a seepage control system and groundwater monitoring wells. The facility will be fenced and access controlled by an on site operator.

Authority and Basis of Decision

The authority for issuance of the permit is contained in W.S. 35-11-301 (a) iii. Criteria for approval or denial of the permit are outlined in Section 12, Chapter III, Wyoming Water Quality Rules and Regulations and W.S. 35-11-302 (a)(vi) of the Wyoming Environmental Quality Act. Minimum design standards for wastewater facilities are contained in Chapter XI, Wyoming Water Quality Rules and Regulation.

Public Input

Because of the controversy and local objections to the project, the Water Quality Advisory Board held a public meeting in Rozet, Wyoming on June 25, 1987. The Advisory Board received extensive oral and written comments on the proposed project prior to making recommendations on the permit application.

The following issues and objections to the project were raised during the public input process:

- A. Potential for groundwater contamination.
- B. Dust associated with truck traffic.
- C. Safety hazards to school children associated with truck traffic.
- D. Odors from the ponds.
- E. Possible air pollution from the ponds.
- F. Aesthetic impact of the facility.

- G. Potential adverse economic impacts on property values and businesses in the Rozet area.
- H. Inappropriate land use for the Rozet area.
- I. Lack of any performance or reclamation bonds for the project.
- J. The lack of any technical guarantees that groundwater quality and water wells will not be polluted.

Advisory Board Recommendations

Board members were provided copies of all materials and comments which were received regarding the pending application. After consideration of all these materials and comments the Board members made recommendations to the Administrator, Water Quality Division. One member recommended denial of the permit based upon the criteria outlined in W.S. 35-11-302 (a)(vi). This decision was based upon the following:

- A. The project interferes with the mental health and well being of the community.
- B. There are no social benefits to the local community and the project places an economic hardship on the citizens of Rozet.
- C. Priority of location determined by residences being there first.
- D. No technical guarantee regarding environmental consequences of the project.
- E. Potential negative impact on the environment.
- F. Geologic conditions may not be continuous and there may be leakage to groundwater.

Two members did not feel that an adequate technical basis for denying the permit was presented. They were not sure that the criteria in W.S. 35-11-301 (a)(vi) was an adequate basis for overriding the technical finding of the staff that the facility was designed to prevent the discharge of any pollutants to the groundwater. They felt, however, that the non-technical concerns of those living in the area should be addressed by the Environmental Quality Council. Consequently, They recommended denial of the Permit so that the facility could not be constructed before the anticipated appeal process was completed. Two members of the Board did not provide recommendations.

Basis of Decision

The staff of the Water Quality Division reviewed the application documents and all of the comments and objections submitted relating to the proposed project. The staff review indicated the following;

- A. The proposed facility meets the minimum design standards and requirements of Chapters III and XI, Wyoming Water Quality Rules and Regulations.

- B. The seepage control system and groundwater monitoring wells will ensure that any seepage will be detected and/or controlled.
- C. The proposed system is designed to prevent the discharge of any pollutants to the groundwater.

The Water Quality Division Administrator considered all of the public input and objections to the project as well as the recommendations of the Water Quality Advisory Board. The Department has clear authority to address all water quality aspects of the proposed project. The agency does not have clear authority to address all of the issues raised by those objecting to the project. W. S. 35-11-3-2 (a)(vi) requires that the Administrator shall consider all facts and circumstance bearing upon the reasonableness of the pollution involved including:

- A. The character and degree of injury to or interference with the health and well being of the people, animals, wildlife, aquatic life and plant life affected;
- B. The social and economic value of the source of pollution;
- C. The priority of location in the area involved;
- D. The technical practicability and economic reasonableness of reducing or eliminating the source of pollution; and
- E. The effect upon the environment.

The above criteria are interpreted to apply to the water quality aspects of a project. These criteria have not been clarified or defined in any regulations. They are subjective and difficult to define and to evaluate but are directly related to the objection raised by the citizens of Rozet. While recognizing the legitimate concerns of the local citizens, the Administrator concluded that the potential problems raised in objection to the project are not an adequate basis for overriding the technical conclusions that the facility will provide for protection of the groundwater. While the residents feel that this is an inappropriate land use for the area near Rozet, the agency does not have clear authority to provide relief to the residents in this matter. The Board of County Commissioners has jurisdiction over land use planning and zoning, and therefore constitutes the appropriate body for making decisions relating to land use.

The local citizens are concerned about the lack of any performance or reclamation bonding requirements. The developer has offered to establish an interest bearing trust account to fund reclamation of the site. The Department of Environmental Quality has no authority to require or administer such a fund. A local authority such as the Board of County Commissioners, may be able to administer such a trust fund.

Conclusion

The Department conclude that the permit shall be issued with conditions.

Permit Conditions

The permit contains several conditions intended to ensure protection of groundwater and to address water quality concerns raised during the public input process. See the attached permit.

The effective date of the permit will be sixty (60) days from the date of issuance. This will provide an opportunity for the local citizen to file an appeal with the Environmental Quality Council and request a stay of construction until the appeal process is completed. This condition is in response to a recommendation from members of the Water Quality Advisory Board that the citizens of Rozet have the opportunity to have their concerns about impacts other than those related to water quality addressed by the Environmental Quality Council.

mad



THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR



Department of Environmental Quality

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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MEMORANDUM

TO: Jake Strohman

FROM: Robert Lucht 

DATE: August 13, 1987

SUBJECT: 86-214 Owl Canyon Recycle Park August 10, 1987

I have reviewed the above referenced application and find the following:

1. Applicant has supplied information requested on September 24, 1986 on all wells within $\frac{1}{4}$ mile and all domestic water supply wells within 1 mile.
2. The applicant provided distances to housing and wind direction.
3. A riprap detail has been included.
4. The concern about the pond extending into a sandstone layer has been addressed.
5. The dikes will be constructed of select clay as per our request.
6. Fill will be placed in lifts of 8" or less per our request.
7. Water content and density tests at the rate of 1 per acre per our request.
8. All other concerns addressed September 24 have been met.

Baseline water quality assays reported to date show ammonia at levels of 4.6, 4.8 and 4.8 almost 10 times the standard for domestic use. Manganese at levels of .5 to .11 PPM is also 3 times domestic standards and also above agricultural standards. Dissolved iron at .88 was also above domestic standards. Sulfates at levels of 1270 to 1600 is 5 to 8 times the standard as has been pointed out in the application. This is class III groundwater being used (and therefore protected) as class I.

The letter from Thomas Barker addresses several concerns:

The issue of discontinuous sand lenses is brought forth with little to substantiate it other than Mr. Barker's personal knowledge. I too am familiar with Fort Union sands and shales. From the position of Rozet on the outcrop, I would assume that this is the basal 1/3 of the Fort Union. While the Fort Union formation is composed of sandstones and shales generally, the percentage of shales increases with depth until the basal portion is almost all claystones. Generally the sandstones are less continuous than the shales in the Fort Union. I have also served as a construction inspector and know from personal experience that observations during construction can detect and quantify sand lenses well enough to produce an excellent liner. The requirement to probe 3 feet below the raw excavation will be sufficient, in my opinion, to detect any sand lenses. Coupled with the necessity to over excavate any lenses detected, this system will doubly insure a good liner.

The concerns expressed about permeability tests, pond failure, pump back and monitoring test work mentioned on page 2 paragraph 4 of Mr. Barker's letter have all been addressed.

The concerns brought up under the heading of "dust" on page 3 of Mr. Barker's letter have been addressed to the extent possible by the applicant. The concerns raised are primarily not within the review powers of the Water Quality Division, but the traffic impact sited is an insignificant amount in any case. The traffic safety concerns are again outside of this department's review authority, but water haulers will have to slow down to the posted 20 MPH speed limit in order to physically make the required turns.

The "odors" section of this letter have been addressed by the applicant. Not only is the prevailing wind direction away from the Town of Rozet, but the applicant has made provision for skimming off waste oil. A permit condition should be written to require an O & M manual with skimming procedures and timing requirements.

The concerns expressed in Mr. Barker's letter under "air pollution" are mainly not of great pollution potential. The applicant has requested to dispose of produced oil field brines and reserve pit fluids and will be prevented by permit from accepting other pollutants. The permit application contains a requirement that each truckload accepted be documented in full concerning the source of the fluids and brines being dumped. Oily residues will be skimmed off before allowing the fluid to inter the main pond.

In my opinion, all of the concerns addressed in Mr. Barker's letter of July 21, 1987 were either addressed adequately in the original application or amendments or have been addressed by permit revisions or are not the responsibility of this department. Mr. Barker's suggestion on the last page of his letter that we require complete water quality testing of each oil well prior to disposal seems designed to place a burden on the operators more than to produce any usable data. The applicant has designed a disposal pit to accept oil field brines. The exact composition of any one truckload is not likely to produce any great change in the composition of the entire pit.

August 13, 1987

Page 3

I have one concern not previously raised by other reviewers. No baseline water quality has been established for any of the surrounding wells. This could leave the applicant and Water Quality Division open for future litigation alleging pollution of potable water supplies with little defense because of lack of data. Present data indicates that water quality in the area is generally poor. To address this concern I have included several sampling requirements in the permit to be done if well owners will grant permission.

The high levels of ammonia present make me wonder if there is present pollution from septic systems. I wonder if coliform bacteria is also present. The topographic map supplied with the application (U.S.G.S. Quad) shows a diked area north of the ponds. This diked area is on the alluvial terrace next to Donkey Creek. Is this a sewage lagoon from the Town of Rozet?

/nc

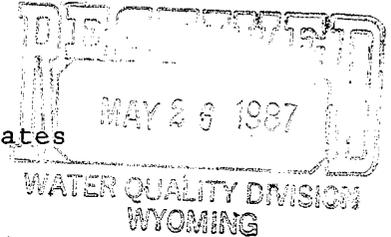
cc: File 86-214
Chris Norman

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVENUE, SUITE 601
SHERIDAN, WYOMING 82801

Norman

PROJECT: Owl Canyon Recycling Park
ARCHITECT OR ENGINEER: Edward S. Scott, P.E.
Professional Consulting Associates
P. O. Box 2185
Gillette, Wyoming 82716



WATER QUALITY DIVISION
REFERENCE NUMBER:

86-214RR

REVIEWING ENGINEER:

SV

Susan Fields, Chris Norman

DATE OF REVIEW:

May 9 and May 13, 1987

ACTION:

Not Authorized

COMMENTS:

- 1). Each of Rich Ruyle's comments from the September 24, 1986, review are adequately addressed, with the exception of Item 8. The amended specifications do not address the frequency of the double barrel test.
- 2). The topographic map shows an approximate 35 acre drainage area to the south of the proposed facility. It does not appear that control of offsite runoff has been addressed. All runoff should be collected and directed away from embankments.
- 3). There appears to be the possibility of any leakage from the evaporation cells bypassing the seepage collection piping. To help eliminate this potential we are requesting that the collection system be installed on the east and west side of the cell, in addition to the north side as shown in the drawings. This extension of the piping system should also be installed at the claystone layer.
- 4). Since the second evaporation cell is not planned for immediate construction, a seepage collection system as described in the previous comment should be installed around Cell 1.
- 5). If water does collect in the seepage collection manhole, how will it be handled?
- 6). The plans do not identify the numbering scheme for the monitor wells. The numbers should be shown along with the State Engineer's permit numbers.

Review of Plans & Specifications
Owl Canyon Recycling Park
May 9 & 13, 1987
Page Two

- 7). The boring logs for the monitor wells do not identify the water level at completion, screened interval or completed depth for Wells 2 and 3. As-built drawings of all three wells need to be submitted as stated in the conditions on Permit to Construct 87-068R.
- 8). The elevation of the monitor wells needs to be identified and submitted.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVE., SUITE 601
SHERIDAN, WYOMING 82801

PROJECT: Owl Canyon Recycling Park

ARCHITECT OR ENGINEER: Bob Timm
Timm and Associates
P.O. Box 726
Gillette, Wyoming 82716

WATER QUALITY DIVISION
REFERENCE NUMBER: 86-214R

REVIEWING ENGINEER: Rich Ruyle *RR*

DATE OF REVIEW: September 24, 1986

ACTION: Not Authorized

COMMENTS:

- 1.) Information on existing water wells must be supplied for all wells within $\frac{1}{4}$ mile radius and domestic water supply wells within a one mile radius of the proposed facility. Data to be submitted should include well location, drill logs, yield, water use, and water quality.
- 2.) Additional information needed in the engineering report includes:
 - a.) Distances to existing habitations.
 - b.) Prevailing wind direction.
- 3.) Riprap must be placed on all interior dikes of the large cells. Significant dike erosion from wave action is a certainty due to the size and location of the ponds.
- 4.) Some of the soil borings (B-1 in particular) show that a portion of the bottom of the ponds may extend beneath the claystone layer into red sandstone. Please address this concern.

- 5.) As we discussed during our initial meeting, the area under all dikes must be subexcavated down to the claystone layer. The dikes can then be constructed from that point by keying them into the claystone and proceeding with compacted lifts as described in Section 02223.6 D. of the specifications. However, the material for dike construction must be the same as that called for in the soil-sealant liner, i.e., claystone, not the material defined as fill and backfill in Section 02222.1. The construction specifications and drawings should be changed to reflect the dike construction procedure described above.
- 6.) Section 02223.6 F. 2. of the specifications should indicate that replaced material will be compacted in lifts not exceeding eight inches.
- 7.) Tests for water content and density of the pond bottom and dikes must be taken at a minimum rate of one per acre per lift, not as "determined by the engineer" which is described in Section 02221.4 of the specifications. The test results must be available for DEQ's review. The specification should be changed accordingly.
- 8.) After construction is complete, permeability tests of undisturbed core samples from the soil liner must be performed at a minimum rate of one per acre for the pond bottoms and one per every 1000 lineal feet for the dikes.

In addition, an exfiltration test must be performed by prefilling the ponds or using the double barrel method.

Results of all testing shall be submitted to the Department of Environmental Quality for review and approval prior to start up of the facility. The specifications for Section 02221.4 - Quality Control should be changed to reflect the above requirements.

- 9.) Because the trenches for the interconnecting piping are above the normal water level of the lagoons, the trench backfill must be constructed in the same manner as the rest of the dike. The phrase "to 2 foot layers. . ." should be struck from Section 02223.6 E. 2. of the specifications.

- 10.) The interconnecting piping between skim pond 1 and skim pond 2 should include a valve on the upstream side of the first tee, similar to what is shown between cells 1 and 2. This would allow the contents of one skim pond to be pumped into the other if the need arises.
- 11.) The interconnecting piping must be air tested according to ASTM C-828-80 after installation. Section 02610 of the specifications should include this provision.
- 12.) Upon abandonment of the facility, the dried sludge will have to be fully characterized chemically to determine if disposal of the sludge in place is acceptable. This requirement will be in the form of a condition on the permit. The RECLAMATION paragraph should be struck from the Engineering Report.
- 13.) Monitor wells are required to monitor the shallow-most water bearing strata. Three wells, at a minimum, are required, one upgradient and two downgradient. These wells should be installed as soon as possible to gain baseline water quality and additional geologic information. It is recommended that a separate permit be obtained for the monitor wells to expedite the installation.

Baseline water quality data will consist of a minimum of four quarterly samples. These samples should be analyzed for the parameters found on Table I, Chapter VIII of the Water Quality Rules and Regulations.

- 14.) A seepage collection system is required. The system should be designed to collect all horizontal seepage from the ponds and prevent migration beyond the system.
- 15.) A surface seal is required for the monitor wells, Chapter XI, Part G, Section 45, Wyoming Water Quality Rules and Regulations. A deviation may be required due to the depth of the surface seal.
- 16.) The wells should be provided with locking caps.
- 17.) A permit from the Wyoming State Engineer is required prior to installation of observation/monitor wells.

18.) Monitor wells completed in the subsurface overlying the claystone are not necessary. The seepage control system will be monitored for fluid migration.

19.) The following permit conditions will be included on any permit to construct that is issued:

a.) The groundwater monitor wells shall be monitored quarterly for the following indicator constituents:

Static water level	Sulfates
pH	Chlorides
TDS	Electrical conductivity

If monitoring data indicates a significant degradation of water quality, this list may be expanded.

b.) The seepage collection system shall be monitored weekly for the presence of fluids. If fluids are present the DEQ/WQD should be notified and the fluid shall be sampled and analyzed for the following:

Static water level	Chromium
Oil and grease	Copper
pH	Lead
TDS	Mercury
Conductivity	Nickel
Chlorides	Selenium
Sulfates	Zinc
Potassium	Sodium adsorption ratio (SAR)
Bicarbonates	Total organic carbon
Arsenic	Dissolved organic carbon
Barium	Boron

A quarterly report shall be submitted to the WQD. The report should summarize all monitoring activities.

