4-9 JN

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-101
MA 14699

EAGLE BUTTE MINE SEDIMENT EB106 RESERVOIR
(Name of Facility)

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

AMAX Coal Company

P.O. Box 3005

Gillette, Wyoming 82716

to construct, install, or modify a flood and sediment control facility according to the procedures and conditions of the application No. 85-101. The facility is located in Sec. 21, 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 301, 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:

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

William L. Garland
Administrator
Water Quality Division

April 29, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

xc: Frank K. Ferris
2000 Knollwood Drive
Gillette, Wyoming 82716

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-102
MA 14699

EAGLE BUTTE MINE SEDIMENT EB107 RESERVOIR
(Name of Facility)

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

AMAX Coal Company

P.O. Box 3005

Gillette, Wyoming 82716

to construct, install, or modify a flood and sediment control

facility according to the procedures and conditions of the application No. 85-102. The facility is located in Sec. 28, 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 301, 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:

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

William P. Garland
Administrator
Water Quality Division

April 2, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER ★ ROBERT E. SUNDIN NO. 285 ★ STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

xc: Frank K. Ferris
2000 Knollwood Drive
Gillette, Wyoming 82716

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-103R
MA 1454Z

JACOBS RANCH MINE SEDIMENT POND NO. 7-3 RESERVOIR
(Name of Facility)

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

Kerr-McGee Coal Corporation

Caller Box 3013

Gillette, Wyoming 82716

to construct, install, or modify a sedimentation facility

facility according to the procedures and conditions of the application No. 85-103R. The facility is located in Sec. 7, T.43N., R.69W.

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 301, 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:

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

William L. Garland
Administrator
Water Quality Division

April 18, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: Doyl Fritz
Western Water Consultants
P.O. Box 3042
Sheridan, WY 82801

JN

PERMIT TO CONSTRUCT

[x] New

[ ] Renewal

[ ] Modified

Permit No. 85-104R
MA 14542

JACOBS RANCH MINE SEDIMENT POND NO. 12-1 RESERVOIR
(Name of Facility)

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

Kerr-McGee Coal Corporation

Caller Box 3013

Gillette, Wyoming 82716

to construct, install, or modify a sedimentation

facility according to the procedures and conditions of the application No. 85-104R. The facility is located in Sec. 12, T.43N., R.70W.

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 301, 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:

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

William R. Garland
Administrator
Water Quality Division

April 18, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: Doyl Fritz
Western Water Consultants
P.O. Box 3042
Sheridan, WY 82801

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-105R
MA 1454a

JACOBS RANCH MINE SEDIMENT POND NO. 12-2 RESERVOIR
(Name of Facility)

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

Kerr-McGee Coal Corporation

Caller Box 3013

Gillette, Wyoming 82716

to construct, install, or modify a sedimentation

facility according to the procedures and conditions of the application No. 85-105R. The facility is located in Sec. 12, T.43N., R.70W.

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 301, 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:

REGISTERED PROFESSIONAL ENGINEER * WILLIAM L. GARLAND * PE # 1479 * STATE OF WYOMING

William L. Garland
Administrator
Water Quality Division

April 18, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER * ROBERT E. SUNDIN NO. 285 * STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: Doyl Fritz
Western Water Consultants
P.O. Box 3042
Sheridan, WY 82801

Norma

RECEIVED
APR - 1 1985
WATER QUALITY DIVISION
WYOMING

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVE., SUITE 301
SHERIDAN, WYOMING 82801

PROJECT:	Jacobs Ranch Mine, Sediment Ponds Nos. 12-1, 12-2, 7-3
ARCHITECT OR ENGINEER:	Doyl Fritz Western Water Consultants P.O. Box 3042 Sheridan, Wyoming 82801
WATER QUALITY DIVISION REFERENCE NUMBERS:	85-103, 85-104, and 85-105
REVIEWING ENGINEERS:	Susan Holmes, Rich Ruyle
DATE OF REVIEW:	March 28, 1985
ACTION:	Not Authorized

COMMENTS:

1.) Because Pond No. 12-1 will receive pit water, it will have to be identified as an NPDES discharge point and provisions must be included for flow monitoring.

2.) Materials and construction specifications are required for the embankment on Pond No. 12-1.

3.) Riprap is required on the inside face of the embankment of Pond No. 12-1 unless justification is provided that excessive erosion will not occur.

4.) There is a discrepancy in the elevation shown on cross-section A-A' and B-B' for the 1-year sediment storage level.

5.) Riprap or other erosion protection should be provided at the containment ditches as they enter Pond No. 12-2.

85-103
thru
85-105

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

March 6, 1985

Darrel Manunder
Kerr-McGee Coal Corporation
Caller Box 3013
Gillette, WY 82716

Dear Mr. Manunder:

As per our conversation on March 6, 1985, please send me any analytical data derived from the sampling of pit water at the Jacobs Ranch Mine.

If you have any questions, feel free to call me at 307-777-7084.

Sincerely,

Matt Langenfeld

Matthew M. Langenfeld
Groundwater Compliance Specialist

MML/pjb

Returned to Stanton 3-11-85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-103

DATE SUBMITTED FOR REVIEW March 1, 1985

NAME AND LOCATION OF FACILITY Jacobs Ranch Mine
Sediment Pond No. 7-3 Reservoir,
Sec. 7, T. 43 N., R. 69 W.;
Campbell County

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Matt Langenfeld

TITLE Groundwater Compliance Specialist

DATE 3/8/85

ACCEPTED FOR RECORD 3/8/85 (Date)

ajm
Groundwater Control Supervisor

Reviewed under supervision of AJM, PE #1803

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-104

DATE SUBMITTED FOR REVIEW March 1, 1985

NAME AND LOCATION OF FACILITY Jacobs Ranch Mine
Sediment Pond No. 12-1 Reservoir,
Sec. 12, T. 43N., R. 70W.;
Campbell County

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Matt Langenfeld

TITLE Groundwater Compliance Specialist

DATE 3/8/85

ACCEPTED FOR RECORD 3/8/85 (Date)

AJM
Groundwater Control Supervisor

Reviewed under supervision of AJM, PE #1803

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-105

DATE SUBMITTED FOR REVIEW March 1 1985

NAME AND LOCATION OF FACILITY Jacobs Ranch Mine
Sediment Pond No 12-2 Reservoir
Sec. 12, T. 43N., R. 70W.
Campbell County

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Matt Langenfeld

TITLE Groundwater Compliance Specialist

DATE 3/8/85

ACCEPTED FOR RECORD 3/8/85 (Date)

AJM
Groundwater Control Supervisor

Reviewed under supervision of ASM, PE # 1803

MEMORANDUM

TO: Rich Ruyle

THROUGH: A. J. Mancini

FROM: Matthew M. Langenfeld

DATE: March 11, 1985

SUBJECT: Groundwater Review of Jacobs Ranch Mine Sediment Ponds, DEQ/WQD Ref. No. 85-103 thru 85-105

Enclosed with the groundwater review of the proposed Jacobs Ranch Mine Sediment Ponds is the information requested on March 6, 1985. The submittal is consistent with the current groundwater protection procedures and requirements.

Sediment pond 12-1 will require an NPDES permit in the future.

cc: John Wagner

3-1-85

PERMIT TO CONSTRUCT

/X/ New

/X/ Renewal (83-559)

/ / Modified

Permit No. 85-106
SEE CONDITIONS ATTACHED TO THIS PERMIT
MA 14542

Hyrum Ditch 11X-26 and 31X-26
(Name of Facility)

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

FMC Corporation

City Center 4, Suite 2720

1801 California Street

Denver, CO 80202

to construct, install, or modify a produced water disposal facility according to the procedures and conditions of the application No. 85-106. The facility is located in Section 26, T26N, R113W in the County of Lincoln, in the State of Wyoming. This permit shall be effective for a period of one 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.

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:

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

Administrator
Water Quality Division

February 25, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

This permit <u>does not</u> supercede the requirements for obtaining any permit from local agencies.

This permit authorizes you to dispose of 238 gallons of produced water on the adjoining access roads every 10 days not to exceed a total liquid application of 4.0 inches.

CONDITIONS TO PERMIT TO CONSTRUCT NO. 85-106

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 defineable high water mark of perennial and intermittent drainages, irrigation canals, lakes and reservoirs.

8-1-85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-107R

DATE SUBMITTED FOR REVIEW 4-24-85

NAME AND LOCATION OF FACILITY Chevron Slurry Pipeline Pump Station Sec. 15, T15N R 105W Sweetwater County

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Kate Lauden

TITLE Engineer Evaluator

DATE 4-31-85

ACCEPTED FOR RECORD 7/31/85 (Date)

AJM
Groundwater Control Supervisor

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: Jack Bedessem, Southwest District Supervisor

FROM: Kate Laudon, Groundwater Engineering Evaluator KJL

DATE: July 31, 1985

SUBJECT: Groundwater Review Chevron Slurry Pipeline DEQ/WQD Ref. No. 85-107R

Chevron has submitted documentation of the construction of three monitor wells and a french drain associated with their phosphate slurry pump station. This information was submitted at our request after a site inspection on June 5, 1985.

Subsurface information submitted in support of the initial permit application indicated that groundwater occurred 10-12 feet below the bottom of the lowest pond. During construction, groundwater was encountered while excavating two of the ponds, and a french drain was installed to direct the groundwater away from the two ponds. The development of a subsurface monitoring plan was required as a condition to the original permit to construct. At the time the permit was issued, we had not received an analysis of the water to be stored in the passive water pond.

All of the information required by the permit to construct, and in your May 23, 1985 letter is included in this latest submittal. Chevron has provided water quality analyses from the three monitor wells, as well as two analyses of tailings water from their Vernal, Utah plant. This tailings water will be stored in the passive water pond at the pump station. Permeability data on the liner of the passive water pond show it to consist of 1.5 to 2.0 feet of sandy clay with scattered gravel in 4 out of 5 samples collected. Permeabilities are relatively high ranging from 2.4×10^{-5} cm/sec to 7.9×10^{-8} cm/sec. These permeabilities do not meet the design specifications authorized by the permit to construct.