Annual samples shall be taken of the pond contents and analyzed for the following:

Aluminum (Al)	Ammonia (NH3-N)
Arsenic (As)	Barium (Ba)
Beryllium (Be)	Boron (B)
Cadmium (Cd)	Chloride (Cl)
Chromium (Cr)	Cobalt (Co)
Copper (Cu)	Cyanide (CN)
Fluoride (F)	Hydrogen Sulfide (H2S)
Iron (Fe)	Lead (Pb)
Lithium (Li)	Manganese (Mn)
Mercury (Hg)	Nickel (Ni)
Nitrate (NO3-N)	Nitrite (NO2-N) (NO3O2)-N
Oil & Grease	Phenol
Selenium (Se)	Silver (Ag)
Sulfate (SO4)	Total Dissolved Solids (TDS)
Uranium (U)	Vanadium (V)
Zinc (Zn)	pH

The results of this sampling event shall be submitted with the 3rd quarter report.

- c.) A log shall be maintained on site. The log will record the activity at the disposal site and will, at a minimum, include the following:

Date	Oil field operator of source
Name of hauler	Volume of load
Contents of truck	Origin of fluids

These records shall be maintained for inspection by DEQ/WQD personnel.

- d.) The monitoring wells should not be removed or abandoned without concurrence from the Department of Environmental Quality, Water Quality Division administrator.

Review of Plans and Specifications
Owl Canyon Recycling Park
September 24, 1986
Page Six

- e.) Drilling logs, as-built construction drawings including ground elevations of each well top, and other hydrogeological information should be submitted to the Department of Environmental Quality, Water Quality Division Groundwater Section.
- f.) Written certification that the earthwork was completed in accordance with the specifications authorized by this permit shall be submitted to: DEQ/Water Quality Division by a registered Wyoming Professional Engineer, and/or a soils firm.
- g.) No hazardous wastes as defined by the U.S. EPA or State of Wyoming shall be placed on this facility. Before any wastes, other than those specified by this permit, may be disposed of in this facility, authorization must be obtained from DEQ/WQD.



Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

TO: Rich Ruyle, NE District Supervisor
 FROM: Chris Norman, Engineering Evaluator *Chris C. Norman*
 DATE: September 5, 1986
 SUBJECT: Owl Canyon Recycling park, WQD Ref. No. 86-214R

The following comments pertain to the above referenced project:

1. The monitor wells should be completed into the red claystone, at a minimum.
2. A surface seal is required for the monitor wells, Chapter XI, Part G, Section 45, Wyoming Water Quality Rules and Regulations. A deviation will be required due to the depth of the surface seal.
3. The wells should be provided with locking caps.
4. A permit from the Wyoming State Engineer is required prior to installation of observation/monitor wells.
5. The following permit conditions should be included:
 - a. The wells shall be inspected bi-monthly (twice per month) for the presence of fluids. If fluids are present, the DEQ/WQD should be notified and a sample should be taken. The well and sample should be analyzed for the following:

pH	O & G
TDS	Conductivity
Chlorides	Static water level
Sulfates	

Once water is present, quarterly samples will be required.

A quarterly report shall be submitted to the WQD. The report should summarize all monitoring activities. If no fluids are present, the report shall be submitted stating that no fluids were present.

Annual samples shall be of the pond contents and analyzed for the following:

Aluminum (Al)	Ammonia (NH3-N)
Arsenic (As)	Barium (Ba)
Beryllium (Be)	Boron (B)

Cadmium (Cd)	Chloride (Cl)
Chromium (Cr)	Cobalt (Co)
Copper (Cu)	Cyanide (CN)
Fluoride (F)	Hydrogen Sulfide (H2S)
Iron (Fe)	Lead (Pb)
Lithium (Li)	Manganese (Mn)
Mercury (Hg)	Nickel (Ni)
Nitrate (NO3-N)	Nitrite (NO2-N) (NO3O2)-N
Oil & Grease	Phenol
Selenium (Se)	Silver (Ag)
Sulfate (SO4)	Total Dissolved Solids (TDS)
Uranium (U)	Vanadium (V)
Zinc (Zn)	pH

The results of this sampling event shall be submitted with the 3rd quarter report.

- b. A log shall be maintained on site. The log will record the activity at the disposal site and will at a minimum, include the following:

Date	Oilfield operator of source
Name of Hauler	Volume of load
Contents of truck	
Origin of fluids	

These records shall be maintained for inspection by DEQ/WQD personnel.

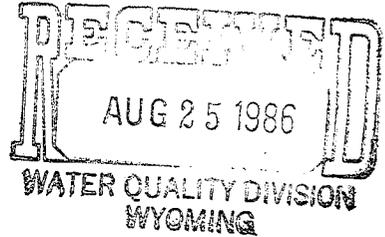
- c. The monitoring wells should not be removed or abandoned without concurrence from the Department of Environmental Quality, Water Quality Division administrator.
- d. Drilling logs, as-built construction drawings including ground elevations of each well top, and other hydrogeological information should be submitted to the Department of Environmental Quality, Water Quality Division Groundwater Section.
- e. Written certification that the earthwork was completed in accordance with the specifications authorized by this permit shall be submitted to: DEQ/Water Quality Division by a registered Wyoming Professional Engineer, and/or a soils firm.
- f. No hazardous wastes as defined by the US EPA or State of Wyoming shall be placed on this facility. Before any wastes, other than those specified by this permit, may be disposed of in this facility, authorization must be obtained from DEQ/WQD.
- g. If seepage is detected in the monitor wells, seepage control measures will be required.
6. It is assumed that the facility will be for disposal of produced water only. If other oil field wastes are to be disposed of at the facility, a general characterization of these fluids should be provided to the DEQ/WQD. If other oilfield wastes are disposed of, the monitoring requirements will be changed.

pjb

NORMA

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVE., SUITE 601
SHERIDAN, WYOMING 82801



PROJECT: Owl Canyon Recycling Park
ARCHITECT OR ENGINEER: Bob Timm
Timm & Associates
P.O. Box 726
Gillette, Wyoming 82716

WATER QUALITY DIVISION
REFERENCE NUMBER: 86-214

REVIEWING ENGINEER: Rich Ruyle *RR*

DATE OF REVIEW: August 22, 1986

ACTION: Not Authorized

COMMENTS:

- 1.) The submittal is preliminary in nature. Complete engineered plans and specifications of the facility are needed. They should include the information outlined in Part C, Section 30 of Chapter XI, Water Quality Division Rules and Regulations.
- 2.) The soils investigation and report appear adequate. It is under review by the Groundwater Section in Cheyenne.

xc: Chris Norman, WQD Cheyenne



THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

*Cambs.
Owl Canyon*

TO: Rich Ruyle, NE District Supervisor
FROM: Chris Norman, Engineering Evaluator
DATE: August 18, 1986
SUBJECT: WQD. Ref. No. 86-214

Some seepage from the pond is expected. Estimating the amount of seepage is impossible, due to absence of soils data. The only statement made is that the soils are relatively impervious. Relative to what?

Review of the borings logs shows that horizontal seepage is probably going to be the predominant path. The addition of a collection system under the pond would be the ideal system. The construction of a seepage collection trench downgradient from the site (north side) would be acceptable.

A seepage control system is needed with this pond.

pjb

file
1/20

PERMIT TO CONSTRUCT

Permit No. 86-215

- New
 Renewal
 Modified

Memorial Hospital Fire Protection Update
(Name of Facility)

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

City of Cheyenne

Board of Public Utilities

2100 Pioneer Avenue

Cheyenne, WY 82001

to construct, install, or modify a municipal public water distribution facility according to the procedures and conditions of the application No. 86-215. The facility is located in NE 1/4, S31, T14N, R66W in the County of Laramie, 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.

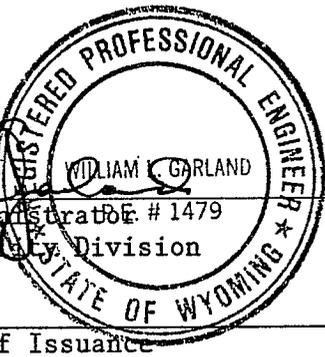
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions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

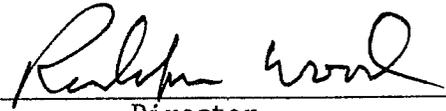
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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

A circular seal for a Registered Professional Engineer in the State of Wyoming. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "STATE OF WYOMING" at the bottom, separated by two stars. The inner circle contains the name "WILLIAM C. GARLAND" and "Administrative # 1479".
William C. Garland
Administrative # 1479
Water Quality Division
7-28-86
Date of Issuance



Director
Dept. of Environmental Quality

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

cc: Joseph Kub, PE
Engineering Consultant
1780 Westland Road
Cheyenne, WY 82001

Lee

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-216

Elmo Interceptor Sewer & Lagoon Abandonment
(Name of Facility)

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

Town of Hanna

P O Box 99

Hanna, WY 82327

to construct, install, or modify a municipal wastewater interceptor & abandon Elmo lagoons facility according to the procedures and conditions of the application No. 86-216. The facility is located in S 16 & 17, T22N, R81W in the County of Carbon, 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.

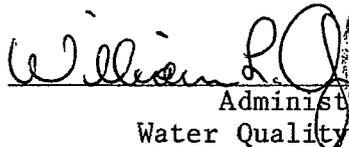
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions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

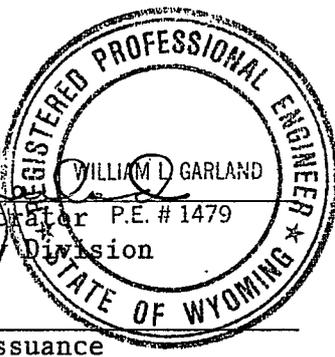
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, Herschler Building, 122 W. 25th, Cheyenne, Wyoming 82002; telephone, 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 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 P.E. # 1479
Water Quality Division
7-24-86
Date of Issuance




Director
Dept. of Environmental Quality

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

cc: Paul McCarthy
PMPC
Box 370
Saratoga, WY 82331

mc

CORRECTED PERMIT

LAND APPLICATION PERMIT

PERMIT NO. 86-217
SEE SPECIAL CONDITIONS

Highland Section 21 Land Application Facility

This permit hereby authorizes the applicant:

Everest Minerals Corporation
P. O. Box 1210
Glenrock, Wyoming 82637

to land apply in-situ uranium mining wellfield purge and restoration fluids. The application site is located in N $\frac{1}{2}$ Section 21, T36N, R72W in the county of Converse, in the State of Wyoming. This permit shall be effective for a period of 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.

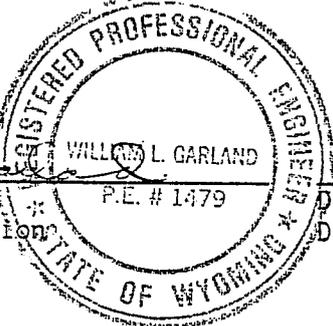
Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way 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:


William L. Garland Administrator Water Quality Division
Ralph Noel Director Department of Environmental Quality

4-7-87

Date of Issuance

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

Conditions to Land Application Permit 86-217

1. Preparation of the irrigation site including subsequent treatments will be conducted according to the Site Management Plan labeled Attachment #1.
2. Monitoring of the barium sulfate settling ponds, the irrigation system soil water, the soil and vegetation, will be conducted in accordance with the schedule described in the monitoring program; Attachment #2.
3. A field sampling protocol describing sampling methods, containers, preservatives and holding times for irrigation water, soil water, soil and vegetation will be submitted to the Wyoming Department of Environmental Quality, Water Quality Division by July 1, 1987.
4. Soil sampling sites will be permanently identified for replicate sampling.
5. Soil Water lysimeters will be in place by May, 1988.
6. Final site closure procedures will include an assessment of the total soil concentrations of the parameters listed for soil in Attachment #2, the monitoring program.
7. Final surface reclamation procedures will be in accordance with the goals described in Chapter IV, Section 2(d) of the Land Quality Division Rules and Regulations.

cc: Susan Fields, DEQ/WQD, Sheridan
Jake Strohmman, DEQ/WQD, Cheyenne

See corrected permit

LAND APPLICATION PERMIT

PERMIT NO. 86-217
SEE SPECIAL CONDITIONS

Highland Section 21 Land Application Facility

This permit hereby authorizes the applicant:

Everest Minerals Corporation
P. O. Box 1210
Glenrock, Wyoming 82637

to land apply in-situ uranium mining wellfield purge and restoration fluids. The application site is located in N $\frac{1}{2}$, Section 21, T36N, R73W in the county of Converse, in the State of Wyoming. This permit shall be effective for a period of 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.

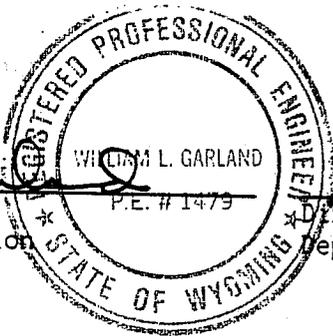
Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. This permit indicates only that standards of design and construction required by the Environmental Quality Act have been met. The state assumes no liability for, and does not in any way 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:


William L. Garland Administrator
Richard Wood Director
Water Quality Division Department of Environmental Quality

4-7-87

Date of Issuance

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

Conditions to Land Application Permit 86-217

1. Preparation of the irrigation site including subsequent treatments will be conducted according to the Site Management Plan labeled Attachment #1.
2. Monitoring of the barium sulfate settling ponds, the irrigation system soil water, the soil and vegetation, will be conducted in accordance with the schedule described in the monitoring program, Attachment #2.
3. A field sampling protocol describing sampling methods, containers, preservatives and holding times for irrigation water, soil water, soil and vegetation will be submitted to the Wyoming Department of Environmental Quality, Water Quality Division by July 1, 1987.
4. Soil sampling sites will be permanently identified for replicate sampling.
5. Soil Water lysimeters will be in place by May, 1988.
6. Final site closure procedures will include an assessment of the total soil concentrations of the parameters listed for soil in Attachment #2, the monitoring program.
7. Final surface reclamation procedures will be in accordance with the goals described in Chapter IV, Section 2(d) of the Land Quality Division Rules and Regulations.

cc: Susan Fields, DEQ/WQD, Sheridan
Jake Strohmman, DEQ/WQD, Cheyenne

ATTACHMENT #1

EVEREST MINERALS CORPORATION
 HIGHLAND URANIUM PROJECT
 WASTEWATER LAND APPLICATION FACILITY

SITE MANAGEMENT PLAN

	1988				1989 - 1995				1996			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Store Treated Water	[Horizontal line across all quarters]											
Seed Bed Preparation	[Horizontal line across all quarters]											
Seed Introduced Species ¹		●				●				●		
Fertilize		●				●				●		
Irrigate	[Horizontal line across all quarters]											
Mowing (if harvested as hay)		●	●	●		●	●	●		●	●	●
Clipping (if not harvested)		●	●	●		●	●	●		●	●	●
Plant Test Plots (2nd year)						●						
Sample Soil Water		●				●				●		
Sample Water		●	●	●		●	●	●		●	●	●
Sample Soil				●				●			●	●
Sample Vegetation ²				●				●			●	●
Evaluate Data		●	●	●		●	●	●		●	●	●
Final Seed Bed Preparation	[Horizontal line across all quarters]											
Plant Permanent Seed	[Horizontal line across all quarters]											
Mulch	[Horizontal line across all quarters]											
Site Closure											●	●

NOTE

- 1) seed for irrigated grasses will be planted as needed
- 2) if vegetation is cut for hay, the vegetation will be sampled at each cutting

ATTACHMENT #2
 MONITORING PROGRAM
 HIGHLAND IRRIGATION PROJECT

<u>SAMPLE</u>	<u>LOCATION</u>	<u>FREQUENCY</u>	<u>ANALYSES</u>
Irrigation Fluid	After Barium Pretreatment Facility	Monthly-Composited Daily	Na, Ca, Mg, Cl, SO ₄ , As, Se, U, Ra-226, HCO ₃ , TDS, K, Ba, B, calculate SAR, pH
Soil Water	24, 48, and 72 inch depth	First Week of June	pH, Electrical Conductivity, Cl, SO ₄ , HCO ₃ , B, U, Ra-226
Irrigated Soil (Thoroughly blended composite 15-30 cm depth)	One per 4 acres	At the end of an irrigation season	Na, Ca, Mg, K, As, Se, B, Ba, Ra-226, U, Electrical Conductivity, SAR, pH
Irrigated Vegetation	Composite from soil sampling locations	At the end of an irrigation season; from each cutting harvested as hay	As, Se, B, Ra-226, U, Ba
Visual Inspections	Irrigation Perimeter	Daily during irrigation season	Check for runoff

NOTE: Heavy metal analyses in soils will be performed on "plant available" or "DTPA extractable" fraction.



Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

TO: Susan Hogg, Land Quality Division
FROM: E. J. Fanning, Soil Specialist, WQD
DATE: January 5, 1987
RE: Permit Application #86-217
Everest Minerals Corp. - Highland
Section 21, Land Application Facility

A handwritten signature in cursive script, appearing to read "EJF", is written over the "FROM:" line of the memorandum.

Attached please find a copy of my cover letter and review comments on the Everest Minerals Land Application Facility.



Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

January 5, 1987

Larry C. McGonagle
Everest Minerals Corp.
P. O. Box 1339
Corpus Christi, TX 78403

RE: Permit Application #86-217

Dear Mr. McGonagle:

This is to summarize my attached detailed comments on permit application 86-217, the Highland Section 21 Land Application Facility.

1. The waste analysis is incomplete for barium and molybdenum.
2. The average irrigation rates in Table 2.5-1 are well below the stated design minimum flow rate of the equipment at 300 gpm.
3. TDS or salinity, rather than Ra-226, appears to be the site-limiting factor. 0.52 feet of applied irrigation water of 3675 micromhos/cm will elevate the soil saturation extract sufficiently to classify the surface soil as saline. A 92 percent leaching fraction will be required to flush salts from the root zone.
4. The maximum cumulative soil activity of Ra-226 allowable to meet the ICRP standard of 0.1 microcurie MPBB is 9.64 pCi/g. The eight year irrigation project should produce a soil Ra-226 activity of 1.82 pCi/g, which is 19 percent of the maximum cumulative activity.
5. The modifications to the proposed monitoring program are listed in comment #16.

6. The wellfield purge impoundment and the barium sulfate settling ponds will have to be permitted under separate permits. The application for these should be submitted to Mr. Rich Ruyle, District #1 Engineering Supervisor, DEQ/Water Quality Division, 2161 Coffeen, Suite 601, Sheridan, WY 82801.

If you have any questions, please give me a call at 307-777-7074.

Sincerely,



E. J. Fanning
Water Quality Soil Specialist

EJF/mad

Enclosure

cc: Susan Hogg, LQD

Review and Final Comments on The Everest Minerals Permit Application 86-217 for Land Application by sprinkler irrigation circle of in-situ uranium mining process pretreated wastewater in the NW1/4 and NE1/4 of Section 21, T36N, R73W, Converse County, Wyoming.

1. Page 1, Section 1.1 Authority for application

The authority for granting a permit for this application is provided in Chapter III of the Wyoming Water Quality Rules and Regulations, entitled "Regulations for Permit to Construct, Install or Modify Public Water Supplies, Wastewater Facilities, and other Facilities Capable of Causing or Contributing to Pollution." Part E of Chapter XI provides the minimum design standards for land application facilities.

Section 55 (c)(ii) of Part E, Chapter XI, the numerical criteria for disposal of limited volumes of industrial wastewater and sludge, is not the basis for permitting continuously generating systems, such as the system described in this application. These criteria were developed for one-time land application situations where the waste is generated in a single season of operation and no long term facility is involved. However, the numbers are generally useful for comparison projections, as used in this application.

The basis for reviewing this application is a site-specific review as expressed in Section 50(a), Site Requirements, Part E, Chapter XI.

2. Page 5, last paragraph

What was the basis for deciding on pretreatment levels of 30 pCi/l Ra-226 and 3.6 mg/l of uranium? Is the Ra-226 activity derived from the state NPDES discharge limits for the Exxon Highland mine which include a daily maximum for total radium of 30pCi/l?

3. Section 2.1.1, Description of Operations, Paragraph 5, Page 6

The injection fluid has not been characterized (at least in this portion of the permit application). Characterization of the injection fluid is basic to an understanding of the waste stream.

4. Page 8, Section 2.1.3 Pretreatment Facility, Paragraph 2 and 4.

Design capacities for the settling ponds are omitted, as are calculations for runoff diversion. The closest surface water to be protected is the playa, or seasonal pond, to the southwest of the wellfield purge storage impoundment, and apparently within the drainage area which includes the circle.

5. Page 9, Section 2.1.4, Irrigation Area, Paragraph 1

The conceptual site management plan should be described in a time schedule format that is integrated with the schedule of the overall project operation. Is the circle under irrigation to be plowed and seeded to the three pasture grass species before initiation of irrigation? How much of the total area will be allotted to small scale research plots? Will the system be sold and kept in operation, or will it be dismantled, and the area left to gradual native revegetation?

6. Page 10, Section 2.2.2 Barium Pretreatment Facility, Paragraph 2

Barium concentrations are omitted from tables 2.5-2, 2.5-3, 2.5-4 and 3.2-1, but are estimated here at between 50 - 100 mg/l. If consistent throughout the waste stream, this would result in a total eight year loading of 0.65 - 1.3 tons of barium per acre, or a soil concentration of 651 - 1303 mg/kg. Background concentrations for soils range from 100 - 3,000 mg/kg. Plant accumulation is significant only when barium concentration is exceeded by calcium and/or magnesium, and little information is available on waste loading rates or phytotoxicity.

7. Page 12, Section 2.2.5, Irrigation Area, Paragraph 3

If the design minimum flow rate of the irrigation equipment is 300 gpm, can the average irrigation rates of 105 and 135 gpm in Table 2.5-1 be reliable estimates?

8. Page 20, Section 2.4.2, Background Soil Concentrations, Paragraph 2

While it is evident that there is only a small variance in values for the selected metals in Table 2.4-3, references for background uranium (as U_3O_8) and Ra-226 in soils are scarce. Consequently, it is not known what is expected for this, or other soil types, for these metals. Some soil data for uranium and Ra-226 are available from the Poison Basin Mine Site near Baggs, Wyoming (AML Project #7). The average uranium (as U_3O_8) concentration for ten samples (excluding ore dumps and sediments) is 51 ppm with a range of 10-140 ppm; the average background concentration for the Everest surface soil samples (n=18) in the irrigation area is 2.5 ppm with a range of 1.7-3.3 ppm. The average (n=10) Ra-226 concentration for the Poison Spider Mine is 6.5 pCi/g, with a range of 0.8-22.5 pCi/g. The average for the Everest site is 1.43 pCi/g, with a range of 0.8-2.9 pCi/g.

Selenium and arsenic means and ranges are within published values.

The average soil CEC (0-6 inches) is 24.42 meg/100g, and the average soil pH (0-6 inches) is 6.26.

9. Page 32, Table 2.5-2, Estimated Concentrations of Various Parameters in the Wellfield Purge.

As mentioned in comment #6, barium is omitted from this table, as well as from tables 2.5-3, 2.5-4, and 3.2-1. The discussion of barium loadings in that comment is adequate for this review.

Molybdenum and selenium have been cited in the literature (Dreesen and Marple, 1979) as two of the more hazardous by-products of uranium mining with respect to transport through the food chain. Estimates of molybdenum concentrations are not presented in any of the above tables, although background soil concentrations are presented in Table 2 of Appendix B.

10. Page 43, Section 3.1, Water Balance

Based on the site hydraulic balance the system will experience a net annual water deficit in the range of 8.37 inches per year in the third year to 13.7 inches per year in the first and second years. Periods of non-irrigation or termination of irrigation at the end of the project life will limit the vertical migration of salts. Groundwater was not encountered in any of the six test holes drilled to 15 feet, or the two holes drilled to 250 feet.

Leachate potential may be estimated as 10-15 percent of the saturated hydraulic conductivity of the most restrictive soil horizon, according to the SCS guides, which for the Ulm Soil Series occurs at 9-26 inches and correlates well with the site borings which indicated a clay to sandy clay soil stratum from the surface to varying depths of 2-12 feet. The permeability of this layer is 0.06-0.2 inches per hour. 15 percent of this = 0.009 - 0.030 inches/hr (2.29×10^{-2} - 0.76 cm/hr). The maximum potential total volume of leachate produced from the system therefore, is approximately 14,175.45 - 472,515 gals/hr or 1.04 - 34.8 ac ft/day on a 24 hour basis. (7.2 inches/day under saturated conditions).

Figure I of Part E, Chapter XI indicates that the effluent produced by Everest Minerals can be classified as very highly saline but low in sodicity. The use of an excess leaching fraction to vertically displace salts is therefore necessary. The accompanying Table II indicates a total eight year salt loading of 38,881.22 lbs/acre. The mean background conductivity of the irrigation site surface soil is 0.495 mmhos/cm, indicating the soil is non-saline and well leached. The goal of the salt loading limit is to limit the increase in soil conductivity at the surface to no greater than four mmhos/cm, the dividing point between saline and non-saline soils.

Using the formula:

$$\begin{aligned} \frac{D_{iw}}{D_s} &= \frac{(d_s)(SP)(\Delta E_{Ce})}{(d_w)(100)(EC_{iw})} \\ &= \frac{1.2(.40)(4.000)}{1.0(3.675)} \end{aligned}$$

= 0.52 feet of irrigation water having a quality of 3675 micromhos/cm electrical conductivity is sufficient to change the electrical conductivity of the saturation extract to four mmhos/cm.

The leaching requirement therefore is $\frac{3.675}{4.000} = 0.9188$ or 92% of the applied water.

If the conductivity of the soil solution approaches 4.0 mmhos/cm, then the corresponding salt concentration is approximately 2,560 ppm. On a weight/weight basis this equates to 10,252.30 lbs of salt/ac-ft of surface soil as a maximum cumulative loading to maintain a soil electrical conductivity no greater than four mmhos/cm.

11. Page 43, Section 3.1 Water Balance Last Paragraph

The last sentence indicates that runoff from the site is not anticipated due to the construction of a small berm around the perimeter. Based on the 25 year 24 hour storm event of 0.30 inches for the Douglas area, runoff is almost negligible. However, design specifications based on larger storm events should be presented.

12. Page 45, 3.2, Impacts on Soils

Based on the accompanying Table II which presents calculated or cited maximum cumulative waste loadings in comparison with the eight year Everest project loadings, total dissolved salts or TDS is the site-limiting factor. A discussion of leachate production potential and salt loadings is provided in comment #10. It appears that a very substantial leaching fraction of 92 percent of the irrigation water is required to flush salts below the root zone and maintain the land system viability. However, the required leaching fraction varies with the ratio of the conductivity of the irrigation water to that of the drainage water, or in this case the saturated soil solution at depths of from 9-26 inches.

The only other parameter that exceeds the maximum cumulative loadings in this table is boron, by a factor of four. Considering the substantial leaching factor required for successful operation of this irrigation circle, toxic concentrations of boron will probably not accumulate within the root zone of the selected grasses.

Although the bicarbonate concentration is high at 1000 mg/l for the first three years and at 437.60 mg/l for the remaining five years, it averages at only 31 percent of the total anion concentration and should not be expected to substantially affect the SAR of the surface soil (and consequently, the infiltration rate).

13. Page 48, Section 3.2.2 Selenium

Total selenium loading and final soil concentration of 3.88 mg/kg does not exceed the recommended maximum concentration of 10 mg/kg, and is not expected to accumulate to toxic levels in forage grasses. As mentioned previously in comment #9, selenium and molybdenum become more soluble and plant - available with increasing pH (i.e. under alkaline conditions). Molybdenum is essential for nitrogen fixing soil microorganisms, but forage content of greater than three ppm produces molybdenosis in grazing animals. Copper availability is affected unless the ratio of copper to molybdenum is greater than two. Analysis of the waste stream for molybdenum will be required.

14. Page 50, Section 3.2.3, Radium - 266

The mean background concentration of Ra-266 in the surface soil of the irrigation site is 1.43 pCi/g. The calculated final soil concentration from the eight year irrigation water addition is 1.82 pCi/g if the Ra-226 concentration (activity) remains constant at 30 pCi/l as a result of the barium chloride pretreatment facility. This represents only a 27 percent increase over background soil activity, and is only 18.8 percent of the calculated maximum acceptable soil activity proposed in Table II, which is based on the food chain calculations in Table III.

These surface soil Ra-226 activities compare favorably with the NRC standards for uranium mill tailing cover soils which may not exceed 5 pCi/g for the first 15 cm depth, and 15 pCi/g for each successive 15 cm depth (10 CFR Part 40, Appendix A, Criterion 6).

The food chain transport calculations in Table III are based on the review and synthesis of the master's theses and the "Final Report on the Radiobiological Investigation of Uranium Mining and Processing Operations in Wyoming," June 1982 (Revised May, 1984), Doerges and Kennington, to the Wyoming Game and Fish Department and the Wyoming Department of Environmental Quality. Data for the background and "contaminated" levels of Ra-226 activity in soil, plants and animals are averages calculated from the 1977 thesis by Jeffrey L. Kotsch, with the animal bone data averages calculated mainly from the principal investigator's report itself.

The lowest section of Table III provides cumulative Ra-226 soil activities at the Everest Minerals irrigation site based on the constant Ra-226 concentration of 30 pCi/l as stated in the waste analysis. Potential food chain accumulations in plants and animal bone are then calculated using average concentration ratios calculated here and compared (favorably) with those in the literature.

The final Ra-226 activity of 4.63 pCi/g of ashed bone is 5.29 times lower than the ICRP Maximum Permissible Concentration (MPC) of 24.5 pCi/g of ashed one in humans. (24.5 pCi/g is calculated from the MPBB (Maximum Permissible Bone Burden) of 0.1 microcurie. Whicker and Schultz (1982) state that "...some effort should be devoted to the development of radiation protection standards for other species." They later concluded that "... the radiation protection standards based on human risk are so stringent that other species will be adequately protected (at the population level) by adherence to these standards." (It is realized that individuals of a species will receive higher dose rates in localized "hot spot" areas, but will probably be selectively eliminated from the overall population if the radionuclide exposure results in a competitive disadvantage.)

Based on the analysis in Table III it is concluded that if the Ra-226 activity of the irrigation water remains constant at 30 pCi/l as provided by pretreatment, the hay production from the irrigation site should be suitable for marketing. Actual release of the hay for livestock consumption will depend on analysis of the plant tissue parts for Ra-226 activity, as well as monitoring of the pretreated irrigation stream.

15. Page 53, Section 3.2.4 Uranium

The NCRP standard of 3500 ppm U_3O_8 (3000 ppm U) will be used for maximum loadings.

16. Page 38, Section 2.6 Proposed Monitoring Program

Suggested modifications to Table 2.6.1, the monitoring schedule proposed by Everest Minerals:

- A. Irrigation Water - the discharge from the barium pretreatment facility is the logical point for sample collection. The daily composited - monthly analysis is an acceptable frequency.

The following parameters should be added to the analysis list:

Calculate SAR (sodium adsorption ratio) from Na, Ca & Mg; add K.

Add HCO_3^- , TDS, B, Ca, Mo, Ba, Ni and pH.

- B. Soil - sample size and frequency are acceptable.

Add the following analytical parameters:

Ba, Cu, Mo, Ni, K (for 0-6" and 6-12").

- C. Vegetation - sample size, location and frequency are acceptable.

Add the following analytical parameters:

Cu, Mo, Ni, Ba, % crude protein.

- D. Soil water- installation of several suction lysimeters for soil water collection at the beginning of June each year. Lysimeters should probably be installed at 6, 18 and 30 inches at each point. Collected soil water will be analyzed for pH, conductivity, chlorides, sulfates, bicarbonates, boron, uranium and Ra-226.

References

- Bohn, Hinrich L., Brian L. McNeal, George A. O'Conner, 1979. Soil Chemistry. John Wiley and Sons.
- Brown, Kirk W., Gordon B. Evans, Jr. and Beth D. Frenznys, 1983. Hazardous Waste Land Treatment. Butterworth Publishers.
- Doerges, John E. and Garth S. Kennington, 1984. Final Report on the Radiobiological Investigation of Uranium Mining and Processing Operations in Wyoming. Radiological Safety Control Program, and the Department of Zoology and Physiology, University of Wyoming, Laramie.
- Dreesen, David R. and M. Lynn Marple, 1979. Uptake of Trace Elements and Radionuclides from Uranium Mill Tailings by Four-Wing Saltbush (Atriplex canescens) and Alkali Sacaton (Sporobolus airoides). In Proceedings of the Symposium on Uranium Mill Tailings Management, Colorado State University, Fort Collins, Co.
- Everest Minerals Corp., 1985. Supplemental Report to Restoration Achievement at Exxon Mineral Company's Expanded R&D Pilot In Situ Uranium Mine; Highland Uranium Operations.
- Exxon Minerals Company, 1984. Permit 218C, Restoration Achievement at the Highland Uranium Operations Expanded R&D Project.
- Nuclear Regulatory Commission, 1986. 10 CFR Part 40, Appendix A, Criterion 6.
- Richards, L.A., Editor, 1954. Diagnosis and Improvement of Saline and Alkaline Soils, Handbook #60, USDA-ARS.
- State of California, 1963. Water Quality Criteria; State Water Quality Control Board.
- Whicker, F. Ward and Vincent Schultz, 1982. Radioecology: Nuclear Energy and the Environment. 2 Volumes. CRC Press, Inc.