Considering the existing groundwater conditions at the site, and the high permeability of the soil liner in the passive water pond, Chevron should be required to either install a membrane liner in the passive water pond, or rework the existing soil liner to bring it up to specifications.

With respect to groundwater monitoring, an additional round of background samples should be collected from each well to document background conditions. Once the ponds become operational, the wells should be monitored quarterly for the list of indicator parameters as well as the selected compliance parameters. The proposed threshold concentrations which would be used to determine seepage appear to be too high. This point can be reconsidered once background water quality has been established.

The gross alpha and gross beta numbers that you read to me over the phone seem unusually high for background conditions. These values should be verified, and the samples should be analyzed for uranium and radium 226. If uranium or radium is present in significant quantities, this would explain the gross alpha measurements, and may affect the use suitability of the groundwater.

KL/nc

PERMIT TO CONSTRUCT

/XX/ New

/ / Renewal

/ / Modified

Permit No. 85-107R

CONDITIONS ON PERMIT
MA 14542

Chevron Slurry Pipeline Pump Station
(Name of Facility)

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

Chevron Chemical Company

505 Broadway

Rock Springs, WY 82901

to construct, install, or modify a emergency spill pond, active water pond (80 mil HDPE Liner) and passive water pond (clay-soil liner) facility according to the procedures and conditions of the application No. 85-107R. The facility is located in Sec. 15, T15N, R105W 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:

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

William L. Garland
Administrator
Water Quality Division

May 10, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER * ROBERT E. SUNDIN NO. 285 * STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

* CONDITIONS ON PERMIT *

1. From the hydrogeological information submitted, it appears that seasonal groundwater is present a minimum of 12 feet beneath the bottom of the unlined emergency pond. A subsurface monitoring program, acceptable to the DEQ/WQD must be submitted for review and implemented before the facility can be put into operation.

2. This office has received only estimations of the slurry water quality to be discharged into the emergency spill pond. Once the facility begins operation a sample representative of that water quality shall be collected. The sample shall be analyzed for the parameter listed in Chapter VIII Rules and Regulations and the results submitted to this department.

Norma; Please return plans to J.B. 5/2/85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-107R

DATE SUBMITTED FOR REVIEW 4-29-85

NAME AND LOCATION OF FACILITY Chevron Phosphate Slurry Pipeline Pump Station Waste Water Ponds Section 15 T15N R105W Sweetwater County

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Kate Lauder

TITLE Engineer Evaluator

DATE 5-1-85

ACCEPTED FOR RECORD 5/1/85 (Date)

GJM
Groundwater Control Supervisor

MEMORANDUM

TO: Jack Bedessem, Southwest District Supervisor

FROM: Kate Laudon, Groundwater Engineering Evaluator KL

DATE: April 30, 1985

SUBJECT: Groundwater Review, Chevron Slurry Pipeline Pump Station Wastewater Ponds, DEQ/WQD Ref. No. 85-107R

Chevron has applied to construct three ponds at the booster pump station on their phosphate slurry line located in Section 15, T15N, R015W, Sweetwater County.

In response to your initial review comments, Chevron has presented borehole data that indicate that shallow groundwater exists at the site. The plans show the bottom of the emergency spill pond constructed at an elevation of 6470 feet. Groundwater was encountered in one of the boreholes at an elevation of 6469. If significant seasonal variation occurs at this site, the high groundwater level could approach the bottom of the lowest pond.

Before the ponds are constructed, one or more monitor wells should be installed, and background water quality should be determined. A monitoring schedule should be established after the various water qualities have been determined, based on the operation of the ponds.

Chevron has provided a sample water quality analysis of the tailings water that will be used to slurry the phosphate ore. This may not be representative of the quality of the water that would be discharged to the emergency spill pond. Chevron should submit an analysis of the water quality of the slurry water in addition to the active water and passive water samples you have requested.

KL/nc

REVIEW OF PLANS AND SPECIFICATIONS

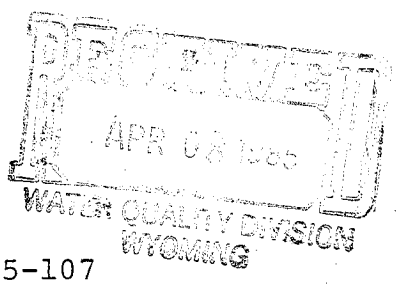
WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Chevron Booster Pump Station Ponds

ENGINEER: Mazin Al-Muffi
Bechtel
50 Beale
San Francisco, CA 94119

OWNER: Chevron Chemical Co.
505 Broadway
Rock Springs, WY 82501



WATER QUALITY DIVISION REFERENCE NUMBER: 85-107

EVALUATOR:
REVIEWING ~~ENGINEER~~: Jack Bedessem JB

DATE OF REVIEW: April 3, 1985

ACTION: **Not authorized.**

COMMENTS:

An initial review of the application and plans has been completed. As discussed with Bill Bigley (Chevron-San Francisco) the following items need to be addressed and/or resolved:

1. Information is needed as to the shallowest most groundwater in the area of the ponds.

2. Three sets of construction plans and specifications, signed by a registered Wyoming Professional Engineer, need to be submitted with the application.

(a) Include details of inlet and outlet structures.

(b) Include details, material and installation specifications for the pond liner(s).

(c) The specifications shall include the requirement--Written certification that the earthwork was completed and liners were installed in accordance with the specifications shall be provided to this office by a Wyoming Professional Engineer, independent soils firm and/or liner manufacturer.

3. Information is needed as to the soils to be used in lining the passive water pond and constructing the emergency slurry pond. (i.e. permeability, compaction, compatability to water quality, etc.)

AC

4. Address erosion protection of embankments due to runoff and wave action. (rip-rap)

5. Information is needed as to the quality of water which will be introduced to the passive and active water ponds. Supply a water quality analyses.

Submit the required information to this office in triplicate. If you have any questions please feel free to contact me.

4-18

PERMIT TO CONSTRUCT

[X] New

[ ] Renewal

[ ] Modified

Permit No. 85-108
MA 14542

Century West Subdivision-Cypress Circle
(Name of Facility)

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

Pacific Power & Light Co.

920 S.W. Sixth Ave.

Portland, OR 97204

to construct, install, or modify a 6 inch water line

facility according to the procedures and conditions of the application No. 85-108. The facility is located in Sec. 14, T19N, R105W 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:

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

William L. Garland
Administrator
Water Quality Division

April 4, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

4-13

PERMIT TO CONSTRUCT

/x/ New

/ / Renewal

/ / Modified

Permit No. 85-109
MA14542

Exxon LaBarge Project Field Dehydration Evaporation Pond
(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 36 mil hypalon lined evaporation pond which will receive wash down water, wastewater from water treatment system facility according to the procedures and conditions of the application No. 85-109. The facility is located in Sec. 35, T28N, R114W 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.

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:

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

Administrator
Water Quality Division

April 11, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

This permit <u>does not</u> supercede the requirements for obtaining any permit from local agencies.

Norma, return plans to Lander
4-11-85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-109

DATE SUBMITTED FOR REVIEW 3-8-85

NAME AND LOCATION OF FACILITY Exxon La Barge Project
Field Dehydration Facility Evap Pond
Sec 35 T28N R114W
Sublette County

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

(X) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

( ) Comments attached.

SIGNED Kate Lauder

TITLE Engineer Evaluator

DATE 4-11-85

ACCEPTED FOR RECORD 4/11/85 (Date)

gjm
Groundwater Control Supervisor

Norma

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

210 LINCOLN STREET LANDER, WYOMING 82520 TELEPHONE 307-332-3144

January 24, 1986

City of Riverton
P.O. Box 1700
Riverton, WY 82501

RE: Permit No. 85-110R

Gentlemen:

Your application for a permit to construct has been authorized in accordance with the Water Quality Division Rules and Regulations. A copy of the project plans and specifications has been stamped and signed by this department to indicate that it is an authorized copy. These plans and specifications, which must be adhered to during construction, have been sent to your engineer.

The permittee is required to notify this office of the day construction commences along with an estimate of the duration of the project.

Carefully review the permit since it contains important information regarding responsibilities and liabilities and may also include special conditions that must be followed. It is the applicant's responsibility to insure that the facility is constructed in accordance with the authorized plans and specifications. It is a violation of the regulations, punishable by fine, to construct, install, or modify any facility in non-compliance with the terms and conditions of an issued permit.

There can be cases where unforseen circumstances or conditions cause a need to deviate from the authorized plans and specifications. In these cases, a new or amended application must be submitted to obtain modification of the permit. No modification shall be implemented until a new or modified permit has been issued or a waiver granted. All permit modification and waiver requests must be directed to this office by your engineer.

Please feel free to contact this office if you have any questions concerning your permit or what your responsibilities are regarding construction or any proposed modifications.

Sincerely,

Steven P. Gerber

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

SG/jw

PERMIT TO CONSTRUCT

/ XX / New

/ / Renewal

/ / Modified

Permit No. 85-110R

Rein Park
(Name of Facility)

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

City of Riverton

P.O. Box 1700

Riverton, WY 82501

to construct, install, or modify a six and eight inch water main

facility according to the procedures and conditions of the application No. 85-110R. The facility is located in Sec. 33, T1N, R4E, WRM in the County of Fremont, in the State of Wyoming. This permit shall be effective for a period of two (2) years (five (5) years maximum) from the date of issuance of this permit.