Table II

Comparison of Maximum Cumulative Constituent Loadings with Total Eight Year Waste Loadings-Everest Minerals

Parameter	Maximum Cumulative Loading		Total 8 yr Loading-Everest	
	lbs/ac 6"	mg/kg	lbs/ac	mg/kg
TDS	10,252.30lbs/acft	approx.2560	38,881.22	19,440.00
As	100-200	50-100	0.32	0.16
B	4.00	2.00	16.13	8.06
Cr	50.10	25.00	0.1592	0.08
Cu	500.00	250.00	0.1592	0.08
Ni	200.00	100.00	0.4534	0.23
Se	20.02	10.00	6.77	3.38
Zn	1,000.00	500.00	0.36	0.18
U ₃₀₈	7,008.41	3,500.00	53.50	26.77
Ra-226	1.93x10 ⁻⁵	9.64 pCi/g	3.64x10 ⁻⁶	1.82 pCi/g
Barium	Information scare; accumulation in plants suppressed by excess calcium and/or magnesium		1303.20-2606.46	651.60-1303.23

Ni concentration estimates
missing for restoration phase

Table I
Hydraulic Balance for the Everest Minerals Irrigation Site

Year	Total Waste (Gals)	Irrigation Season	Daily App. Rate (Gals)	Site Acreage	Daily App. Rate (Inches)	Additional May (16 Days)	Moisture from Irrigation June (30 Days)	July (31 Days)	August (31 Days)	September (15 Days)	Total Additional moisture (inches)
1	18,396,000	123 Days	149,560.97 (19,992.11ft ³)	58	0.095	1.52	2.85	2.94	2.94	1.42	11.67
2	Same loading as Year 1										
3	26,280,000		213,658.54 (28,560.15ft ³)		0.136	2.18	4.08	4.22	4.22	2.04	16.74
1-5	23,652,000		192,292.68 (25,704.14ft ³)		0.122	1.95	3.66	3.78	3.78	1.83 X 5 yrs	15.00
If the irrigation system design includes a minimum flow rate of 300 gpm, as stated on page 12											
	53,136,000		432,000 (57,746.29ft ³)	(21.8 hrs)	0.27	4.32	8.10	8.37	8.37	4.05 X 8 yrs	33.21

-situ mining water
Activity (pCi/gm)

1	Animals		Source	Concentration Ratio
	Background	Contaminated		
			Soil-Table 4, Kotsch thesis	
			Soil-Table 1-3, Kotsch thesis	
				0.37 overall
				1.86 =2.98
			Plants-Appendix 4-Kotsch	0.74
				3.11 overall
				3.14 = 12.1
				5.09
			Plants-Table 7-Kotsch	0.74
	Vertebrae 6.3		Cattle-Table 11 UW Pathfinder	3.15
		Vertebrae-5.4	Cattle-Table 11 UW Pathfinder	0.21
		Vertebrae-16.7	Jackrabbits & Cottontails - Table 8 Kotsch	0.65
		Bone-6.59	Pronghorn-Table 3 UW Pathfinder	0.26
		Bone-2.49	Bobcat-Table 3 UW Pathfinder	0.15
			Everest Minerals Permit Application # 6-217	
		3.73		
		3.83		
		3.98		
		4.11		
		4.24		
		4.37	The ICRP standard for the MPC (maximum permissible conc.) in human bone is 24.5 pCi/g ashed bone	
		4.50		
		4.63		

10-9-86



THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

TO: File: Everest Minerals ILS Uranium Commercial Permit Application

FROM: Phil Pucel *Phil*

DATE: October 7, 1986

SUBJECT: Everest Minerals "Supporting Information, Commercial ISL Application, Highland Uranium Project", TFN 1 2/353, DEQ/WQD Ref. No. 86-217

Baseline Data

The proposed sampling program, consisting of one sample per well and one well per acre, provides neither a statistical basis nor an adequate characterization of baseline conditions. Previous R & D projects routinely collected at least 4 baseline samples for each monitor well. A distinct baseline data set was then established for each monitor well. An application which proposes to establish an even weaker baseline data set should be modified. Due to the spatial variability in water quality and the large distances between monitor wells, averaging of data for an entire monitor well ring is not appropriate.

Restoration

Restoration goals will probably require more exact definition than that which is listed on page 3: "Restoration is achieved when indicator parameters approximately reach baseline."

While this broad standard allows room for flexibility in making determinations, it can also lead to lengthy negotiations and perhaps legal proceedings, particularly when a persistent problem parameter and high clean-up costs are involved. A well-defined baseline is most important and should be based upon an adequate number of samples taken in accordance with an accepted Quality Assurance/Quality Control Plan. Restoration to this baseline is the primary goal. Slipping to a secondary standard may be allowed by the DEQ/WQD administrator only after aggressive restoration efforts have been unsuccessful. The sequence of events leading to the transition from a primary to a secondary goal should be well understood and documented because prolonged restoration activities and even cessation of mining can result from:

1. the failure to achieve primary or secondary goals and/or
2. the lack or misapplication of the best restoration technology available.

Stability

The stability sampling program should provide data sets which are statistically comparable to baseline and restoration data sets. The sampling schedule, specific wells, and parameters should be clarified and organized into a table.

Note that the success of the stability period is also subject to random sampling of any monitor, injection, or production wells. The water quality in any well must meet the restoration goals in order to achieve stability for the mining unit.

Responses to my comments dated June 24, 1986

Page 2, #4

Comment: Pressure testing and single point resistivity logs were proposed as mechanical integrity tests. These tests are used to verify casing integrity, but they do not provide information relevant to vertical migration of lixiviant along the borehole. Radioactive tracer logs are sensitive in detecting leaks or fluid movement in channels in the cement, but they require a service company and are time-consuming.

Resolution of this issue can be governed by the Mechanical Integrity regulations found in 40 CFR 146.08 or any more stringent DEQ/LQD regulations. 40 CFR 146.08 states that cementing records and an appropriate monitoring program may be used in situations where the nature of the casing precludes the use of noise and temperature logs.

Everest Minerals relies on a proper cement job which uses a high velocity injection to insure turbulent flow. The slurry is thin and high in bentonite content.

Comments on attachment 4: Insertions for permit/license application

On page 110 - The proposal says that overlying and underlying monitor wells will be located within 100 feet of the centerline of the proposed well field area.

The location of these monitor wells should be adjusted so that adequate coverage is afforded. This plan should take into consideration the width of a well field area, and the probable radius of a cone of impression. If a vertical excursion is left undetected during operations, the contaminated water will move down the regional gradient. Selected long-term monitoring wells, located downgradient of the process area, should be left in place to detect such an occurrence.

Appendix 6 of the permit application contains isopach maps of the confining beds which are considered to be the overlying and underlying aquitards. The maps show a number of areas where the confining beds are very thin or discontinuous. For example, on map A6.2 the 45 shale is the designated overlying aquitard for the 30 sand zone. In Section 21, this aquitard is very thin or perhaps discontinuous off the northeast end of the pattern. A similar situation is shown on map A6.3 where the 35 shale is thin over a good portion of the pattern in Section 20. A third example is shown on A6.4 where the 25 shale, the underlying aquitard for the 30 sand, is thin or discontinuous over a large portion of the mining area.

Discussions on October 2 and 3 revealed that further evaluation of the confining beds would occur during aquifer tests. In instances where the aquitard is discontinuous, an additional monitor well will be installed to detect fluid migration out of

the ore zone. Aquifer test data and more detailed stratigraphic information will be evaluated prior to a final determination of the monitor well network configuration.

Status of the permit

The permit application, to be submitted within a few weeks, will reflect the changes and agreements reached during the discussions held on October 2 and 3, 1986.

PP/nc

cc: Jake Strohman
Susan Hogg

9-24-86



THE STATE OF WYOMING

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GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

TO: Jake Strohman
FROM: E. J. Fanning
DATE: September 4, 1986
SUBJECT: Everest Minerals Permit Application #86-217

I have reviewed several of the more important sections of this permit application and am providing several bottom line comments. A complete set of comments will follow.

1. Pretreatment of the well field workover fluids and well field purge water which are likely to contain elevated levels of Ra-226 and Uranium is provided by barium chloride coprecipitation as barium-radium sulfate, and uranium is reduced by passing over an anion exchange resin. Ra-226 levels will average less than 30 pCi/l and uranium concentration will average below 3.6 mg/l (in the irrigation water).
2. As with most metals, the attenuation in the soil of Ra-226 is positively correlated with a pH (soil solution) greater than 6.5 and conservative hydraulic loadings. Soil pH's on the irrigation site range from slightly acidic to neutral. pH monitoring is therefore necessary under continuous irrigation.

Cation exchange capacities on the site soils are high (i.e., greater than 15 meq/100g) which is a major factor in assimilative capacity. This is characteristic of soils with textures ranging from clay to sandy clay loams.

Uranium attenuation in soils is more strongly related to the maintenance of more saturated soil conditions which is more easily accomplished on soils with a high percentage clay, which seems to be characteristic of this irrigation site. (The idea is to maintain the uranium in a lower oxidation state.)

3. The National Academy of Sciences and National Academy of Engineering have agreed that Ra-226 contaminated wastewater must be applied at a rate so that the leachate does not exceed 20 pCi/day. The applied water will have a Ra-226 concentration of 30 pCi/l which will probably be totally attenuated in the top 1 foot of the profile.

Research reports that uranium wastewater of 100 mg/l applied to soils has been almost completely absorbed, assuming maintenance of reducing conditions. The treated wastewater applied here will average 3.6 mg/l uranium.

EJF/nc

ing 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, Wyoming 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.

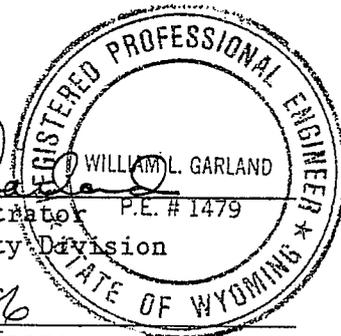
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

AUTHORIZED BY:



Administrator P.E. # 1479
Water Quality Division
8-8-86

Date of Issuance





Director
Dept. of Environmental Quality

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

Wanna

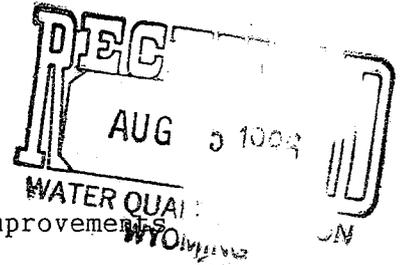
MEMORANDUM

TO: Plans, Permit 86-218R f.

FROM: Steve Gerber *SG*

SUBJECT: Response to Comments on Hudson 1986 Water System Improvements

DATED: July 30, 1986



I received a call from Don Frasier on July 24 in response to my comment on the need of a check valve in the casing for a submersible pump. Don said he had checked with Rolly Connell and Rolly said that check valves were included in the pump. I told Don I would authorize the project.

SG/jw

Norma

MEMORANDUM

TO: Plan, Permit 86-218 R.
FROM: Steve Gerber *sg*
SUBJECT: Phone Review for Hudson 1986 Water Improvement
DATED: July 30, 1986

RECEIVED
AUG 5 1986
DIVISION
WYOMING

I called Don Frasier with Wind River Engineering about the above referenced project. I told Don that the check valve in the casing is to be located near the pump. If the pump has a check valve built into it an additional check valve is not necessary.

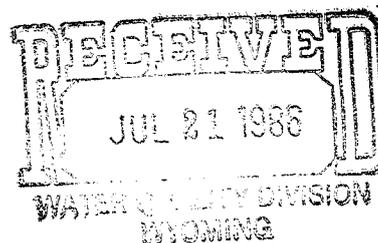
SG/jw

*phone review
7/23*

homa

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144



PROJECT: Hudson - 1986 Water Improvement

ENGINEER: R.D. Connell & Associates, Inc.
P.O. Box 1010
Riverton, WY 82501

OWNER: Town of Hudson
141 E. Third Street
Hudson, WY 82515

WATER QUALITY DIVISION REFERENCE NUMBER: 86-218

REVIEWING ENGINEER: Steven P. Gerber, P.E.

Jeff Hermansky for

DATE OF REVIEW: July 14, 1986

ACTION: Not authorized.

COMMENTS:

A review of the above referenced project has been completed. The following items must be addressed and/or resolved before a permit can be issued:

1. Every well shall be protected from and remain operational during the 100 year flood or the largest flood of record, whichever is greater. Show the flood level to verify this requirement is being met.

2. The well test shall provide for continuous pumping for at least 24 hours or until stabilized drawdown has continued for at least 6 hours when test pumped at 1.5 times the design pumping rate.

3. Specifications must require electrical cable to be firmly attached to the rise pipe at 20 foot intervals or less.

4. The regulations require the pump to be located at a point above the top of the well screen. The purpose for this is that when air comes in contact with the screen it will corrode more quickly and is more susceptible to bacteria growth. Discuss the feasibility of locating the pump above the casing.

5. Where a submersible pump is used, a check valve shall be located in the casing. This valve must be located near the pump.

6. The discharge piping shall be provided with a means of pumping to waste. Explain how this requirement is being met.

7. A pit unit must be used instead of the specified pitless adapter. All pitless units shall be shop fabricated from the point of connection with the well casing to the unit cap or cover. They shall be threaded or welded to the well casing, and be of water tight construction throughout. The materials and weight shall be at least equivalent and compatible to the casing.

8. The top of the pitless unit shall terminate at least 18 inches above final ground elevation or 3 feet above the 100 year flood level or the highest known flood elevation, whichever is higher. Show the flood level to verify this requirement is being met.

9. Provisions shall be made for venting the well casing to atmosphere. The vent shall terminate in a down turned position, at or above the top of the pitless unit in a minimum $1\frac{1}{2}$ inch diameter opening covered with a 24 mesh corrosion resistant screen.

10. Each well must be equipped with an access port that will allow for the measurement of the depth to the water surface. An air line used for level measurement shall be provided, unless another means of measuring the water surface is available. Explain how the water surface is to be measured.

11. The well field shall have a device capable of measuring the total discharge. Each well can have its own meter or the discharge lines can be combined prior to the reservoir and a single meter can be used.

12. Show that the hypochlorinator has capacity to adequately chlorinate the additional flow.

13. Profile the water line so the need for air release valves can be evaluated.

14. The application must be signed by the Applicant.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

SG/jw
cc: Plans (3)
File (2)

ing 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, Wyoming 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:


William L. Garland
Administrator
Water Quality Division
July 29, 1986
Date of Issuance

Richard Wool
Director
Dept. of Environmental Quality

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

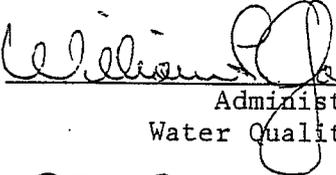
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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, Wyoming 82520; telephone, 332-3144.

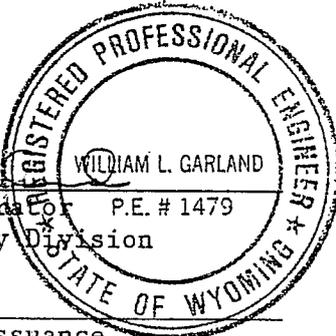
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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 P.E. # 1479
Water Quality Division
08-13-86
Date of Issuance





Director
Dept. of Environmental Quality

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

MEMORANDUM

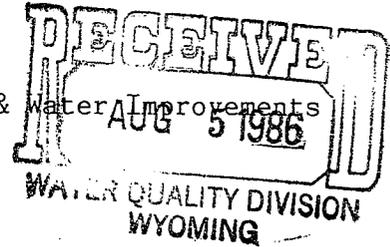
home

TO: Plans, Permit 86-220

FROM: Steve Gerber *SG*

SUBJECT: Phone Review of Park County Fairgrounds Sewer & Water Improvements

DATED: July 30, 1986



I talked with Bob Kaufman on July 23, 1986 about the two inch water line serving the 43 trailer connections. I told Bob that the regulations state that any water main smaller than 6 inches must be justified by hydraulic analysis. I asked Bob to provide an analysis showing that there will be adequate pressure at the maximum anticipated flow rate.

SG/jw



Department of Environmental Quality
Water Quality Division

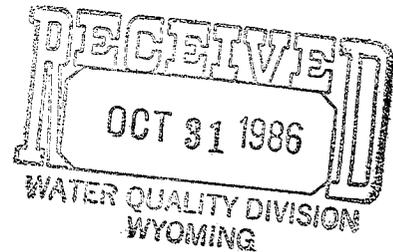
210 LINCOLN STREET

LANDER, WYOMING 82520

TELEPHONE 307-332-3144

October 27, 1986

Mr. J.C. Kinder
Shady Acres
311 Yellowstone
Cody, WY 82414



RE: Sewer Disposal System, DEQ/WQD Ref. No. 86-221

Dear Mr. Kinder:

I have received your response to my August 29, 1986 letter and find it acceptable. Based on the commitment to connect to the city sewer within 30 days after it becomes available you do not need to complete the permitting process of the existing wastewater disposal system. Therefore, I am returning your application for a "Permit to Construct".

Please keep in mind that before you can install the sewer line to connect to the city system a "Permit to Construct" for that line must be obtained from this office. Since you must connect within 30 days after the system becomes available the permitting process must be started well before that time. No time extensions past the 30 days will be granted.

Thank you for your cooperation in this matter. Do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Steven P. Gerber".

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

SPG/jw

cc: Larry Robinson, DEQ/WQD, Cheyenne
Norma Coulson, DEQ/WQD, Cheyenne

hopra

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION

210 LINCOLN

LANDER, WYOMING 82520

PHONE: (307) 332-3144

CERTIFIED P 399 271 446

PROJECT: Shady Acres Trailer Park Sewage Disposal System

ENGINEER: Arwin D. Preist
E & M Design
311 S. Wadsworth, Suite 305
Denver, CO 80227

OWNER: Shady Acres
311 Yellowstone
Cody, WY 82414

WATER QUALITY DIVISION REFERENCE NUMBER: 86-221

REVIEWING ENGINEER: Steven P. Gerber, P.E. *SPG*

DATE OF REVIEW: July 18, 1986

ACTION: Not authorized.

COMMENTS:

A review of the above referenced project has been completed. The following items must be addressed and/or resolved before the system can be approved:

1. The existing leachfield is considerably undersized. The existing field including sidewall area, is about 1980 square feet for the original field and about 470 square feet for the addition (assuming three feet of depth below the perforated pipe). This gives a total area of 2450 square feet. The regulations require an area of 3940 square feet. This is based on a flow rate of 350 gallons per trailer per day for 9 trailers and a percolation rate of 3 minutes/inch. This means at least an additional 1490 square feet of leachfield is required.

2. Since it is unknown where or how the percolation tests were run, these tests should be repeated to insure the system will not again be undersized.

3. By looking down the riser pipe in the leachfield addition, it appeared the water table is very shallow. A minimum of three feet of unsaturated soil shall be maintained between the bottom of the absorption system stone and the estimated groundwater mound imposed on the seasonally high groundwater table. Dig a hole in the area to determine the depth to water table. Also, the groundwater mound must be estimated.

4. Based on the information that the septic tank has never been pumped and that the drain field failed in the fall of 1985 it is possible that the original leachfield has been sealed off. Therefore, measure the sludge level within the septic tank to determine if solids have built-up to the point that they might be discharging to the leachfield. After measuring the sludge level have the septic tank pumped.

Review of Plans & Specs.

Ref. No. 86-221

Page Two

5. To insure that the leachfield has not plugged, uncover a portion of the original leachfield pipe. Remove a section of pipe to insure there is not a solids build up.

Prior to performing items 4 and 5 above, notify this office at least 5 days prior to performing the work so a representative of our office can be present to observe. Item 5 will not need to be performed if you would rather just install a completely new leachfield. If it is found that solids have plugged the leachfield a new field will be required.

The services of an engineer registered in Wyoming will be required to respond to items 1, 2 and 3. Several competent engineers are located in Cody. You may retain any of them to perform this work for you.

In order to see that this matter is resolved as quickly as possible complete the above items and resubmit a revised leachfield system within 30 days from receipt of this letter.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

SG/jw

Running file
11-9-12-86
He

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 86-222R
EPA C560144

Meeteetse - Wilson Avenue Sewer
(Name of Facility)

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

Town of Meeteetse

P.O. Box 38

Meeteetse, WY 82501

to construct, install, or modify a 8 inch sanitary sewer to replace existing 8 inch sanitary sewer facility according to the procedures and conditions of the application No. 86-222R. The facility is located in Section 4, T48N, R100W in the County of Park, 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.

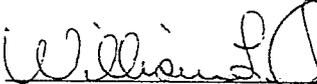
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions 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, Herschler Building, 122 W. 25th, Cheyenne, Wyoming 82002; telephone, 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.

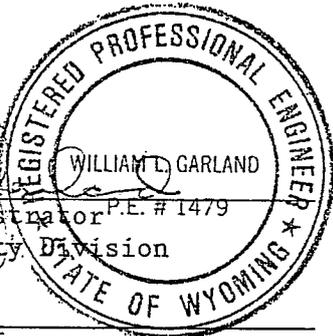
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

AUTHORIZED BY:



Administrator P.E. #1479
Water Quality Division
8-26-86

Date of Issuance



REGISTERED PROFESSIONAL ENGINEER
WILLIAM L. GARLAND
P.E. #1479
STATE OF WYOMING



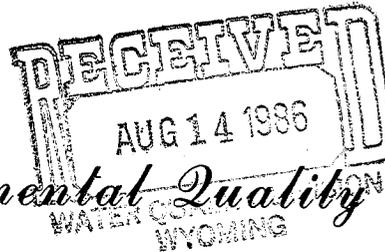
Director
Dept. of Environmental Quality

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

cc: Donald Armstrong
Armstrong Consulting Engineers
625 E. Madison #5
Riverton, WY 82501



Norma



ED HERSCHLER
GOVERNOR

Sub

Department of Environmental Quality
Water Quality Division

210 LINCOLN STREET

LANDER, WYOMING 82520

TELEPHONE 307-332-3144

August 12, 1986

Sublette County School District
ATTN: Mr. Brian Mallary
P.O. Box 549
Pinedale, WY 82941

RE: Elementary School Improvements, WQD No. 86-223

Dear Mr. Mallary:

The plans and specifications for the above referenced project have been reviewed by this office and found to be in compliance with the minimum design standards for the state of Wyoming. Because this facility has already been constructed, a permit to construct cannot be issued. Therefore, would you please retain a copy of this letter as proof that this facility has been accepted by this department.

This letter will also serve as authorization for you to operate five dry wells for roof and run-off drainage disposal, including the drain pit, as shown by the plans submitted with the permit application. No other use for or by the dry well is authorized.

Should you have any questions or comments, please contact either Jack Bedessem or myself.

Sincerely,

Bill Locke, P.E.
Water Quality Engineer

BL/jw

cc: Tony Mancini, DEQ/WQD, Cheyenne



THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

TO: Bill Locke, WQD Lander
FROM: ^{AMM} A. J. Mancini, WQD Cheyenne
DATE: July 31, 1986
SUBJECT: Sublette Co. School District, Pinedale Schools #86-223

I discussed permitting the dry wells with Jake Strohman.

It was concluded that one permit, the permit to construct, would be adequate. However, the permit to construct should include a condition for operating the dry wells. I suggest the following, or something similar, as a permit condition:

Permittee is authorized to operate 5 dry wells for roof and runoff drainage disposal, including the drain pit, as shown by plans submitted with the permit application. No other use for or by the dry wells is authorized.

me

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-224R

Evanston Well No. 8
(Name of Facility)

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

City of Evanston
1200 Main Street
Evanston, WY 82930

to construct, install, or modify a public water supply well and connection to
the distribution system

facility according to the procedures and conditions of the
application No. 86-224R. The facility is located in

NW $\frac{1}{4}$, Sec. 20, T15N, R120W
in the County of Uinta,

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 dur-

ing 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.

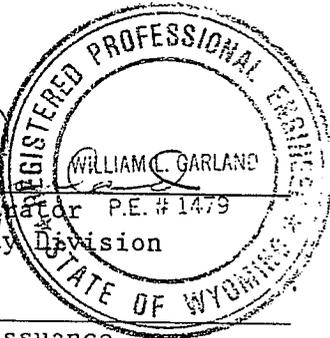
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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

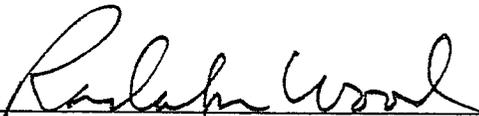
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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 P.E. #1479
Water Quality Division

09-08-86
Date of Issuance



Director
Dept. of Environmental Quality

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

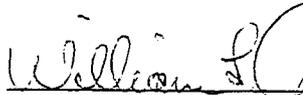
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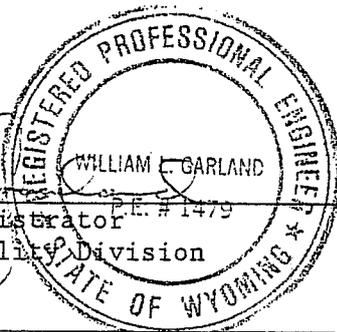
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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

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AUTHORIZED BY:



Administrator
Water Quality Division
P.E. # 1479

08-15-86
Date of Issuance



Director
Dept. of Environmental Quality

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

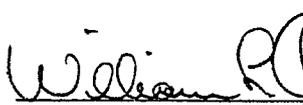
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The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted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

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AUTHORIZED BY:



REGISTERED PROFESSIONAL ENGINEER
WILLIAM C. GARLAND
Administrator # 1479
Water Quality Division
STATE OF WYOMING
10-21-86

Date of Issuance



Director
Dept. of Environmental Quality

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

* CONDITIONS ON PERMIT *

1. The applicant, with DEQ/Water Quality Division approval, is authorized to construct and install additional hydrocarbon recovery and groundwater monitoring wells associated with the Haddocks, Inc. groundwater clean up system. As built plans and specifications along with an updated site location map shall be provided to the Department of Environmental Quality/Water Quality Division, 210 Lincoln, Lander, Wyoming, 82520, within 15 days of the final installation.

2. Monthly monitoring/progress reports shall be submitted to the Department of Environmental Quality/Water Quality Division, 210 Lincoln, Lander, Wyoming, 82520, beginning in November, 1986. The reports shall include, at a minimum, data collected of the following information:

(a) Relative depth of groundwater in each monitoring well, recovery well and recovery/cutoff trench (static water level).

(b) Hydrocarbon layer thickness in each monitoring well, recovery well and recovery/cutoff trench.

(c) Quantity of hydrocarbon product recovered during the monthly monitoring period, including the meter readings.

(d) Quantity, date, disposal location and certification of all wastewater or hydrocarbon product which was removed from the site for disposal or refinement.

(e) Documentation of other pertinent progress made towards clean up of the groundwater.

REVIEW OF PLANS AND SPECIFICATIONS
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: Haddocks Harbor Groundwater Monitoring and Recovery Wells

ENGINEER: Ken Temme and Pat Bollinger
Chen & Associates Chen & Associates
605 N. Warehouse Rd. 605 Rehonce
Casper, WY 82601 Rock Springs, WY 82901

OWNER: Lynn Haddock
1704 Elk Street
Rock Springs, WY 82901

WATER QUALITY DIVISION REFERENCE NUMBER: 86-226 "As Built"

REVIEWING ENGINEER: ^{BZ} Jack Bedessem

DATE OF REVIEW: August 14, 1986

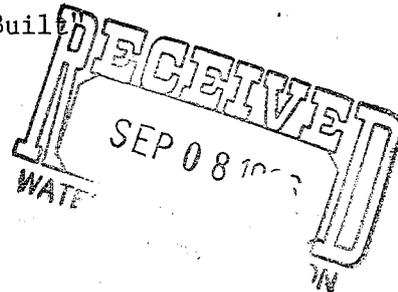
ACTION: Not authorized.

COMMENTS:

A review of the plans and data has been completed. The wells were constructed to investigate and mitigate the contamination of groundwater associated with leaking underground storage tank(s). This application includes existing interceptor trenches, 13-monitoring wells and recovery well.

A "Permit to Construct" will not be issued owing to the fact that these wells have already been constructed. However, before the wells can be accepted "as built" the following information needs to be submitted:

1. Provide an updated program for monitoring the operation of the recovery system - drawdown, product thickness, extent and movement, quantity product and wastewater recovered/disposal, reporting.
2. Specifications are needed for the groundwater suppression pump, scavenger pump and materials.
3. Provide documentation (data) which verifies the pumping rates to achieve efficient recovery - groundwater suppression pump and scavenger pump.
4. Provide profile and details which describe the recovery well, drawdown, pumps and storage of the hydrocarbon and wastewater.
5. Provide the analytical results from the groundwater monitoring well sampling gram.
6. It is recommended that the proposed interceptor/recovery trench application for "Permit to Construct" be submitted separately.



ew of Plans & Specs.

Ref. No. 86-226

Page Two

Submit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

To expedite matters, also submit a copy of the additional information to Kate Laudon.

JB/jw

cc: Kate Laudon, DEQ/WQD, Cheyenne

9-5-86 ✓
rc

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 86-227R

P & M Coal Sedimentation Reservoir 1-U-D West
(Name of Facility)

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

Pittsburg & Midway Coal Mining Company

Kemmerer Mine

Frontier, WY 83121

to construct, install, or modify a 19.92 ac-ft sedimentation reservoir to collect runoff and pit water pumpage facility according to the procedures and conditions of the application No. 86-227R. The facility is located in (Tract 96) Section 18, T21N, R116W 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.

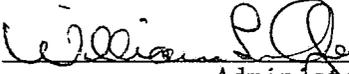
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions 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, Wyoming 82520; telephone, 332-3144.

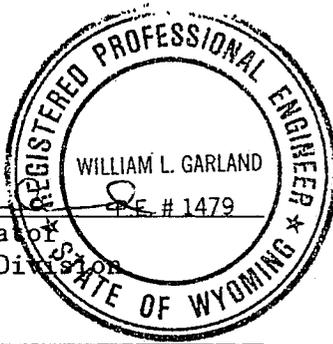
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

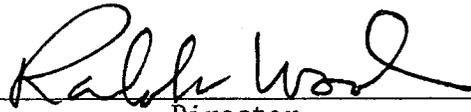
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

AUTHORIZED BY:



Administrator
Water Quality Division
9-5-86
Date of Issuance





Director
Dept. of Environmental Quality

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

✓
me

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-228
See Special Condition

Casper Service Center Waterline Extension
(Name of Facility)

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

Casper Board of Public Utilities

200 North David Street

Casper, WY 82601

to construct, install, or modify a municipal water distribution facility according to the procedures and conditions of the application No. 86-228. The facility is located in NE 1/4, S3, T33N, R79W in the County of Natrona, 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, Herschler Building, 122 W. 25th, Cheyenne, Wyoming 82002; telephone, 777-7781.

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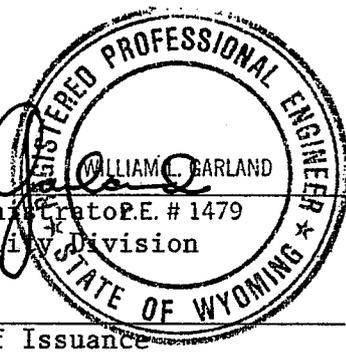
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

AUTHORIZED BY:

William L. Garland

Admin. to P.E. # 1479
Water Quality Division
July 29, 1986

Date of Issuance

A circular seal for a Registered Professional Engineer in the State of Wyoming. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "STATE OF WYOMING" at the bottom, separated by two small stars. The inner circle contains the name "WILLIAM L. GARLAND" and the number "1479".