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

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

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

The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and 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:

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

Administrator
Water Quality Division

January 13, 1986
Date of Issuance

Director
Dept. of Environmental Quality

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

Norma

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

210 LINCOLN STREET LANDER, WYOMING 82520 TELEPHONE 307-332-3144

December 17, 1985

CERTIFIED P 399 271 402

Mr. Brad Nelson
City of Riverton
P.O. Box 1700
Riverton, WY 82501

Dear Gentlemen:

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

Facility Name: Rein Park

DEQ/WQD Reference Number: 85-110

Engineering Consultant: Cardinal Engineering Co.

DEQ/WQD Review Engineer: Steve Gerber

Date of DEQ/WQD Review: March 8, 1985

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.
Water Quality Engineer

SG/jw

Okay

REVIEW OF PLANS AND SPECIFICATIONS

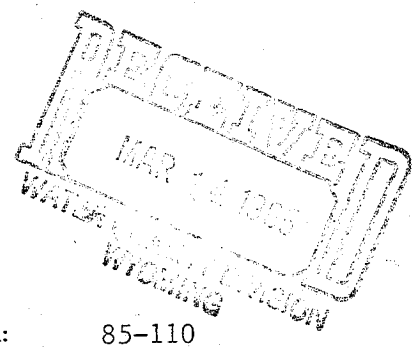
WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: City of Riverton
P.O. Box 1700
Riverton, WY 82501

ENGINEER: Cardinal Engineering
2334 Roselane
Riverton, WY 82501

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



WATER QUALITY DIVISION REFERENCE NUMBER: 85-110

REVIEWING ENGINEER: Ed Baruth Ed

DATE OF REVIEW: March 8, 1985

ACTION: **Not authorized.**

COMMENTS: 1. Verification of adequate water pressure is needed. The City of Riverton's city engineer can provide this in letter form.

2. On the plan sheet it appears that 2" and 1¼" water lines cross a sewer line.

This makes necessary your consideration of the regulation covering water/sewer crossing in Chapter 11, reprinted here.

(ii) Horizontal and vertical separation from water mains. Minimum horizontal separation shall be ten feet (3 m) where the water main is less than 1.5 feet (0.46 m) above the elevation of the sewer. Minimum vertical separations shall be 1.5 feet (0.46 m) at crossing. Joints in sewers at crossing shall be located at least ten feet (3 m) from water mains. The upper line of a crossing shall be specially supported. Where vertical and/or horizontal clearances cannot be maintained, the sewer shall be placed in a separate conduit pipe.

Section 02220, UTB-4 of the specification should be modified. Your detail on the plan sheet of the crossing is fine.

3. Please submit three, not two copies of plans and specifications.

RBC

Norma Coulson WQ

85-111R

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

LAND QUALITY DIVISION

HERSCHLER BLDG. - THIRD FLOOR
122 WEST 25TH

TELEPHONE 307-777-7756

CHEYENNE, WYOMING 82002

RECEIVED
JUN 7 1985
WATER QUALITY DIVISION
WYOMING

June 5, 1985

Mr. Marlin Holm
Environmental Supervisor
Big Horn Coal Co.
P. O. Box 724
Sheridan, WY 82801

Dear Mr. Holm:

RE: RESERVOIR #309 BIG HORN MINE, PERMIT 213-T2

The Department of Environmental Quality has completed the review of Reservoir #309. The submittal, together with the responses to comments, was satisfactory. The Department of Environmental Quality, Land Quality Division (DEQ/LQD) and Water Quality Division (WQD) approval is given for construction of Reservoir #309. Attached to this letter is your permit to construct (#85-111R) issued by WQD.

This approval is given contingent upon the following two items being resolved:

The NPDES permit for Big Horn Mine is to be updated to reflect the addition of Reservoir #309 prior to the discharge of process or pit water into the structure.

The State Engineer's Office issuance of a permit for Reservoir #309 is to be completed prior to construction.

Please notify DEQ in writing when the above two items are resolved and at that time submit an additional seven copies of the complete submittal for Reservoir #309 for distribution. Please address the letters and copies to me.

Thank you for your cooperation during this review. If you have any questions regarding this letter, call me at 777-7756.

Sincerely,

Kathy Muller Ogle
Mine Operations Environmental
Representative

KMO:lg

Attachment

cc: Roger Shaffer
George Christopulos
Jake Strohman
John Wagner
Rich Rule
Rick Chancellor
Phil Velez
Norma Coulson
Mary Howes

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-111R

BIG HORN MINE NO. 309 RESERVOIR
(Name of Facility)

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

Big Horn Coal Company

P.O. Box 724

Sheridan, Wyoming 82801

to construct, install, or modify a pit water treatment reservoir

facility according to the procedures and conditions of the application No. 85-111R. The facility is located in Sec. 14, T.57N., R.84W.

in the County of Sheridan, 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

5-29
original to Land Quality

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-111R
MA 14542

BIG HORN MINE NO. 309 RESERVOIR
(Name of Facility)

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

Big Horn Coal Company

P.O. Box 724

Sheridan, Wyoming 82801

to construct, install, or modify a pit water treatment reservoir

facility according to the procedures and conditions of the application No. 85-111R. The facility is located in Sec. 14, T.57N., R.84W.

in the County of Sheridan, 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.

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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 301, 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:

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

William L. Garland
Administrator
Water Quality Division

May 22, 1984
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

Norma Nelson
W00 85-111

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

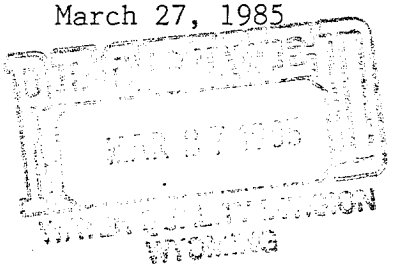
LAND QUALITY DIVISION

HERSCHLER BLDG. - THIRD FLOOR
122 WEST 25TH

TELEPHONE 307-777-7756

CHEYENNE, WYOMING 82002

March 27, 1985



Marlin Holm
Reclamation Supervisor
Big Horn Coal Co.
P.O. Box 724
Sheridan, WY 82801

RE: Big Horn Coal Co. - Permit No. 213-T2, Reservoir No. 309

Dear Mr. Holm:

Both the Water Quality Division and the Land Quality Division of the Department of Environmental Quality have completed their review of Big Horn Coal Company's proposal to substitute the design of Reservoir No. 309 for the currently approved design of Reservoir No. 307 in Permit No. 213-T2. The following issues need to be resolved before the department can approve this design.

1. The design needs to indicate the location and size of the inlet pipe to the reservoir so that an evaluation of embankment stability, potential for short-circuiting, and adequacy of erosion control may be completed.

2. Construction and material specifications are needed for the dikes that will be constructed above the existing grade.

3. Information on the seeding of the exterior dikes is needed.

4. It would be preferable for there to be a valve or gate on the spillway pipe. If a discharge violation did occur, that would allow the operator to immediately stop the discharge.

5. The operator should submit an index sheet referencing those sections of the approved permit (Permit 213-T2) which are affected by this change. The following locations within the permit should be referenced:

   a. Exhibit MP-28 (Volume 31)
   b. MP-43A (Volume 27)
   c. MP-46 (Volume 27)
   d. MP-47 (Volume 27)
   e. Table MP-8 (Volume 27)
   f. Table MP-9 (Volume 27)

Approval of this design cannot be given until the above comments are adequately addressed. Please remember that the Land Quality, R&R, Chapter IV.3.h.2.(c). requires that you provide certification after construction.

Please send four copies of the responses to these comments to my attention and I will coordinate the review. If you have any questions regarding the comments or if we can be of assistance, please call me at (307) 777-7756.

Sincerely,

Kathy Muller Ogle
Mine Operations Environmental Representative

KMO/kv

cc: Lyle Randen
Nick Tiffany
Richard Ruyle
District III
Jake Strohman
Norma Coulson

Sent to Kathy Ogle, LQD

Norma

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVE., SUITE 301
SHERIDAN, WYOMING 82801

PROJECT: Big Horn Mine No. 309 Reservoir

ARCHITECT OR ENGINEER: Robert W. Mattson
Big Horn Coal Co.
P.O. Box 724
Sheridan, Wyoming 82801

WATER QUALITY DIVISION
REFERENCE NUMBER: 85-111

REVIEWING ENGINEER: Rich Ruyle RR

DATE OF REVIEW: March 18, 1985

ACTION: Not Authorized

COMMENTS:

1.) Construction and material specifications are needed for the dikes that will be constructed above the existing grade.

2.) Information on the seeding of the exterior dikes is needed.

3.) Details of the inlet pipe to the pond should be shown to verify there is adequate erosion control.

4.) I would prefer to see a valve or gate on the spillway pipe. If a discharge violation does occur, there should be a way to immediately stop the discharge.

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-112R
MA 1454 2

City of Worland
Road 11-Sanitary Sewer & Water Main
(Name of Facility)

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

City of Worland-Board of Public Utilities

829 Big Horn Avenue

Worland, WY 82401

to construct, install, or modify a sanitary sewer and water main

facility according to the procedures and conditions of the application No. 85-112R. The facility is located in Sec. 29 and 30, T47, R92

in the County of Washakie, 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:

REGISTERED PROFESSIONAL ENGINEER
WILLIAM R. GARLAND
Reg. # 1479
STATE OF WYOMING

William R. Garland
Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

April 9, 1985
Date of Issuance

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

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

RECEIVED
MAR 14 1985
WATER QUALITY DIVISION
WYOMING

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

PROJECT: Worland, Fifteen Mile Creek Road and Road 11 Water and Sewer

ENGINEER: Board of Public Utilities
City of Worland
829 Big Horn Ave.
Worland, WY 82401
ATTN: Bob Shelton

OWNER: Board of Public Utilities
City of Worland
829 Big Horn Ave.
Worland, WY 82401

WATER QUALITY DIVISION REFERENCE NUMBER: #85-112

REVIEWING ENGINEER: Ed Baruth Ed Baruth by Jeff Hermanek

DATE OF REVIEW: March 8, 1985

ACTION: **Not authorized.**

COMMENTS:

1. Three copies of the plans are to be submitted for use in permitting. Please forward one additional plan sheet for the fifteen Mile Creek Rd. and Road 11 water and sewer extensions.