Rudolph Wood

Director
Dept. of Environmental Quality

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

SPECIAL CONDITION

The fire protection line shall have an approved backflow prevention device installed. At a minimum, it shall be a double-check valve assembly.

cc: Ronald Nelson
Nelson, Melius & Associates
Suite 212, Center Bldg
Casper, WY 82601

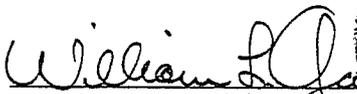
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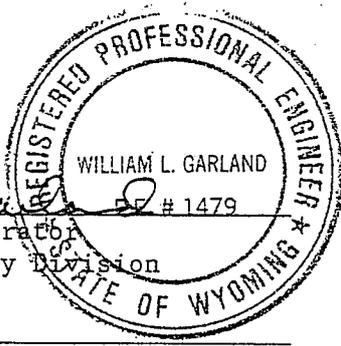
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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

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AUTHORIZED BY:


Administrative
Water Quality Division




Director
Dept. of Environmental Quality

08-15-86
Date of Issuance

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

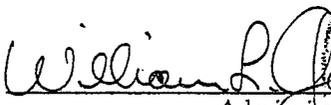
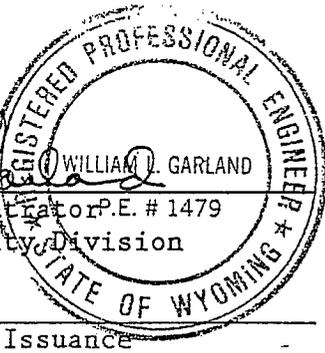
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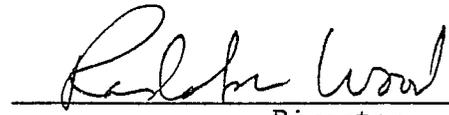
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AUTHORIZED BY:


WILLIAM L. GARLAND
Administrator P.E. # 1479
Water Quality Division

08-15-86
Date of Issuance


Director
Dept. of Environmental Quality

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

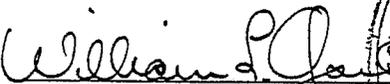
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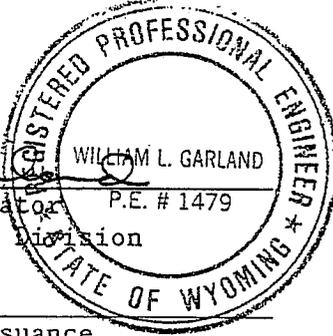
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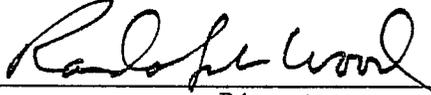
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AUTHORIZED BY:


Administrator
Water Quality Division



08-15-86
Date of Issuance


Director
Dept. of Environmental Quality

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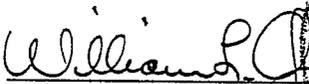
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AUTHORIZED BY:



Administrator
Water Quality Division

08-15-84
Date of Issuance



Director
Dept. of Environmental Quality

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

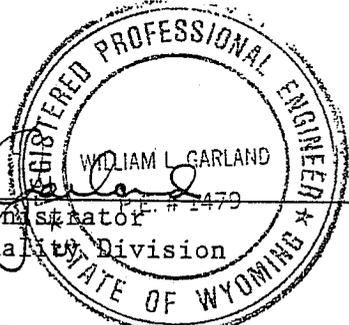
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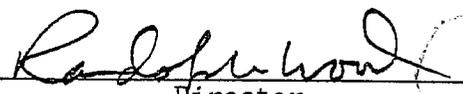
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AUTHORIZED BY:


William L. Garland
Administrator #1479
Water Quality Division
08-15-86
Date of Issuance


Director
Dept. of Environmental Quality

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

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THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

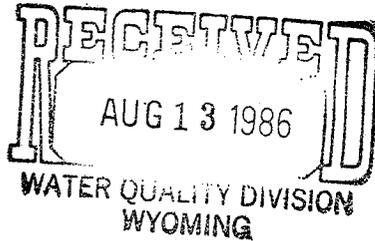
2161 COFFEEN AVENUE,
SUITE 301

SHERIDAN, WYOMING 82801

TELEPHONE 307-672-6457

August 11, 1986

86-234R



Mr. Neil Harrington
Glenrock Coal Company
1026 55 Ranch Road
Glenrock, Wyoming 82637

Dear Mr. Harrington:

I have completed my review of your August 5, 1986 submittal for As-Built approval of the leach field at the Dave Johnston Mine. The analysis of leach field adequacy performed by Bruce Nelson uses somewhat different numbers than were presented in your original submittal. I feel, however, the system will probably perform adequately because of the pretreatment provided by the plant. It will be important to continue to operate the treatment plant at its maximum efficiency and to monitor the leach field for any early signs of failure.

Since this leach field is already installed, a Permit to Construct cannot be issued. This letter will serve essentially the same purpose by documenting this office's As-Built Approval of the system.

Please call if you have any questions or comments.

Sincerely,

Susan Fields

Susan Fields
Environmental Engineer

SF:ls

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86-~~234~~
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THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental & *Letter Revised*
Water Quality Division

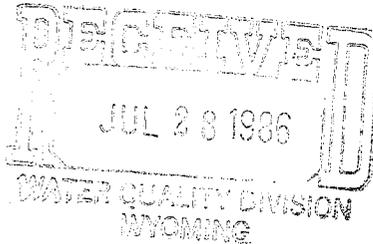
2161 COFFEEN AVENUE,
SUITE 301

SHERIDAN, WYOMING 82801

57

July 23, 1986

Mr. Neil Harrington
Glenrock Coal Company
1026 55 Ranch Road
Glenrock, Wyoming 82637



Dear Neil:

Thank you for your responses to my annual inspection. I feel, however, a few points need to be clarified regarding the possible violations noted in the report. I had understood during the inspection that the discharges over the spillway at point 001 during mid-June had not been sampled or reported. There was also a question in my mind as to whether the pond was being adequately pumped down to provide necessary storage for the 10-year, 24-hour storm. I noted these concerns in my report and referred the situation to John Wagner. Documentation of this nature does not constitute an actual issuance of a violation, but simply presents the concern. The discharges and reporting procedures will be evaluated by Mr. Wagner and any issuance of a violation or enforcement action will be handled through his department.

I have completed a review of your preliminary submittal for As-Built approval for the leach field. In order to evaluate the adequacy of the field it is necessary to have an idea of the flows. Past data of flow measurements taken when the plant was discharging should provide an idea of average flows. Estimates should be provided for average daily and instantaneous peak flows into the field.

The percolation capabilities presented are quite low. Our regulations require that a soil suitable for a leach field have a percolation rate not greater than 60 minutes per inch. With this in mind, I feel it important to verify the actual percolation of the soil. Please run a minimum of three percolation tests in the vicinity of the field and submit the results. Tests should be conducted as outlined in the information provided you with my inspection report.

Mr. Neil Harrington
July 23, 1986
Page Two

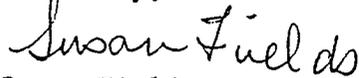
Depth to groundwater must also be identified. This information may be available through extrapolation from some of the mine's monitoring wells. If there are no wells in the vicinity of the field, a trench or pit should be dug near the field to identify depth to groundwater.

When this information is submitted, I will be able to determine if the leach field is adequately sized.

Again, please be aware that an actual violation was not issued for diversion of wastewater to the unpermitted leach field. As long as the requested information is submitted in a timely manner, no enforcement action will be taken. I agree that use of the leach field is a more favorable solution for wastewater disposal than the previous surface discharge. We simply want to verify that the existing system can handle the flows generated so that future problems do not develop.

Thank you for the information and I look forward to receiving the rest of the required data. Please call if you have any questions.

Sincerely,



Susan Fields
Environmental Engineer

SF:kk

xc: John Wagner; DEQ/WQD, Cheyenne

2-11-86
Juc

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-235
SEE CONDITIONS ATTACHED

Wertz ABC Unit No. 86 Well
(Name of Facility)

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

Amoco Production Co.

Box 2520

Casper, WY 82602

to construct, install, or modify a drilling fluids reserve pit facility according to the procedures and conditions of the application No. 86-235. The facility is located in SW1/4 NW1/4 T26N, R89W in the County of Carbon, in the State of Wyoming. This permit shall be effective for a period of one (1) year (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.

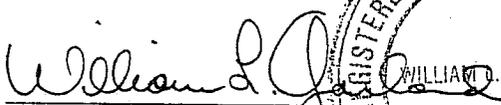
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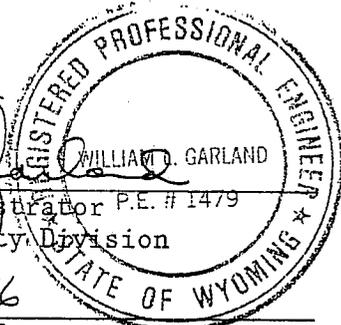
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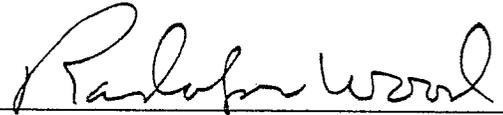
AUTHORIZED BY:



Administrator P.E. #1479
Water Quality Division
8-8-86

Date of Issuance





Director
Dept. of Environmental Quality

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

This permit authorizes you to dispose of 294,000 gallons of drilling fluid wastewater on the adjoining 3 miles of road, a total liquid application of 1.5 inches.

CONDITIONS TO PERMIT TO CONSTRUCT NO. 86-235

1. Wastewater 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% for vehicular application or 15% for spray irrigation or irrigation by gated pipe on the contour. Vegetated areas of the site shall not be spray-irrigated where possible plant leaf injury may result from salt residue.
3. Wastewater 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, Herschler Building, 4 West, Cheyenne, WY 82002, phone number 777-7088, to arrange a field inspection prior to initiation of work. The District engineer should be notified at least 48 hours in advance of discharges and must be informed how much wastewater will be applied (number of truckloads), the specific site of application (to the nearest 1/4 section) and time of application.

10-15-86



THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

October 14, 1986

Ms. Wendy L. Barteaux
Western Research Institute
P.O. Box 3395
University Station
Laramie, WY 82071

RE: GPC 86-236

Dear Ms. Barteaux:

In order to comply with permit GPC 86-236, Section C, WRI should resample the burn cavity and analyze the water for phenols using EPA method 420.2, Total Recoverable Phenolics, Colorometric, Automated, 4AAP, with Distillation.

The water quality will then be characterized using the same method used for process control. The analytical results will be added to the permit application.

The Department of Environmental Quality, Water Quality Division does realize that injection has already commenced and the burn cavity water quality has been altered. The water should be sampled expeditiously prior to further injection.

If you have any questions, please contact this office.

Sincerely,

Christian G. Norman
Groundwater Engineering Evaluator

CGN/nc



8-28
ne
ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

August 19, 1986

Wendy Barteaux
Western Research Institute
P O Box 3395, University Station
Laramie, WY 82070

RE: GPC permit 86-236, Hoe Creek UCG site, NW1/4, SW1/4, Section 7, T47N, R72W,
Campbell County, Wyoming

Dear Ms. Barteaux:

Enclosed is a signed permit for the operation of an injection well associated with testing a carbon adsorption field unit for the removal of phenol from water (groundwater restoration test).

Please note the following:

1. The administrator of the Water Quality Division or his representative must be notified 48 hours before the injection operation is to commence. Written notification of the date and time of commencement must follow within seven days of commencement.
2. The submittal of certain information and reports is required. Refer to sections C. and F.4. of the permit. Other submittals may be required (see section I).
3. Enclosed with this letter are copies of form GPC 7. One completed and signed copy of this form must accompany the submittal of information/reports concerning this permitted activity. This form can be reproduced or additional copies may be requested as needed. The form is to be signed, as specified in Section Q. of the permit, Signatories Requirement: by an executive officer of at least the level of vice president, or a duly authorized (in writing) representative.
4. If pressure injection is to be used, prior approval must be obtained from this office.

The enclosed permit neither substitutes for, nor relieves the necessity of obtaining other permits or authorizations as may be required.

Sincerely,

Handwritten signature of William L. Garland.
William L. Garland, PE
Administrator

WLG/AJM/pjb
Enclosures

cc: Leroy Dockter, UCG Manager, Laramie Project Office, US Dept of Energy

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

(X) New (Existing well)

Permit Number:

() Modified

GPC 86-236
UIC Class V

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),

Western Research Institute
Attn: Wendy Barteaux
P O Box 3395, University Station
Laramie, WY 82070

is authorized to operate

an injection well for a miscellaneous discharge to groundwater, associated with testing a carbon adsorption field unit for the removal of phenol from water (groundwater restoration test), in the NW 1/4 SW 1/4 Section 7, T47N, R72W, Campbell County

according to procedures and conditions of the application GPC 86-236 and requirements and other conditions of this permit.

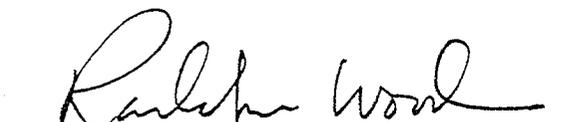
This permit shall become effective on date of issuance.



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



Aug 26, 1986
Date



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

8-26-86
Date

A. Discharge (Injection) Zone and Area of Review

The discharge zone is the burn cavity of the Hoe Creek II Underground Coal Gasification (UCG) experiment. Four geologic units have been affected by the Hoe Creek II UCG burn. The Felix 2 coal seam is the bottom unit and varies in depth from 35 to 50 meters below land surface. Above the Felix 2, in ascending order, are a siltstone/claystone interburden unit, the Felix 1 coal seam, and an overlying siltstone/sand unit. All units are in the Wasatch Formation.

The area of review extends throughout those portions of aquifers which may be affected by the discharge, and at a minimum within a quarter-mile radius of the injection well. The injection well is Well A (existing), originally designed to be the air injection well for the Hoe Creek II experiment.

B. Groundwater Classification

Groundwater has been impacted by the UCG experiment. Based on existing use of affected groundwater, the water is Class III, suitable for livestock use.

C. Authorized Operations

The permittee is authorized to inject treated water into the Hoe Creek II UCG cavity as part of a wastewater treatment demonstration utilizing a carbon adsorption field unit for the removal of phenol. The demonstration will consist of pumping contaminated water from the Felix 1 coal bed into a holding tank in which the water is continuously circulated, then pumping this water through a prefilter unit and a series of carbon adsorption units and into a second holding tank; the water in the second tank (after treatment) will be injected into the Hoe Creek II cavity. Average injection rate is estimated to be 10 gpm; this is also the estimated maximum injection rate. The estimated maximum daily injection is 5000 gpd. Injection will be directly into the burn cavity and not into rock strata.

It is anticipated that pressure will not be used to inject treated water. If permittee determines that pressure must be used, prior approval will be obtained from the Water Quality Division.

The treated water will have a phenol concentration equal to or less than that of water in the burn cavity. Permittee shall submit a final report describing the test and results. This report may be submitted in conjunction with information required in item F.4. of this permit. This report and the information required in F.4. shall be submitted within 90 days following the conclusion of the test.

Permittee shall notify the administrator of the Water Quality Division or his representative, 48 hours before injection is to start. Permittee shall provide written notification within seven days after injection commences of the date and time of commencement.

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 permittee shall maintain a daily log for the injection well. The log should include injection rates, volumes and pressure, maintenance requirements, any problems, and any other operational notes. At the end of the test, a copy of this log plus any other monitoring data shall be submitted to the Department of Environmental Quality, Water Quality Division.

G. Requirements for Monitoring the Discharge

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

If permittee determines that injection pressure must be used, prior approval will be obtained from the Water Quality Division. Also see item K.

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 elsewhere in the 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

I. 10, N/A (not applicable to this permit).

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.

This requirement will be satisfied by submittal of the report required in Section C.

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.

N/A.

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: N/A.

Permittee has been unable to locate information concerning the construction of the existing injection well. Since the processed (treated) water will be injected into the cavity and not rock strata,

Permittee has been unable to locate information concerning the construction of the existing injection well. Since the processed (treated) water will be injected into the cavity and not rock strata, permittee does not anticipate any problems due to injection procedure.

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.

Permittee suspects, due to nature of the cavity, some migration into other aquifers will occur. However, since the injected water quality will be similar to the quality of the water found in Well A during May 1986, migration is not considered a problem. Permittee believes aquifer restoration will be enhanced if a gradient from the cavity to the pumping wells is created: contaminated water will be pulled away from the area near the cavity and replaced by cavity water (very low phenol content) mixed with treated water.

Nothing in this permit constitutes an endorsement of the construction or the design of the facility described herein. The state assume 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.

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:

Well will continue to be monitored after test completion.

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

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.

N/A.

O. Special measures the Director finds necessary:

In the event of an unauthorized discharge, the permittee will take immediate corrective action.

The permitted activity must commence within one year of the issuance date or the permit will be invalid.

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.

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.



Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

August 4, 1986

Wendy Barteaux
Western Research Institute
Box 3395, University Station
Laramie, WY 82701

RE: GPC 86-236

Dear Ms. Barteaux:

This letter is a written confirmation of my call to you on August 1, 1986. The following questions were asked with regard to WRI's application for a UIC permit.

1. How will the liquid be injected?
2. Are well head pressures expected?
3. What is the use of the affected aquifers?
4. Will there be a separate waste stream?
5. Is the cavity full of water?
6. Is there any other water bearing strata present in the burn cavity?

Please provide a written response for the Water Quality Division records. If you have any questions, please call.

Sincerely,

A handwritten signature in cursive script, appearing to read "Christian G. Norman".

Christian G. Norman
Engineer Evaluator

CGN/pjb

cc: A J Mancini, WQD

/ve

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-237R

* CONDITIONS ON PERMIT *
(Ref. No. 85-143)

Aspens Water & Sewer District
East Side Water Main Connection

(Name of Facility)

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

Aspens Water & Sewer District

P.O. Box 25003

Jackson, WY 83001

to construct, install, or modify a water and sewer line extension for future

connection to Teton Pines

facility according to the procedures and conditions of the
application No. 86-237R. The facility is located in _____

Sec. 11, T41N, R117E

in the County of Teton,
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 dur-

ing 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.

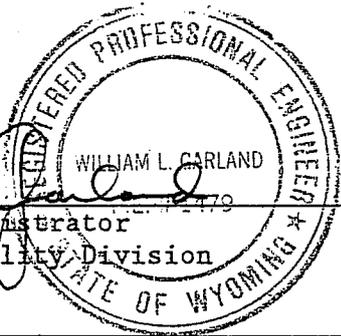
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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



09-26-86
Date of Issuance


Director
Dept. of Environmental Quality

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

* CONDITIONS ON PERMIT *

1. A complete hydraulic analysis must be completed for both the Teton Pines and Aspens Water and Sewer District water systems within 4 weeks from the date this permit is issued.

2. The water system for the Aspens Water and Sewer District must be upgraded to comply with the DEQ Regulations within one year from the date this permit is issued.

Harman

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: East Side Water Main Connection

ENGINEER: Jorgensen Engineering
P.O. Box 1142
Jackson, WY 83001

OWNER: Aspens Water & Sewer District
P.O. Box 25003
Jackson, WY 83001



WATER QUALITY DIVISION REFERENCE NUMBER: 86-237

REVIEWING ENGINEER: Steven P. Gerber, P.E. *SPG*

DATE OF REVIEW: August 5, 1986

ACTION: Not authorized.

COMMENTS:

A review of the above referenced project has been completed. The following items must be addressed and/or resolved before a permit can be issued:

1. In the future, all new applications must include a master plan that identifies all the construction previously permitted and the location of the water and sewer addition. This will allow me to keep the project in perspective.
2. Provide computations showing that the existing sewer mains are adequately sized to carry the additional flow from the Aspens.
3. Provide computations showing that the water and sewer lines to be used to connect to the Aspens are adequately sized.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

SG/jw

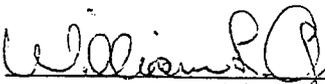
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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, Wyoming 82520; telephone, 332-3144.

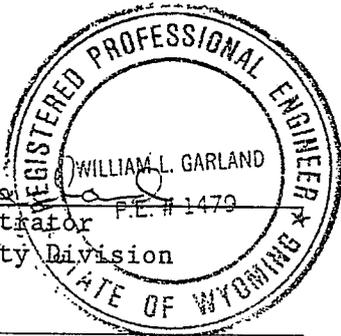
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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.

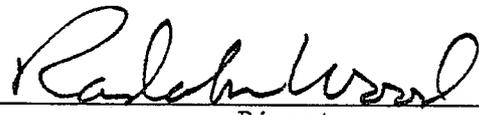
AUTHORIZED BY:



Administrator
Water Quality Division



09-08-86
Date of Issuance



Director
Dept. of Environmental Quality

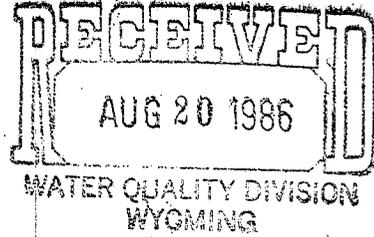
This permit does not supercede the requirements for obtaining any permit from local agencies.

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REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144



PROJECT: Sweetwater Junction Rest Area

ENGINEER: Donald Armstrong
625 E. Madison, #5
Riverton, WY 82501

OWNER: State of Wyoming Highway Department
P.O. Box 2108
Cheyenne, WY 82002

WATER QUALITY DIVISION REFERENCE NUMBER: 86-238

REVIEWING ENGINEER: Jeff Hermansky *JH for*

DATE OF REVIEW: August 15, 1986

ACTION: Not authorized.

COMMENTS:

The following questions and comments need to be addressed before a permit to construct can be issued:

1. The design report does not substantiate how the vehicle count was determined, how many gallons of wastewater to allot per vehicle, how many gallons to allot to the caretakers trailer, and how the wastewater flow from the R.V. dump was established.

2. Bedding and compaction specifications are needed for the septic tanks. This is especially critical to fiberglass tank installations.

3. The drain field rock proposed does not meet the requirements since it allows for up to 100% passing the 1/2" screen. The regulations require the rock to be between 1/2 and 2 1/2 inches.

4. There is not sufficient justification for using a 10 minute/inch percolation rate for the disposal bed design. Appendix C of the design report states the percolation rate for test holes P9 through P13 as 40 minutes/inch, and that holes P9, P13 and P14 are in sand and gravel while P10, P11 and P12 are in a slightly clayey sand. The percolation rate for P14 was 7.4 minutes/inch. What's the percolation rate for holes P9 and P13?

5. The trap in the sewer line between the trailer sewage receiving station bar screen sump and the septic tank must be removed.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

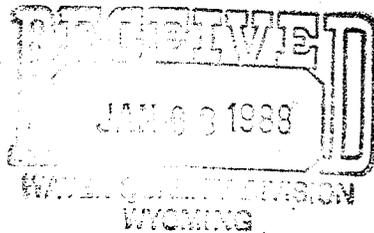
JH/jw



THE STATE

OF WYOMING

S33, T41N, R117W
Tet



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

December 30, 1987

Indian Paintbrush Homeowners Association
P.O. Box 500
Wilson, WY 83014

RE: "As-Built" Authorization for Indian Paintbrush No. 1 Domestic Well
(WQD Ref. No. 86-239RR)

Dear Sir:

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

Sincerely,

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

SPG/jw



Department of Environmental Quality

Air Quality Division
(307) 332-3144

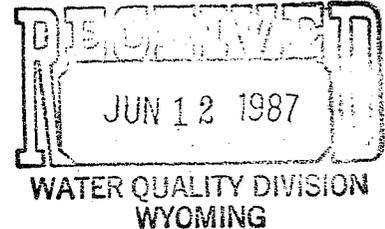
Land Quality Division
(307) 332-3047

Solid Waste Management Program
(307) 332-3144

Water Quality Division
(307) 332-3144

June 10, 1987

Jorgensen Engineering
P.O. Box 1142
Jackson, WY 83001



Dear Mr. Ablondi:

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 this proposed project is:

Facility Name: Indian Paintbrush #1 Domestic Well

DEQ/WQD Reference Number: 86-239

Engineering Consultant: Jorgensen Engineering

DEQ/WQD Review Engineer: Steven P. Gerber

Date of DEQ/WQD Review: 8-19-86

According to Chapter III of the Water Quality Rules and Regulations, Section 7 b. (2), "If an application is denied because of incompleteness necessitating a request for additional information, the applicant shall have a maximum of six months to comply with the request. If the applicant fails to provide the requested information within that period, the entire incomplete application shall be returned."

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

- The application will not be resubmitted as the proposed project has been cancelled.
- 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: _____



Department of Environmental Quality

Water Quality Division

210 LINCOLN STREET

LANDER, WYOMING 82520

TELEPHONE 307-332-3144

December 15, 1986

Jorgensen Engineering
P.O. Box 1142
Jackson, WY 83001

Dear Mr. Ablondi:

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 this proposed project is:

Facility Name: Indian Paintbrush No. 1 Domestic Well
 DEQ/WQD Reference Number: 86-239
 Engineering Consultant: Jorgensen Engineering
 DEQ/WQD Review Engineer: Steven P Gerber
 Date of DEQ/WQD Review: 8-19-86

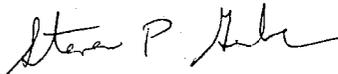
According to Chapter III of the Water Quality Rules and Regulations, Section 7 b. (2), "If an application is denied because of incompleteness necessitating a request for additional information, the applicant shall have a maximum of six months to comply with the request. If the applicant fails to provide the requested information within that period, the entire incomplete application shall be returned."

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

- _____ The application will not be resubmitted as the proposed project has been cancelled.
- _____ 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 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,



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

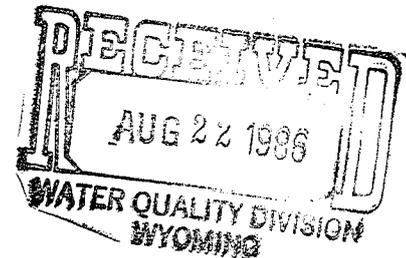
SG/jw

REVIEW OF PLANS AND SPECIFICATIONS

Norma

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144



PROJECT: Indian Paintbrush No. 1 Domestic Well

ENGINEER: Jorgensen Engineering
P.O. Box 1142
Jackson, WY 83001

OWNER: Indian Paintbrush Homeowners Association
P.O. Box 500
Wilson, WY 83014

WATER QUALITY DIVISION REFERENCE NUMBER: 86-239

REVIEWING ENGINEER: Steven P. Gerber, P.E. *SPG*

DATE OF REVIEW: August 19, 1986

ACTION: Not authorized.

COMMENTS:

A review of the above referenced project has been completed. The following items must be addressed and/or resolved before a permit can be issued:

1. Has the water system been previously permitted? If so what are the permit numbers. If not, then this permit cannot be issued until an as-built letter of authorization is issued for the entire system.
2. Provide flow data to demonstrate that the source will provide a combined capacity that will equal or exceed the design maximum daily demand.
3. The well must be disinfected after construction. Provide specifications which controlled the disinfection of the well.
4. Provide yield and drawdown test results. Provide specifications for the test methods. The test pump capacity must be 1.5 times the design rate, 75 gpm in this case. The test is to provide for continuous pumping for at least 24 hours or until stabilized drawdown has continued for at least 6 hours.
5. Plumbness and alignment is to be tested in accordance with AWWA A-100. Provide specifications to which these tests were performed.
6. The casing must extend to at least 18 inches above the ground surface.
7. Provide specifications that were used for the gravel pack material and installation.

8. Provide specifications of casing pipe utilized to insure it conforms to AWWA A-100.
9. Compute entrance velocity of water into the well through the screen to insure a velocity of .1 fps is not exceeded.
10. The screen is to be installed so that the pumping water level remains above the screen under all operating conditions.
11. Provide specifications for cement grout seal.
12. Provide specifications for well development.
13. Provide specifications on how well casing is to be sealed. The top of the casing shall be sealed against entrance of water under all conditions.
14. The discharge piping shall be provided with a means of pumping to waste but shall not be directly connected to a sewer.
15. A pitless unit shall be shop fabricated from the point of connection with the well casing to the unit cap or cover. Provide specifications.
16. Provisions shall be made for venting the well casing to atmosphere. The vent shall terminate in a downturned position, at or above the top of the pitless unit in a minimum $1\frac{1}{2}$ inch diameter opening covered with a 24 mesh corrosion-resistant screen.
17. Every well greater than 4 inches in diameter shall be equipped with an access port that will allow for the measurement of the depth to the water surface. An air line used for level measurement shall be provided.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

SG/jw

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PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-240R
(Ref. No. 85-143)
* CONDITIONS ON PERMIT *

Teton Pines Commercial Area Water and Sewer Extension
(Name of Facility)

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

JH Racquet Club Ltd. Partnership
Star Route Box 362A
Jackson, WY 83001

to construct, install, or modify a water and sewer line to serve the
commercial area and connect to Aspens water line

facility according to the procedures and conditions of the
application No. 86-240R. The facility is located in

Sec. 11, T41N, R117E

in the County of Teton,

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 dur-

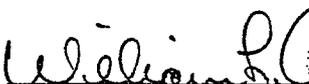
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

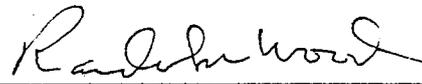
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State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


WILLIAM L. GARLAND
Administrator E. # 1479
Water Quality Division
STATE OF WYOMING
09-26-86
Date of Issuance


Director
Dept. of Environmental Quality

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

* CONDITIONS ON PERMIT *

1. A complete hydraulic analysis must be completed for both the Teton Pines and Aspens Water and Sewer District water systems within 4 weeks from the date this permit is issued.
2. The water system for the Aspens Water and Sewer District must be upgraded to comply with the DEQ Regulations within one year from the date this permit is issued.

norma

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144



PROJECT: Teton Pines Commercial Area Water & Sewer Extensions

ENGINEER: Jorgensen Engineering
P.O. Box 1142
Jackson, WY 83001

OWNER: JH Racquet Club Ltd. Partnership
Star Route, Box 362A
Jackson, WY 83001

WATER QUALITY DIVISION REFERENCE NUMBER: 86-240

REVIEWING ENGINEER: Steven P. Gerber, P.E. *SPG*

DATE OF REVIEW: August 19, 1986

ACTION: Not authorized.

COMMENTS:

A review of the above referenced project has been completed. The following items must be addressed and/or resolved before a permit can be issued:

1. In the future, all new applications must include a master plan that identifies all the construction previously permitted and the location of the water and sewer addition. This will allow me to keep the project in perspective.

2. Provide computations showing that the water main is adequately sized to provide the additional flow to the Aspens.

Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

SG/jw

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 86-241
~~* CONDITION ON PERMIT *~~ PBL

Tenneco Monitoring Wells
 (Name of Facility)

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

Tenneco Minerals
P.O. Box 1167
Green River, WY 82935

to construct, install, or modify a series of monitoring wells to monitor
contamination from a tailings pond

facility according to the procedures and conditions of the
application No. 86-241. The facility is located in
Sec. 31, T18N, R109W

in the County of Sweetwater,

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 dur-

ing 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, Wyoming 82520; telephone, 332-3144.

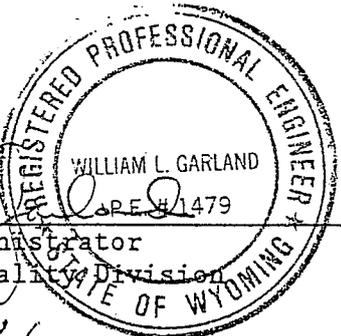
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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
STATE OF WYOMING



8-26-86
Date of Issuance



Director
Dept. of Environmental Quality

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



THE STATE

OF WYOMING



Department of Environmental Quality

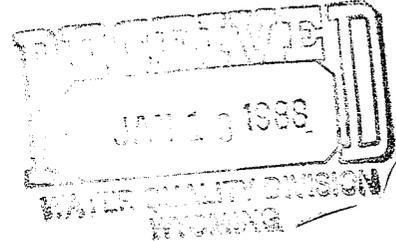
Air Quality Division
(307) 332-3144

Land Quality Division
(307) 332-3047

Solid Waste Management Program
(307) 332-3144

Water Quality Division
(307) 332-3144

March 13, 1987



Mr. Charles V. King
Star Valley Ranch Association
P.O. Box 159
Thayne, WY 83127

RE: Relocation of Prater Canyon Supply Line, WQD Ref. No. 86-242R

Dear Mr. King:

A review of the above referenced as-built plans and specifications has been completed by this office. The as-builts appear to be in compliance with the State of Wyoming minimum design standards for water systems. Because this facility has already been constructed, a permit to construct cannot be issued. Therefore, please maintain a copy of this letter in your files as proof that the facility has been accepted by this department.

Sincerely,

Bill Locke, P.E.
Water Quality Engineer

BL/jw

REVIEW OF PLANS AND SPECIFICATIONS
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: Relocation of Prater Canyon Supply Line

ENGINEER: Charles V. King
925 E. Executive Park Dr.
Salt Lake City, UT 84107

OWNER: Star Valley Ranch Association
P.O. Box 159
Thayne, WY 83127

WATER QUALITY DIVISION REFERENCE NUMBER: 86-242

REVIEWING ENGINEER: Bill Locke, P.E. *BL*

DATE OF REVIEW: August 15, 1986

ACTION: Not authorized.

REMARKS:

A preliminary review of the above referenced plans and specifications has been completed. The following items must be addressed before a letter of acceptance will be issued:

1. An unsigned application form must be included in the package.
2. Is there a fitting located at STA 0+00? Please provide details of the two connections to the existing line.
3. Please provide documentation that the water line was installed (trenching, bedding, backfill) per AWWA and manufacturers standards. Also document that the pipe was pressure and leakage tested as well as disinfected in accordance with the specific AWWA standards.
4. It appears that the creek crossing is in excess of 15 feet in width. If this is the case please document that a minimum of two feet of cover was provided over the pipe and that the pipe was of special construction, having flexible water tight joints. Valves should have been provided at both ends of the creek crossing so that the section can be isolated for repair.
5. Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference Number that appears on this review sheet in cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

BL/jw

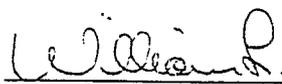
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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, Wyoming 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.

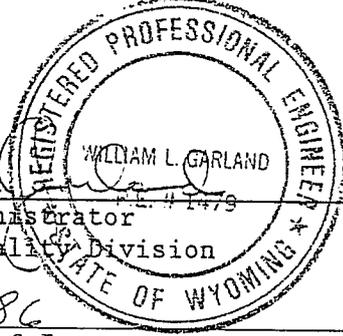
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

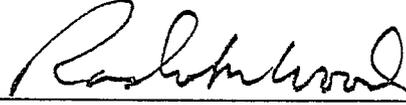
AUTHORIZED BY:



Administrator
Water Quality Division
8-26-86

Date of Issuance





Director
Dept. of Environmental Quality

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



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

October 22, 1987

Star Valley Ranch Association
ATTN: Mr. Vern Bloxham
P.O. Box 159
Thayne, WY 83127

RE: Star Valley Ranch Flow Metering Stations, WQD No. 86-244R

Dear Mr. Bloxham:

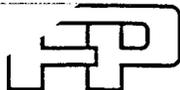
I have completed reviewing the as-built drawings for the Green and Prator Canyon water metering stations and find them to be in compliance with the minimum design standards for the State of Wyoming. A permit to construct cannot be issued because these improvements have already been completed. Therefore, please retain a copy of this letter and attached plans in your file as documentation that the improvements have been accepted by this department.