2. Provide details on how the crossing below the Big Horn Canal will be constructed.

EB:dlb

PERMIT TO CONSTRUCT

/X/ New

/__/ Renewal

/__/ Modified

Permit No. 85-113R

SEE CONDITION ON REVERSE SIDE
MA -14542

ROCHELLE MINE SP-9A RESERVOIR

(Name of Facility)

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

Rochelle Coal Company

2760 R South Havana, P.O. Box 14008

Aurora, Colorado 80014

to construct, install, or modify a sedimentation facility

facility according to the procedures and conditions of the application No. 85-113R. The facility is located in Sec. 15, T.41N., R.70W.

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 301, 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:

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

Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER * ROBERT E. SUNDIN NO. 285 * STATE OF WYOMING *

Director
Dept. of Environmental Quality

April 16, 1985
Date of Issuance

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

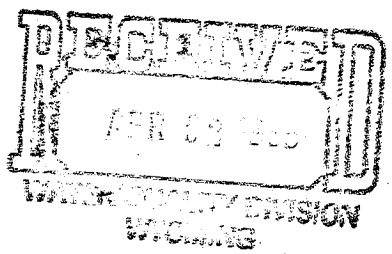
CONDITION

Erosion protection shall be provided in the spillway and at the outfall to Peabody Draw.

Norma

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION
2161 COFFEEN AVE., SUITE 301
SHERIDAN, WYOMING 82801



PROJECT: Rochelle Mine SP-9A Reservoir

ARCHITECT OR ENGINEER: Richard A. Isaac
Rochelle Coal Company
P.O. Box 14008
Aurora, Colorado 80014

WATER QUALITY DIVISION
REFERENCE NUMBER: 85-113

REVIEWING ENGINEER: Susan Holmes SH

DATE OF REVIEW: March 29, 1985

ACTION: Not Authorized

COMMENTS:

1) Please submit hydrologic calculations used in design of the reservoir and spillway. The following information should be included: methodology, assumptions, and calculations. Drainage basin parameters and the rainfall distribution used in the calculations should be identified.

2) Please submit calculations for the sediment storage requirements. Again, these should include methodology, assumptions and identification of soil and drainage basin parameters used in the calculations.

3) Riprap should be placed at the spillway outlet in Peabody Draw because the velocity is greater than 5 fps and the change of direction required for the flow to enter the drainage.

4-12-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-114RR
SEE CONDITIONS ATTACHED TO THIS PERMIT

Aspen Water and Sewer District (Phase I) Monitor Wells
(Name of Facility)

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

Aspen Water and Sewer District

c/o Aspen Management, Inc.

Box 25003

Jackson, WY 83001

to construct, install, or modify a network of three groundwater monitor wells according to the procedures and conditions of the application No. 85-114RR. The facility is located in Section 11, T41N, R117W 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 during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions of this construction permit.

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

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

Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

April 17, 1985
Date of Issuance

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

CONDITIONS TO PERMIT TO CONSTRUCT #85-114RR

1. The applicant is authorized to construct and install additional groundwater monitor wells associated with the Aspen Water and Sewer District wastewater treatment facility.

2. The monitor wells will be located and constructed as specified in application 85-114 and follow-up correspondence. Construction shall meet the minimum standards as specified in Chapter XI, Part G of Wyoming's Water Quality Rules and Regulations..

3. As soon as the permittee can obtain a monitor well easement and in any event no later than March 1, 1986, the permittee shall install monitor wells (to be located and constructed as described in the permit application) and shall continue monitoring as required by this permit (see #5 below). Prior to installing the said monitor wells, the permittee must make reasonable efforts to obtain an easement to install and operate said monitor well from the owners of the property where the monitor wells are to be located as specified in the permit application. To this end, the permittee must provide quarterly reports to the Department of Environmental Quality, Water Quality Division, beginning June 1, 1985, setting forth what progress the permittee has made in obtaining said easement. These quarterly reports are due with 30 days after the end of each quarterly period. Failure by the permittee to comply with the provisions of this paragraph will be considered a violation of this permit by the permittee.

4. Monitor wells must be developed until fines and sediments are no longer present in the purged water. Three to five days after completion of these monitor wells an initial set of samples should be taken and tested for the parameters listed in #5 below. This will be considered the first set of quarterly analytical results from the newly installed monitor wells.

5. Quarterly samples are to be collected from each monitor well and the effluent. The existing monitor wells are to be sampled until the new monitor wells are installed. Proper well excavation, sampling, preservation and analytical techniques should be followed. Refer to Chapter VIII, Section 7 of Wyoming's Water Quality Rules and Regulations. The water and effluent samples should be analyzed for the following list of parameters:

BOD	Fecal Coliform
Chloride	Total Dissolved Solids
Nitrate-Nitrogen	Water Level Measurements
Ammonia-Nitrogen	

This parameter list may be modified by the Administrator as required.

Norma

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

85-114

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

February 14, 1985

CERTIFIED

Mr. Nord Peterson
Aspens Management
P. O. Box 25003
Jackson, WY 83001

Dear Nord:

The Department of Environmental Quality/Water Quality Division is in receipt of your letter and attachments received January 25, 1985. The report partially satisfies the requirements of William Garland's letter to you dated January 24, 1985. The remaining matters need to be addressed before February 29, 1985 or legal action will follow.

The proposal for 1 upgradient and 2 downgradient monitor wells must include the exact locations and distances, construction, completion and protection specifications. A sand or gravel pack with compatible perforations is recommended. The expected method of drilling should also be included in the proposal. Is it possible to drill the wells between the irrigation ditch and the leachfield? Does or will the irrigation ditch have any mounding effects on the monitor wells? Note that the monitor wells are required to be permitted through the Department of Environmental Quality/Water Quality Division. Enclosed is an application for a permit to construct, install, or modify public water supplies and wastewater facilities. This application should accompany the submittal of the monitor well proposal.

Please site your source of information regarding the direction of groundwater flow at the Aspens Phase I.

The first quarterly report documenting progress toward easement for the monitor wells is due June 1, 1985. The March, 1985 quarterly monitoring data is due within 30 days of the end of March.

Refer to William Garland's letter dated January 24, 1985, if you have any questions or feel free to contact me at (307)-777-7084.

Sincerely,

Matt Langenfeld

Matthew M. Langenfeld
Groundwater Compliance Specialist

MML/sk
cc: A. J. Mancini, DEQ
Ed Baruth, DEQ - Lander

PERMIT TO CONSTRUCT

/XX/ New

/ / Renewal

/ / Modified

Permit No. 85-115R

* CONDITIONS ON PERMIT *

MA 14542

Star Valley Cheese Cooperative
SBR Wastewater Treatment Facility
(Name of Facility)

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

Star Valley Cheese Cooperative

Highway 89

Thayne, WY 83127

to construct, install, or modify a sequencing batch reactor/activated sludge wastewater treatment facility facility according to the procedures and conditions of the application No. 85-115R. The facility is located in Sec. 23, T34N, R119W 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:

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

Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER * ROBERT E. SUNDIN NO. 285 * STATE OF WYOMING

Director
Dept. of Environmental Quality

June 18, 1985
Date of Issuance

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

* CONDITIONS ON PERMIT *

1. In the event of an emergency situation and the discharge of raw or partially treated wastewater results, the Department of Environmental Quality/Water Quality Division must be notified immediately: John Wagner, 307-777-7781.

2. The authorized plans, specifications and design information do not completely address sludge management and disposal methods. A comprehensive sludge management and disposal plan must be submitted to this office for review by September 1, 1985.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Star Valley Cheese Cooperative
SBR Wastewater Treatment Facility

ENGINEER: Mr. James V. Olson
Eckhoff, Watson, and Preator Engineering
1798 South West Temple
Salt Lake City, UT 84115

OWNER: Star Valley Cheese Cooperative
Thayne, WY 83127

WATER QUALITY DIVISION REFERENCE NUMBER: 85-115

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

DATE OF REVIEW: April 16, 1985

ACTION: **Not authorized.**

COMMENTS:

An initial review of your plans and specifications has been completed. The following items need to be addressed and/or resolved:

1. Submit three signed copies of an "Application for Permit to Construct, Install or Modify Public Water Supplies and Wastewater Facilities in Wyoming."

2. An engineering design report which describes existing conditions, problems and the proposed solution is required for each project. The engineering design report shall include:
   a. Existing and projected flows and flow variations.
   b. Shock loads, with cause and frequency.
   c. Existing and projected wastewater characteristics including BOD, suspended solids, pH, etc.
   d. Complete description of proposed facilities and its method of operation. Include plan flow diagram and discussion on solids disposal.
   e. Provide criteria and computations for sizing of unit processes.

3. Specifications must be stamped and signed by the engineer.

4. The capacity of the air blowers is not specified.

5. Prepare hydraulic profile for treatment works wastewater, sludge and effluent flows.

AC

6. Discuss the problems that would be experienced by a power failure and the necessity of an alternate power source.

7. Delete the emergency overflow line from the main pump station. It is not permissible to allow untreated wastes to discharge into the canal.

8. Explain the purpose of the bypass line in the valve pit following the main pump station. It appears that if the valve is ever opened the discharge from one pump will simply flow back into the sump through the other pump.

Submit the required information, in triplicate. If you have any questions please feel free to contact me.

copy: Orris Albertson
File (2)

4-2-85

PERMIT TO CONSTRUCT

/XX/ New

/ / Renewal

/ / Modified

Permit No. 85-116R

MA 14542

Wise Choice Motel
(Name of Facility)

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

Robert Bechtum

Northfork Star Route

Cody, WY 82414

to construct, install, or modify a septic tank and drainfield

facility according to the procedures and conditions of the application No. 85-116R. The facility is located in Sec. 22, T. 52N., R.105W.

in the County of Park, in the State of Wyoming. This permit shall be effective for a period of 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:

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

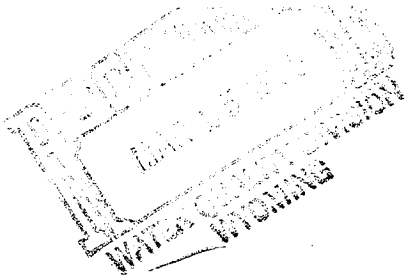
Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

March 25, 1985
Date of Issuance

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



MEMORANDUM

TO: Wise Choice Motel Disposal Facility, Plans #85-116

FROM: Steven P. Gerber, P.E. SPG

DATE: March 20, 1985

I conducted a phone review of the Wise Choice Motel disposal facility with Bob Overfield with Engineering Associates. I discussed the following items with Bob:

1. I questioned the function of the Chuckwagon Facility. It is an open structure under which they barqecue. They have only one sink to wash things in. I agreed the wastewater flow estimate was OK.

2. I told Bob we needed better info on depth to bedrock and groundwater.

3. I asked for the slope of the ground.

4. Dimensional data is required for the septic tank. A minimum liquid depth of 4 ft. is required.

5. A cleanout that extends to grade and is capped is required.

6. I asked for information on the grease interceptor.

SG:dlb

AC

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-117R
MA 14542

Convention Center
(Name of Facility)

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

Spring Creek Ranch Co.

P.O. Box 3154

Jackson, WY 83001

to construct, install, or modify a water and sewer line extentions

facility according to the procedures and conditions of the application No. 85-117R. The facility is located in Sec. 21, T41N, R116W 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:

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

William L. Garland
Administrator
Water Quality Division

April 9, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER ★ ROBERT E. SUNDIN NO. 285 ★ STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

MEMORANDUM

TO: Plans, 85-117

FROM: Jeff Hermansky

SUBJECT: Phone Review of Spring Creek Ranch Convention Center

DATE: April 12, 1985

On April 2, 1985 I reviewed the water and sewer plans for the Spring Creek Ranch Convention Center with Robert Farnsworth, the project engineer.

I told Bob that:

1. The sewer line from the convention center is considered a main since the projected flow is greater than 2,000 gallons per day. Therefore, the line must be at least 6 inches.

2. The main from the center must intersect the 8 inch sewer at a manhole.

Bob and I also discussed the plans for the water. I said the plan and profile do not correlate. Bob said he would make this point clear.

RECEIVED
APR 16 1985
WATER QUALITY DIVISION
WYOMING

3-13-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-118
SEE CONDITION ON BACK OF PERMIT
MA-14689

Utilities - Other Industrial Area - Phase II - Peacekeeper Project
(Name of Facility)

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

Base Civil Engineer

90 CSG/DE

F.E. Warren AFB, WY 82005

to construct, install, or modify a public water supply distribution and wastewater collection systems facility according to the procedures and conditions of the application No. 85-118. The facility is located in Sections 22, 26, and 27, T14N, R67W 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:

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

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

Administrator
Water Quality Division

Director
Dept. of Environmental Quality

March 7, 1985
Date of Issuance

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

Condition to Permit to Construct #85-118

Section 2B, Part 2, paragraph 3.3 Dewatering, page 2B-3, Specifications. The applicant must apply for a NPDES Discharge Permit and receive authorization from the Water Quality Division to discharge water from any dewatering operations into defined drainages or waterways of the State of Wyoming. Mr. John Wagner, Water Quality Division, is the point of contact for this authorization.

cc: Jordon Holland
90 CSG/DEE
F.E. Warren AFB, WY 82005

John Wagner, DEQ/WQD

3-25

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-119R
SEE CONDITION ON BACK OF PERMIT
MA 1454

Laramie County School Agricultural Complex
(Name of Facility)

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

Laramie County School District No. 1

2810 House

Cheyenne, WY 82001

to construct, install, or modify a subsurface wastewater treatment and disposal facility facility according to the procedures and conditions of the application No. 85-119R. The facility is located in Section 2, T14N, R67W 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:

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

William L. Garland
Administrator
Water Quality Division

March 20, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

Condition to Permit to Construct #85-119R

The permittee shall notify the Don Pack, Laramie County Environmental Health, 1700 Snyder Ave., Cheyenne, WY 82001, phone 638-8545, of the estimated day construction will commence and the estimated day of completion of this project. Inspection of the installed system is required prior to backfilling.

cc: Stephen R. Elliott
Elliott, Coad & Associates, P.C.
1603 Capitol Ave., Suite 400
Cheyenne, WY 82001

3-12-85

Review of Plans and Specifications

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

PROJECT: School Agricultural Complex, Laramie Co.

ARCHITECT OR ENGINEER: Stephen Elliott, Elliott, Coad & Assoc. P.C.
1603 Capitol Ave., Suite 400, Cheyenne, WY 82001

APPLICANT:

WATER QUALITY DIVISION REFERENCE NUMBER: 85-119

REVIEWING ENGINEER: Thomas S. Norman

DATE OF REVIEW: March 11, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

1. The application form was incomplete as the applicant's information was not completed and the application was not signed by the applicant.

2. Dimensions are necessary on the septic tank (i.e., length, width, depth, liquid depth, etc.) to assure that our regulations are met.

3. The layout of the drainfield is incomplete as the northern portion is not shown. The distance to property lines, drainages, etc. must be shown. A replacement area for the drainfield must be shown.
A detail of the drop boxes and drainfield must be shown to make sure that each trench bottom is level and that the wastewater does not pond in a certain area.

4. Documentation was not provided on the depth to seasonal high groundwater and bedrock.

5. The Chapter XI regulations base the drainfield size on the infiltration area (bottom and sidewall area below the pipe). The design flow of 1615 gpd divided by the application rate of 0.8 gpd/sq. ft. of infiltration area yields 2019 square feet of infiltration area. The trench detail shows 3.0 sq. ft. of infiltration area for every lineal foot of trench (i.e., 2 sq. ft. of bottom area and 0.5 sq. ft. of side area on each sidewall = 3.0 sq. ft.). Therefore the minimum lineal feet of drainfield is 673 (2019 sq. ft. ÷ 3 sq. ft./lineal foot) which could be supplied by 7 lines at 100 lineal feet. Your proposed system does meet this requirement.

7-1-85

MEMORANDUM

TO: File

FROM: Phil Pucel Phil

DATE: June 24, 1985

SUBJECT: Baggs Sewage Lagoons Groundwater Monitor Network, DEQ/WQD Ref. No. #85-120R

Phone conversation with Dick Davis on June 24, 1985.

Today I called Mr. Davis to discuss an in-house memo dated June 14, 1985. The points requiring clarification were discussed as follows:

1. The different methods for purging the wells was due to a time constraint on the engineer present at the sampling. Apparently, he could not stay to complete the sampling, so the technicians were instructed to purge the last two wells, MW-3 and MW-4, by evacuating three casing volumes. As a result, these two wells do not have field parameter data values. MW-1 and MW-2 have field parameter data and supposedly there was some record of total volume evacuated. Mr. Davis said he would look for the data.

2. The first set of SWL's are in the appendix of the report "Hydrogeology of a Proposed Wastewater Treatment Site, Baggs, WY."

3. Mr. Davis indicated that he would try to arrange further well development before Tom Williams (WQD) arrives to resample the wells. It was agreed that Tom Williams would call Mr. Davis on Wednesday afternoon, June 26, 1985, to inform him of the sampling date.

4. Mr. Davis said that the values in Table 2 are incorrect. Furthermore, the first survey was incorrect so Robert Jack Smith & Associates resurveyed the wells.

7-1-85

MEMORANDUM

TO: File

FROM: Phil Pucel Phil

DATE: June 14, 1985

SUBJECT: Baggs Sewage Lagoons Groundwater Monitor Network, DEQ/WQD Ref. No. 85-120R

On June 13, 1985, WQD received a report, "Hydrogeology of a Proposed Wastewater Treatment Site, Baggs, Wyo", prepared by Geotechnical Corporation, Box 1292, Laramie, WY 82070. This document contains a report on the location and completion details of monitor wells, static water level data, a sampling event, and data analysis. This information has received a preliminary review and provides the impetus for the following comments and questions. This evaluation is provided solely for use by WQD personnel in preparation for a forthcoming meeting with the consultants who have been hired to design the sewage lagoons.

The following items require clarification:

1. The sampling protocol (the purging and sample handling methods) was different for wells MW-1 and MW-2 as opposed to wells MW-3 and MW-4. What volumes were pumped from MW-1 and MW27. Were field parameters measured during purging of MW-3 and MW-47?

2. The first set of static water level data should be reported.

3. Is further well development planned?

4. The water levels indicated on the water level contour map of Figure 4 do not correlate with the data in Table 2. It is recommended that another set of SWL measurements be made and a new water level contour map be provided.

5. The reported levels of metals in the groundwater were not anticipated. WQD Groundwater Section plans to resample these wells during a field trip which will address another problem in Baggs. The operational monitor program will be established after this sampling is accomplished.

3-25-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-120R
SEE CONDITIONS ATTACHED TO THIS PERMIT
MA 14542

Town of Baggs Sewage Lagoon Groundwater Monitor Network
(Name of Facility)

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

Town of Baggs

P.O. Box 300

Baggs, WY 82321

to construct, install, or modify a groundwater monitor network according to the procedures and conditions of the application No. 85-120R. The facility is located in Sections 5 and 6, T12N, R81W 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.

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

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

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

Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

March 15, 1985
Date of Issuance

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

Conditions to Permit to Construct #85-120R

1. The groundwater monitor network will be constructed according to the Wyoming Department of Environmental Quality, Water Quality Division Rules and Regulations, Chapter XI, and the recommendation in the March 6, 1985 memorandum from Phil Pucel to Richard W. Davis.

2. Due to physical limitations at this site, a deviation is granted from the specified minimum depth of seal required in Chapter XI Section 65 (a). The surface seal will be designed to prevent contamination of the well by precipitation, ponding, or other surficial sources of fluid.

3. Background groundwater quality will be established by sampling each monitoring well for four consecutive quarters prior to the lagoon system becoming operational. Once the lagoon system becomes operational, an operational monitor program will be designed by the Department of Environmental Quality, Water Quality Division and performed by the operator. The operational monitor program will contain an abbreviated list of parameters based upon the background groundwater quality. Proper sampling, analytical techniques, and data management will be followed and recorded in the Operation and Maintenance Manual.

   To establish background, two wells, the upgradient well and the middle downgradient well will be sampled for the following list of parameters:

Static Water Level	Arsenic
Water Temperature	Barium
pH	Cadmium
Total Dissolved Solids	Chromium
Sulfate	Copper
Chloride	Iron
Fluoride	Lead
Nitrate-Nitrogen	Manganese
Ammonia Nitrogen	Mercury
Oil and Grease	Selenium
Silver	Zinc

   The other two downgradient monitor wells will be sampled for:

Static Water Level	Nitrate Nitrogen
Total Dissolved Solids	Ammonia Nitrogen
Chloride	pH

4. Data will be reported to the Department of Environmental Quality, Water Quality Division, Groundwater Section, within 30 days from the end of each quarter.

5. Graphical presentations of the data will be submitted to the Department of Environmental Quality bi-annually.

6. After the plant has been in operation for one year, the monitoring requirements will be reviewed to determine if they could be reduced.

3-7-85

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

March 6, 1985

Mr. Richard W. Davis
Geotechnical Corporation
P.O. Box 1292
Laramie, WY 82070

RE: Town of Baggs Monitoring Wells, DEQ/WQD Ref. No. 85-120

Dear Mr. Davis:

This correspondence summarizes our phone conversation on March 5, 1985 with respect to the groundwater assessment and monitoring at the sewage lagoons in the Town of Baggs (refer to application number 85-120).

The primary point was the location of a fourth monitor well located off the southwest corner of the facility.

Although there is no static water level data available from nearby wells, the alluvial groundwater flow direction is apparently westerly/southwesterly. Consideration of potential mounding effects from the facility and the potential for high variability in permeabilities in the alluvium indicates that the addition of a third downgradient monitor well is appropriate during this design phase of the project. The selection of a location off the southwest corner is based upon probable flow direction and topography.

The upgradient well is used to establish baseline conditions, in conjunction with the other site wells and existing local wells, and to detect any changes in groundwater quality which may be due to off-site upgradient sources. The proposed upgradient well location may render its usefulness as questionable due to potential groundwater quality changes which occur under the influence of mounding from the facility. If this occurs, this well would not be considered as an upgradient well. The location of this well should be dictated by the consideration of mounding effects and the relative location of lined ponds.

It was indicated that a survey of local groundwater quality was being undertaken by Robert Jack Smith & Associates, Inc.

Other items pertaining to the application are listed below:

1. Water Quality Rules and Regulations, Chapter XI, Part G, Section 64, page 142, indicates that the top of casing shall terminate above any known conditions of flooding. Consideration should also be given to possible changes to the surface elevation due to lagoon construction. The top of the lagoon dikes will be above the 25 year flood elevation.

2. The area around the well shall slope away from the well. Surface drainage shall be directed away from the well.

3. The depth of seal, specified as 20 feet in Section 65, is subject to a deviation to be granted by the Administrator.

4. A gravel pack is recommended for monitor wells particularly where the soils are only moderately permeable as indicated by previous pumping tests in the area.

5. It is recommended that detailed logs are kept during drilling at the site.

6. The application, #85-120, said that the alluvium consists of "poorly permeable, very poorly sorted, sand gravel, and cobbles." This description is modified to read that clay was also found in the alluvium and that cobbles were scattered through the fines. The next round of drilling will provide much more information on the variability of soil types across the site and the ratio of grain sizes.

7. Chen and Associates will be drilling and installing wells.

8. Include the legal description on applications.

9. Drilling logs and well completion details as submitted to the State Engineer should be copied to Water Quality Division as they become available.

10. Please submit a signed application form.

Further information will be submitted to the Department of Environmental Quality, Water Quality Division, after Mr. Davis has discussed these topics with the contractor with overall responsibility for construction of the facility.

Attached is a December 6, 1984 letter from Tom Williams to Paul McCarthy describing groundwater monitoring requirements for the Baggs, Wyoming sewage treatment facility. Please note that the "Operational Groundwater Quality" parameters on page 2 constitute an abbreviated list. The parameters listed under "Background Groundwater Quality" are used during the establishment of baseline conditions. A description of the monitor program, sampling protocol, analytical techniques, and data management system should be included in the O & M manual for the facility.

Sincerely,

Phil Pucel

Phil Pucel
Groundwater Engineering Evaluator

PP/nc
Enclosures

cc: Robert Jack Smith & Assoc., Inc., P.O. Box 1104, Rawlins, WY 82301
Tom Conrardy, DEQ/WQD, Cheyenne

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-121RR
MA 14542

TEXAS TRAILS SUBDIVISION WATER LINE EXTENSION
(Name of Facility)

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

Mr. Alden C. Robinson

P.O. Box 127

Moorcroft, Wyoming 82721

to construct, install, or modify a water line extension

facility according to the procedures and conditions of the application No. 85-121RR. The facility is located in Sections 5 and 6, T.49N., R.67W., in the County of Crook, 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 301, 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:

REGISTERED PROFESSIONAL ENGINEER * WILLIAM L. GARLAND * STATE OF WYOMING

Administrator P.E. # 1479
Water Quality Division

April 19, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER * ROBERT E. SUNDIN NO. 285 * STATE OF WYOMING

Director
Dept. of Environmental Quality

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

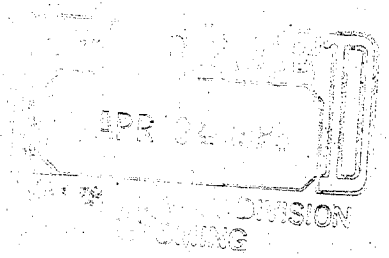
xc: Edward S. Scott, Professional Consulting Assoc.

Norma

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT:	Texas Trails Water Line Extension Moorcroft, Wyoming
ARCHITECT OR ENGINEER:	Edward S. Scott Professional Consulting Associates P.O. Box 2185 Gillette, Wyoming 82716
WATER QUALITY DIVISION REFERENCE NUMBER:	85-121
REVIEWING ENGINEER:	Susan Holmes SH
DATE OF REVIEW:	April 1, 1985
ACTION:	Not Authorized



COMMENTS:

1) A statement is needed from a representative of the Town of Moorcroft that the Town is willing and able to supply water to the proposed development.

2) Verification is needed to show that the proposed extension can maintain adequate pressure under peak demands and fire flow conditions, i.e. maximum pressure of 100 psi and minimum pressure of 20 psi under fire flow conditions. How many units is the proposed development and what is the associated water demand?

3) A backflow prevention device must be installed on the service connection to Tract B. The type of device installed is dependent on the type of user, but generally a double check valve is sufficient. Please refer to Chapter XII of the Water Quality Rules and Regulations for specific requirements.

4-18 JV

PERMIT TO CONSTRUCT

/ X / New

/ / Renewal

/ / Modified

Permit No. 85-122R

MA 14542

City of Worland
Fifteen Mile Creek Road-Water & Sewer
(Name of Facility)

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

City of Worland, Board of Public Utilities

829 Big Horn Avenue

Worland, WY 82401

to construct, install, or modify a sanitary sewer and water main

facility according to the procedures and conditions of the application No. 85-122R. The facility is located in

Sec. 26, T47, R93

in the County of Washakie, 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:

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

Administrator
Water Quality Division

April 9, 1984
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER ★ ROBERT E. SUNDIN NO. 285 ★ STATE OF WYOMING ★

Director
Dept. of Environmental Quality

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

REVIEW OF PLANS AND SPECIFICATIONS

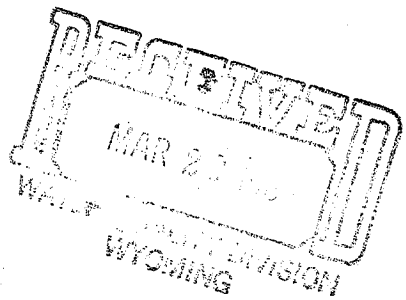
WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Worland, Fifteen Mile Creek Road Washakie

ENGINEER: Board of Public Utilities ✓
City of Worland
829 Big Horn Ave.
Worland, WY 82401
ATTN: Bob Shelton

OWNER: Board of Public Utilities
City of Worland
829 Big Hron AVe.
Worland, WY 82401



WATER QUALITY DIVISION REFERENCE NUMBER: #85-122

REVIEWING ENGINEER: Ed Baruth Ed

DATE OF REVIEW: March 8, 1985

ACTION: **Not authorized.**

COMMENTS:

1. Three copies of theplnas are to be sumitted for use in permitting. Please forward one additional plan sheet for the Road 11 water sewer extensions.

2. Provide details on how the crossing below the Big Horn Canal will be constructed.

EB:dlb

AC

8-20

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-123R

* CONDITIONS ON PERMIT *

MA 14542

Church Buttes Evaporation Ponds
(Name of Facility)

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

Wexpro Company

P.O. Box 458

Rock Springs, WY 82902

to construct, install, or modify a bentonite lined evaporation ponds for produced water from natural gas wells facility according to the procedures and conditions of the application No. 85-123R. The facility is located in Sec. 6, Lot 10, T16N, R112W 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:

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

William L. Garland
Administrator
Water Quality Division

August 15, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

* CONDITIONS ON PERMIT *

1. This permit is for a disposal pond to contain produced water from gas wells only.

2. No hazardous wastes as defined by the U.S. EPA or State of Wyoming shall be placed in 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.

3. In the event that seepage or a leak is detected or suspected, the DEQ/WQD must be notified immediately. Please contact Southwest District Supervisor at 210 Lincoln, Lander, Wyoming, 307-332-3144. Investigative or mitigative measures must be accepted by the DEQ/WQD.

4. The DEQ/WQD shall be contacted prior to the reclamation of this facility. The method of reclamation must be accepted by this department.

7-30

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-123R -- response to WQD comments

DATE SUBMITTED FOR REVIEW 7/25/85

NAME AND LOCATION OF FACILITY Church Buttes Evap. Ponds

Sweetwater Co., WY
(or Uinta Co.? -- conflict)

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED AJM

TITLE _____

DATE _____

ACCEPTED FOR RECORD 7/30/85 (Date) AJM Groundwater Control Supervisor

MEMORANDUM

TO: Jeff Hermansky, Lander

FROM: A. J. Mancini

DATE: July 30, 1985

SUBJECT: Comments on applicant's response to WQD review of application for permit to construct Church Buttes Evaporation Ponds (85-123R)

Monitor wells shall be constructed as specified in WQD Rules and Regulations Chapter XI. The groundwater section recommends a minimum well casing diameter of three inches, mainly because past experience has demonstrated that the hole drilled for smaller diameter casing is extremely difficult to develop. If we think there is a chance that monitor wells will detect seepage, we should attempt to have the wells constructed as good as possible. Each casing should be equipped with a locking-cap and be protected from damage at the surface.

Even though the applicant anticipates no shallow groundwater, when the monitor wells are drilled care should be taken so that any shallow groundwater that might be encountered can be identified as to accurate depth interval, and can be sampled for analysis. Any analysis should be provided the WQD in a timely manner.

I suggest that monitor wells be installed early if not before pond construction, and checked for fluid during installation.

It is recommended that monitor wells bottom in poorly permeable strata if at all possible. This could mean slightly varying depths for the wells and perhaps a little deeper than 18 feet below the surface. "As-builts" of the monitor wells should be provided.

The information recently received in Cheyenne for review does not include a Data Sheet for PECO 4596 or PECO 2383. For Data Sheets submitted, it has been noted that hazardous ingredients are identified in PECO 4712 and PECO 2280. I have contacted the EPA but have not yet received feed-back relative to whether or not the applicant will need EPA's approval for disposing of these identified hazardous ingredients. Perhaps the best way to handle this would be for the applicant to contact EPA Region VIII in Denver and ascertain whether or not the applicant needs a permit or approval from the EPA for the disposal of the wastes containing the identified hazardous ingredients. As you know, WQD can permit the construction of the ponds, but cannot authorize the disposal of hazardous wastes.

I will hold on to the applicant's response a while longer, in case I do get some feed-back from the EPA in the interim.

AJM/nc

WATER QUALITY DIVISION
GROUNDWATER SECTION
- PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-123

DATE SUBMITTED FOR REVIEW 3/25/85

NAME AND LOCATION OF FACILITY Church Buttes Evap Ponds (Wapiro)
Sec. 6-16N-112W
Uinta Co.

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(✓) Comments attached.

SIGNED AJM

TITLE

DATE 4/15/85

ACCEPTED FOR RECORD 4/15/85 (Date) AJM Groundwater Control Supervisor

MEMORANDUM

TO: Jeff Hermansky

FROM: A. J. Mancini

DATE: April 15, 1985

SUBJECT: Review Comments for Application to Construct Church Buttes Evaporation Ponds, S6, T16N, R112W, Uinta Co., #85-123

1. Inasmuch as the wastewater apparently is very saline, has the applicant ascertained compatibility of the waste and the proposed liner material?

2. Seepage through the liner may be anticipated. I would like to see a worst case (calculation) estimate of seepage through each lined pond.

3. The report of the geotechnical investigation concludes that sand and gravels exposed at proposed pond bottom elevations will have to be over-excavated and replaced with other material. I think this is important. Would the entire pond bottom be excavated? How will the applicant know when all sand and gravel are excavated? Sand and gravel at the outside limits of the ponds can convey fluid to the pond sites, below liner-depths. Suggest that applicant consider excavating sand and gravel to some distance beyond pond construction limit, as applicable. Will the over-excavated sand and gravel be incorporated in embankment material?

4. The report states that "a leak detection system should be designed and installed to detect accidental leaks from the ponds, identify location of the leak, and isolate and control the leak." The applicant should submit plans and specifications of this system for review.

5. Is chromate used as a corrosion inhibitor? If so, what is the maximum anticipated concentration of Cr+6?

6. Are other chemicals or compounds used, such as scavengers, inhibitors, etc? If so, same should be identified. Data should be provided on actual or potential toxicity and hazardous nature.

7. Will other plant wastes be disposed of in the pond in the future? If so, identify and characterize same.

8. Are the existing disposal pits known to have seepage or other problems which do or could impact groundwater? Do these ponds have leak detection systems? Are they effective? Describe. (There evidently are two existing disposal pits immediately to the west of the proposed ponds.)

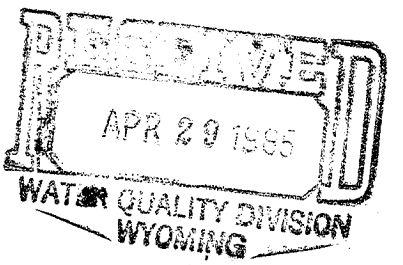
REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Church Buttes Evaporation Ponds

ENGINEER: Larry Bodyfelt
Mountain Fuel Resources, Inc.
P.O. Box 1129
Rock Springs, WY 82901



OWNER: Wexpro Company
ATTN: Carl Rosene
P.O. Box 458
Rock Springs, WY 82902

WATER QUALITY DIVISION REFERENCE NUMBER: 85-123

REVIEWING EVALUATOR: Jeff Hermansky

DATE OF REVIEW: April 23, 1985

ACTION: **Not authorized.**

COMMENTS:

The DEQ groundwater section in Cheyenne and the DEQ Lander District Office have reviewed the Church Buttes Evaporation Ponds application. The following questions and comments have been raised as a result of the review. These questions and comments must be satisfactorily addressed before a Permit to Construct can be issued:

1. It appears that the series of monitoring wells that are shown surrounding the ponds are to be the leak detection system. Please submit specifications for the construction of these wells, information on depths they are to be terminated, and a monitoring program.

2. The geotechnical report recommends over-excavation of sands and gravels in the pond bottoms and replacement with suitable material. The specifications do not address depths, limits, or gradation requirements for material removal or replacement material. Please define this clearly in the specifications, specifically addressing suitable and unsuitable materials.

3. The specifications regarding the bentonite liner are very general. Define what permeability is to be achieved, approximate amount of bentonite to be added, and total depth of the liner.

4. Has the engineer addressed the compatibility of a bentonite liner with the highly saline water to be contained in the ponds? Saline water is known to reduce the effectiveness of bentonite liners.

AC

5. What is the worst case estimate (calculation) of seepage through the proposed lined ponds?

6. I am concerned that the highly saline wastewater will cause rapid corrosion and failure of the 2 inch steel pipe that runs from the plant to the condensate and clear water manholes. Wouldn't it be prudent to consider a non-corrosive material?

7. The geotechnical report nor the plans and specifications make note of groundwater. What is the depth to groundwater and what is its quality?

8. Is chromate used as a corrosion inhibitor anywhere in the plant? If so, what is or what do you anticipate the maximum concentration of Cr^{+6} to be?

9. Are other chemicals or compounds, such as scavengers, inhibitors, etc., used in the plant process? If so, can they be discharged in the wastewater? What are they and what is their actual or potential toxicity and hazardous nature?

10. Are other plant or outside wastewaters to be disposed in the proposed ponds? If so, please identify and characterize them.

11. Are the existing disposal pits known to have seepage or other problems which do or could impact groundwater? Do these ponds have leak detection systems? Are they effective? Please explain.

12. What are the projected daily wastewater amounts?

13. The specifications must include testing requirements for the pond liners after construction. Please clearly define.

14. The ponds should be protected with flagging to discourage use by waterfowl.

Please feel free to contact either Jack Bedessem or me if you have any questions.

copy: Tony Mancini, DEQ/WQD, Cheyenne

M-7-30

PERMIT TO CONSTRUCT

/ / New

/ / Renewal

/XX/ Modified

Permit No. 85-124R
MA 14542

Shute Creek Gas Plant-Water System Expansion
(Name of Facility)

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

Exxon Co., USA

P.O. Box 1600

Midland, TX 79702

to construct, install, or modify a water treatment facility and distribution system facility according to the procedures and conditions of the application No. 85-124R. The facility is located in Sec. 14, T22N, R112W 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:

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

William L. Garland
Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

July 24, 1985
Date of Issuance

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

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Shute Creek Gas Plant Potable Water Supply

ENGINEER: E.R. Andrews, Stearns Catalytic Corporation
4500 Cherry Creek Dr.
P.O. Box 5888
Denver, CO 80217

OWNER: Exxon Co., USA
P.O. Box 1600
Midland, TX 79702
ATTN: T.J. Tibbitts

WATER QUALITY DIVISION REFERENCE NUMBER: 85-124

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

DATE OF REVIEW: April 17, 1985

ACTION: **Not authorized.**

COMMENTS:

An initial review of your plans and specifications has been completed. The following items need to be addressed and/or resolved.

1. Show how the feed line to the gas plant water treatment plant will connect to the line from the wells.

2. Explain how the wells are to be controlled considering they will now be supplying two separate systems.

3. Provide construction plans and specifications for the water treatment plant including chemical feed systems, storage tanks, pump stations and all water distribution piping.

4. Define the water system demands for average day, maximum day and maximum hour. Provide flow information for both the mancamp and gas plant. Itemize gas plant flows for both potable use and plant use. Show the adequacy of the wells to supply the demands during each of the flow conditions.

5. Provide a control description for the entire water treatment facility, including how the chemical feed systems are controlled.

6. Provide foundation requirements for structures and storage tanks.

AC

7. The report states: "Items common to all three facilities are sized for an ultimate product water capacity of 90 gpm (120 gpm feed-water)." The total capacity of the wells per the report is 140 gpm. It does not appear an adequate water supply will exist to also meet the needs of the mancamp. Please explain.

8. The flow diagram on Exhibit 3 indicates the wells will be used as an alternate water supply to the firewater pond. Explain the rates, frequency and control of this makeup system. Also explain how this will impact the other demands on the system.

9. Provide details of the polyelectrolyte feed system. Include chemical storage requirements, dosage, solution tank sizing and feed rates. Specifications of equipment is required.

10. The report states that the pressure filters will be designed for the initial system capacity of 60 gpm and provisions made to expand the system capacity to 90 gpm. The flow diagram on Exhibit 3 states that the filters are sized for 80 gpm. Also the report previously talks about an ultimate feed rate of 120 gpm. Explain the differences between these numbers and verify the sizing criteria. Specifications are needed for the pressure filters.

11. Quantify the backwash rates and frequency for the pressure filters. Identify where this water is going to be disposed of.

12. Provide details of the acid feed system. Include dosage and feed rates. Specifications for equipment is required.

13. Provide details of the scale inhibitor feed system. Include solution tank sizing, chemical storage requirements, dosage, and feed rates. Specifications for equipment is required.

14. Specifications for degasifier is required. Provide construction details.

15. Specifications of blowers including capacity is required.

16. Provide specifications of the RO Booster Pumps. Include pump sizing.

17. Provide specifications of the duplex filter.

18. Provide details and specifications for RO Permeator Modules.

19. A provision is made to supply treated water to condensate storage. Define the frequency and volume of water to be supplied. Explain the impact this flow will have on the system.

20. The material balance on Exhibit 3 gives the flow rate for the well water make-up as 800 lb/hr which is equal to 1.6 gpm and flow rates for water treatment system product and water treatment system wastes as 600 lb/hr (1.2 gpm) and 200 lb/hr (.4 gpm) respectively. Please explain the difference between these numbers and the design flows.

21. Details and specifications are needed for the potable water pumps, the potable water surge drum, and the potable water chlorination system. Include chlorine dosage and feet rates.

22. The material balance gives the flow rate for the potable water make-up as 600 lb/hr or 1,725 gpd. The report gives the daily water demand as 3,400 gallons. Explain the difference.

23. The following items must be included on the plans of the distribution system:

a. Plan and profile of line from distribution system to the water treatment plant.

b. Discuss the need for air release valves at high points in the lines.

c. Show a cross-section drawing of the pipe bedding.

24. Provide a flow measuring device for raw water influent and treated water storage tank effluent.

25. Exhibit 3 shows the "Treated Water Inhibitor Feed System" feeding the condensate storage line and Exhibit 8 shows the "Potable Water Corrosion Inhibitor Feed System" feeding the potable water line. Are these the same systems? Please clarify.

26. Identify which equipment will be run by the emergency generator should a power failure occur.

Please provide three copies of the above required information. If you should have any questions please call.

copy: File (2)

4-12

PERMIT TO CONSTRUCT

/ / New

/ / Renewal

/X/ Modified

Permit No. 85-125
Ref. No. 81-464RR
MA 14542

The Bluffs Subdivision Fourth Filing
(Name of Facility)

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

Janss Corporation

601 Pacific Dr.

Rock Springs, WY 82901

to construct, install, or modify a extension of existing sanitary sewer lines facility according to the procedures and conditions of the application No. 85-125. The facility is located in Sec. 27, T19N, R105W 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:

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

Administrator
Water Quality Division

April 12, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

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

5-29

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-126R
MA 14542

BARNEY BROTHERS LAND · LIVESTOCK, INC. SUBDIVISION
(Name of Facility)

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

Barney Brothers Land · Livestock, Inc.

P.O. Box 146

Ranchester, Wyoming 82839

to construct, install, or modify a expansion of existing water

facility according to the procedures and conditions of the application No. 85-126R. The facility is located in Sec. 19, T.57N., R.85W.

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.

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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 301, 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:

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

William L. Garland
Administrator
Water Quality Division

May 22, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

xc: William A. Mentock
Engineering, Inc.
45 East Loucks, Suite 301
Sheridan, WY 82801

REVIEW OF PLANS AND SPECIFICATIONS

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

RECEIVED
APR 05 1985

PROJECT: Barney Brothers Land & Livestock Inc. Subdivision, Ranchester, Wyoming

ARCHITECT OR ENGINEER: William A. Mentock
Engineering Inc. of Wyoming
45 East Loucks, Suite 301
Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 85-126

REVIEWING ENGINEER: Susan Holmes SH

DATE OF REVIEW: April 3, 1985

ACTION: Not Authorized

COMMENTS:

1) An analysis should be submitted that verifies that the water main extension can adequately serve the proposed development, i.e. maximum pressure of 100 psi, normal operating pressure of not less than 35 psi and minimum pressure of 20 psi under fire flow and peak day demand conditions. Also, a statement from the Town of Ranchester is needed stating that they are willing and able to supply water to the development.

2) Is it feasible to loop this extension at any of the proposed deadends?

3) The water main along Barney Court, from Halbert Street to the cul-de-sac, must be a minimum of 8-inch, because the length of pipe serving the hydrant is greater than 250 feet.

4) The hydrant in the cul-de-sac should be located such that the water services to Lots 6 and 7 are on the supply side of the hydrant. This will allow for complete flushing of the main.

5) A hydrant or blowoff valve should be installed at the deadend of the 8-inch water main in Barney Lane.

6) Backflow prevention devices are required on all water service connections. Also, the size and material of the water services needs to be specified.

7) The 7-foot bury depth on the water main appears to conflict with the sanitary sewer at all sewer and water crossings. A detail should be included showing how the 18-inch clearance requirement will be met. These crossings should also be shown on the sewer profile.

8) The minimum slope shown on the sanitary sewer service detail is incorrect. It should be ¼-inch per foot. Also, the maximum and minimum depth dimensions are not shown.

9) The specifications must be signed by a Professional Engineer registered in Wyoming.

3-18-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-127
SEE CONDITION ON BACK
MA 1454a

Sinclair Refinery - Northwest Study Area
(Name of Facility)

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

Environmental Protection Agency, Region 8

1860 Lincoln St.

Denver, CO 80295

to construct, install, or modify a groundwater monitoring network according to the procedures and conditions of the application No. 85-127. The facility is located in Sections 16 and 17, T21N, R68W 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.

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

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

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

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

William L. Garland
Administrator
Water Quality Division

Robert E. Sundin
Director
Dept. of Environmental Quality

March 14, 1985
Date of Issuance

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

Condition to Permit to Construct #85-127

A deviation is hereby granted for those wells prevented by physical limitations to adherence to the requirements on minimum depths of seal below ground surface as found in Water Quality Division Rules and Regulations, Chapter XI, Section 65. However, a sufficient seal will be installed according to normal engineering practice.

4-2-85

V
JN

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-128
SEE CONDITIONS ATTACHED TO THIS PERMIT
MA 1454

Missile Stage Storage Facilities I, II, III, and IV, Peacekeeper Project
(Name of Facility)

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

Base Civil Engineer

90 CSG/DE

F.E. Warren AFB, WY 82005

to construct, install, or modify a public water supply distribution system facility according to the procedures and conditions of the application No. 85-128. The facility is located in Section 22, T14N, R67W 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:

REGISTERED PROFESSIONAL ENGINEER
WILLIAM L. GARLAND
No. 1479
STATE OF WYOMING

William L. Garland
Administrator
Water Quality Division

March 26, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: Kenneth Moore
Banner Associates
P.O. Box 550
Laramie, WY 82070

John Wagner, DEQ/WQD

Conditions to Permit to Construct #85-128

1. The emergency overflow pond near the MSSF IV Facility has not been permitted with this permit to construct. The overflow pond will not require a permit to construct provided that it is only used as an emergency spill containment facility and procedures for notification and cleanup are followed as outlined, in detail, in the permit application.

2. The F.E. Warren AFB NPDES Discharge Permit must be modified to include the discharge pipe from the emergency overflow pond. A request to modify that permit must be forwarded to Mr. John Wagner of this office.

3. Specifications Document, Section 2C, Part 2, paragraph 3.3, page 2C-3, Dewatering. If the applicant, or his designated contractor, is required to dewater excavations, trenches, or other parts of the work, a separate NPDES Discharge Permit will be required from the Water Quality Division prior to discharging any water.

4. Specifications Document, Section 2D, Part 2, paragraphs 5.1.7, Filament Wound Reinforced Thermosetting Resin Pipe, and 5.1.8, Centrifugally Cast Reinforced Thermosetting Resin Pipe, shall conform to AWWA C950 Specifications, not ASTM C950.

5. Specifications Document, Section 2D, Part 3, paragraph 7.2, Leakage Test. The correct form of the leakage equation is:

$$L = \frac{SD\sqrt{P}}{133{,}200}$$

in accordance with AWWA C600 Specification.

STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

1111 EAST LINCOLNWAY CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

February 8, 1984

Mr. Paul MacRoberts
Black and Veatch Engineering Consultants
PO Box 8405
Kansas City, Missouri 74114

Dear Mr. MacRoberts:

In regards to our recent telephone conversation concerning a proposed retention pond to receive fire deluge wastewater from a missile system storage area on F.E. Warren Air Force