Sincerely,

Bill Locke, P.E.
Water Quality Engineer

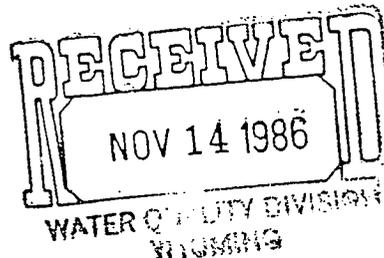
BL/jw
cc: Charles V. King

ARCHIVES



86-245
cc Archives

FORSGREN-PERKINS ENGINEERING, p.a.



November 11, 1986

Mr. Bill Locke
Wyoming Department of Environmental Quality
Water Quality Division
210 Lincoln
Lander, WY 82520

RE: North Afton Water District - Water System Improvements - #86245

Dear Bill:

Please find enclosed the results of radiological water analysis on the four springs that will be supplying the North Afton water system. We are forwarding these as promised.

The information on the existing well is being collected by the Lincoln County School District No. 2, the owner of the well, and will be forwarded to you as soon as it is available.

If there are any questions, please feel free to contact me.

Very truly yours,

FORSGREN-PERKINS ENGINEERING

Dean P. Jamison, P.E.
Project Engineer

ccp

Enclosure

Litton

Core Lab

23-SEP-86

PAGE 1 OF 1

FORSGREN-PERKINS ENGINEERING

350 NORTH 2ND EAST
REXBURGH ID 83440
DEAN JAMISON

JOB: 860956
CHEMIST: DLD
LOCATION: CASPER RADIOCHEM

NORTH AFTON SPRING WATER PROJECT

SMPL NO.	SAMPLE ID.	GROSS A PCI/L	ERROR PCI/L	LLD PCI/L	GROSS B PCI/L	ERROR PCI/L	LLD PCI/L
956-1	SPRING 1	0.0	2.0	1.2	0.0	1.9	1.0
956-2	SPRING 2	0.0	1.3	1.0	0.0	1.4	1.0
956-3	SPRING 3	1.4	2.0	1.0	1.0	1.6	1.0
956-4	SPRING 4	0.4	1.9	1.0	0.3	1.6	1.0

PERMIT TO CONSTRUCT

9-15
nc

New

Permit No. 86-245R

Renewal

Modified

North Afton Water Improvements

(Name of Facility)

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

North Afton Water and Sewer District

Route 1

Afton, WY 83110

to construct, install, or modify a develop four springs, 600,000 gallon water

storage reservoir, transmission and distribution lines

facility according to the procedures and conditions of the

application No. 86-245R. The facility is located in

Sec. 19, T32N, 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 dur-

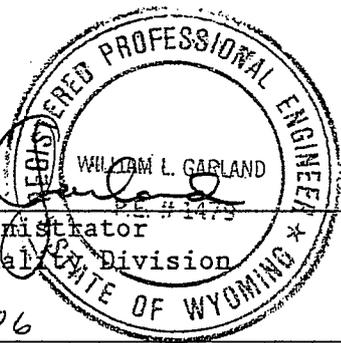
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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, Wyoming 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:


William L. Garland
Administrator
Water Quality Division
9-15-86
Date of Issuance

Randolph W. Wood
Director
Dept. of Environmental Quality

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

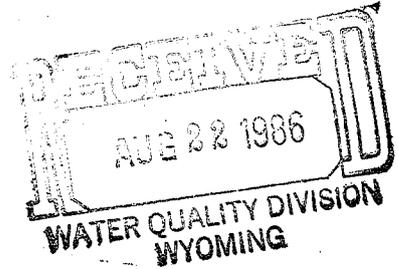
Norma

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER QUALITY DIVISION
210 LINCOLN
LANDER, WYOMING 82520
PHONE: (307) 332-3144

PROJECT: North Afton Water Improvements
ENGINEER: Winston R. Dyer
Forsgren-Perkins Engineering
75 Yellow Creek Rd., Suite 302
Evanston, WY 82930
OWNER: North Afton Water & Sewer District
Route 1
Afton, WY 83110



WATER QUALITY DIVISION REFERENCE NUMBER: 86-245

REVIEWING ENGINEER: Bill Locke, P.E. *BL*

DATE OF REVIEW: August 20, 1986

ACTION: Not authorized.

COMMENTS:

A preliminary review of the above referenced plans and specifications has been completed. The following items must be addressed before a permit to construct will be issued:

1. The school well to be retrofitted must be equipped with disinfection equipment and connections as a minimum per Wyoming Water Quality Rules and Regulations (WWQRR), Chapter XII, Section 8C.
2. As-built drawings and material specifications are required for the existing school well. Well log completion reports would also be helpful.
3. A chemical radiological and bacteriological water analysis is required for the springs and the existing well.
4. Confirm that the polyethelyene pipe specified conforms to AWWA C901.
5. A minimum vertical water and sewer separation of 1.5 feet must be specified where horizontal separation is less than 10 feet.
6. Please provide the subsurface soils investigation supporting the foundation design and loading parameters for the concrete storage tank.
7. WWQRR, Chapter XII, Section 14h requires special construction having flexible watertight pipe joints and isolation valves on both sides of the crossing.
8. Please confirm that the tank disinfection conforms to AWWA D105.

Review of Plans & Specs.

Ref. No. 86-245

Page Two

9. Please resubmit the required information to this office in triplicate. Be sure to include the Water Quality Reference number that appears on this review sheet in a cover letter or transmittal sheet. Should you have any questions or comments, please contact this office.

BL/jw

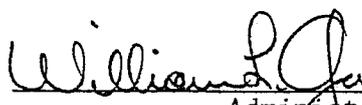
ing working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

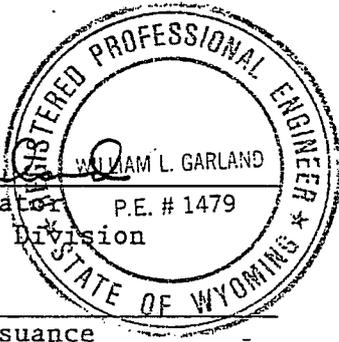
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 210 Lincoln, Lander, Wyoming 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
9-25-86
Date of Issuance




Director
Dept. of Environmental Quality

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

* CONDITIONS ON PERMIT *

1. No hazardous wastes as defined by the U.S. EPA or State of Wyoming shall be placed in this facility. All drilling fluids, reserve pit fluids and produced water may be disposed of in this facility.
2. Operator records or log must be kept on each load brought to the facility including the hauler's name, source of load, oilfield operator, wastewater composition, and volume of wastewater. These records shall be retained for inspection by DEQ/WQD personnel as needed.
3. The monitoring wells shall be monitored on a monthly basis. If fluid is found in the monitoring system it shall be reported immediately and then have the fluids analyzed for TDS and Cl. The results of all groundwater monitoring and analysis shall be submitted to: Tony Mancini, DEQ/WQD, Herschler Building, 122 W. 25th Street, Cheyenne, Wyoming, 82002 within 30 days following each sampling event.
4. If fluids are detected in the monitoring wells, disposing of fluids into the facility must stop immediately. Before the facility can be used again it must be determined that the fluid in the monitoring wells is not from the pond. If the fluid is found to be wastewater, use of the facility shall be discontinued until the DEQ/WQD is satisfied that a threat to groundwater does not exist. All investigative or mitigative measures must be accepted by DEQ/WQD.
5. The DEQ/WQD shall be contacted prior to the reclamation of this facility. The method of reclamation must be accepted by this department.

horma

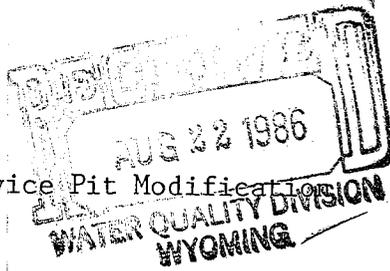
MEMORANDUM

TO: Plans; #86-246

FROM: Steve Gerber *SG*

SUBJECT: Phone Review for Oilfield Disposal Service Pit Modification

DATED: August 20, 1986



I talked to Dale Camack on the above referenced submittal. I told Dale that we would issue the permit when the following is accomplished:

1. When the data on the monitor wells is submitted per the conditions of an earlier permit.
2. A monitoring and record keeping system is established for the monitor wells.

SG/jw



Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

MEMORANDUM

TO: File

FROM: *AJM* A J Mancini

DATE: August 18, 1986

SUBJECT: Application for modification (86-246), Oilfield Disposal Service Pit #1 to dispose of all drilling fluids and reserve pit fluids

Discussed with Steve Gerber and Jake Strohman this date. No objections to requested modification.

Permittee should submit required information on monitoring network as soon as possible and not wait for "90 days after well completion" (85-617). Permittee should submit this information to WQD before next disposal of drilling fluids and reserve pit fluids, if possible, and begin active program of monitor network inspection and record keeping.

(Gave this information to Steve Gerber by phone 8-18-86, 9:00 am.)

pjb

cc: Steve Gerber

✓
nc

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 86-247R

RAWHIDE MINE SWIFT FOX RESERVOIR
(Name of Facility)

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

The Carter Mining Company

P.O. Box 3007

Gillette, Wyoming 82716

to construct, install, or modify a sediment pond facility according to the procedures and conditions of the application No. 86-247R. The facility is located in Section 15, T.51N., R.72W., 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 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.

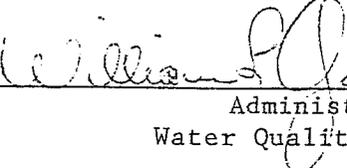
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions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

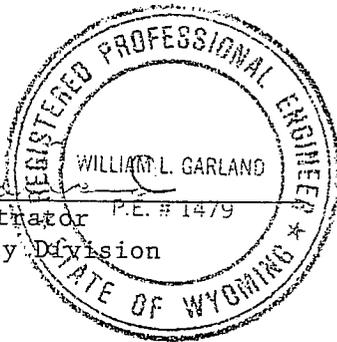
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: District Engineer, State of Wyoming, Department of Environmental Quality, Water Quality Division, 2161 Coffeen Avenue, Suite 601, Sheridan, Wyoming 82801; telephone, 672-6457.

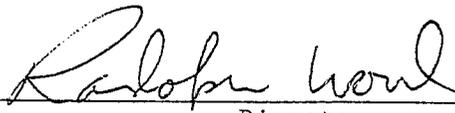
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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 P.E. # 1479
Water Quality Division




Director
Department of Environmental Quality

08-29-86

Date of Issuance

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

NORMA

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVE., SUITE 601
SHERIDAN, WYOMING 82801

PROJECT: Rawhide Mine Swift Fox Reservoir

ARCHITECT OR ENGINEER: Tom Peterson
The Carter Mining Company
P.O. Box 3007
Gillette, Wyoming 82716

WATER QUALITY DIVISION
REFERENCE NUMBER: 86-247

REVIEWING ENGINEER: Rich Ruyle *RR*

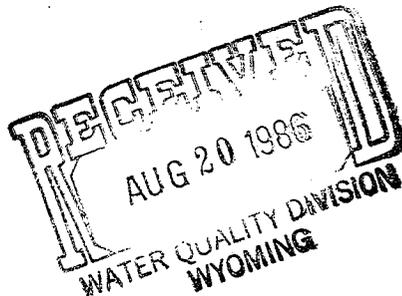
DATE OF REVIEW: August 18, 1986

ACTION: Not Authorized

COMMENTS:

A cross-section view of the pond is needed on the plans. This is used to verify the dike slopes, pond elevations, and capacity.

xc: Bob Giurgevich



8-27 ✓
KCC

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 86-248

CITY OF SHERIDAN, AVOCA STREET WATER LINE
 (Name of Facility)

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

City of Sheridan

P.O. Box 848

Sheridan, Wyoming 82801

to construct, install, or modify a water distribution line facility according to the procedures and conditions of the application No. 86-248. The facility is located in Section 35, 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.

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.

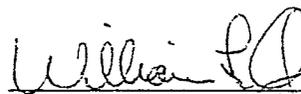
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions 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, 2161 Coffeen Avenue, Suite 601, Sheridan, Wyoming 82801; telephone, 672-6457.

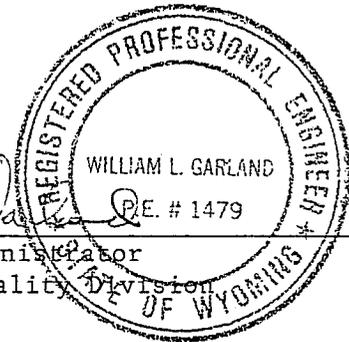
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

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
STATE OF WYOMING





Director
Department of Environmental Quality

8-26-86

Date of Issuance

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

file
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no

PERMIT TO CONSTRUCT

New
 Renewal
 Modified

Permit No. 86-249R
SEE CONDITIONS ON BACK
Ref. NO. 85-603

Catherdral Home for Children
(Name of Facility)

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

Cathedral Home for Children

P.O. Box E

Laramie, WY 82070

to construct, install, or modify a commercial subsurface wastewater treatment and disposal facility according to the procedures and conditions of the application No. 86-249R. The facility is located in SW1/4 Section 16, T16N, R73W in the County of Albany, in the State of Wyoming. This permit shall be effective until October 30, 1986.

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.

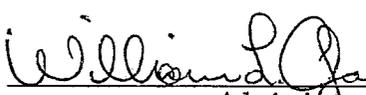
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions 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, Herschler Building, 122 W. 25th, Cheyenne, Wyoming 82002; telephone, 777-7781.

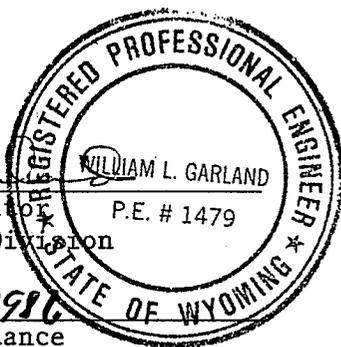
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation.

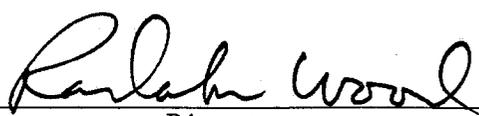
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

AUTHORIZED BY:



Administrator
Water Quality Division





Director
Dept. of Environmental Quality

September 9, 1986
Date of Issuance

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

Conditions to Permit to Construct No. 86-249R

1. The intent of the construction authorized by this permit is to provide facilities for the interim treatment of wastewater until such time that treatment is available through a regional wastewater system. The Laramie Step I Wastewater Facility Plan requires that treatment be provided through a regional system. The facilities authorized by this permit will be operated until August 1, 1987 or until services are available through the approved regional system, whichever is sooner. These facilities will then be abandoned or integrated into the regional system in accordance with the requirements of the Facility Plan, unless the City of Laramie and Albany County jointly authorize an additional three year extension.
2. The permittee shall notify Albany County Planning Office, 405 Grand Avenue, Laramie, Wyoming 82070, phone number 721-5288, of the estimated day of completion of this project. Inspection of the installed system is required prior to back-filling.
3. The system shall be constructed and operational by October 30, 1986.

cc: Donald Lamb, Associated Engineers, 609 South 2nd, Laramie, WY 82070
Albany County Planning Office, 405 Grand Ave., Laramie, WY 82070

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
Herschler Building, 4 West, 122 West 25th
Cheyenne, Wyoming 82002

PROJECT: Cathedral Home for Children Wastewater System

ARCHITECT OR ENGINEER: Don Lamb, Associated Engineers
609 S. 2nd, Laramie, WY 82070

APPLICANT: Cathedral Home for Children
P.O. Box E, Laramie, WY 82070

WATER QUALITY DIVISION REFERENCE NUMBER: 86-249

REVIEWING ENGINEER: *TSN* Thomas S. Norman

DATE OF REVIEW: August 20, 1986

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

- 1. Alarms were not shown for the pump station.
- 2. The pressurized sewer line should be allowed to drain to prevent freezing.
- 3. The pumps must be able to be removed without entering the wet well.
- 4. The electrical controls must meet NEC for Class 1, Group D, Division 1 location.

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THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

August 11, 1986

Alvin F. Bastron
Wyoming Recreation Commission
Herschler Building
Cheyenne, WY 82002

RE: Permit to Construct Application Number 86-250; Ref.No. 79-80

Dear Mr. Bastron:

The Department of Environmental Quality, Water Quality Division, has reviewed your application (86-250) for a permit to construct a publicly-owned septic system for the Hynds Lodge at NW 1/4, SE 1/4, S8, T14N, R70W. 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 permittee in the exercise of its 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 Hynds Lodge Sewer System 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 wastewater system, you must apply for a permit to construct prior to construction to avoid enforcement action.

Sincerely,

William L. Garland
Administrator

WLG/TSN/pjb

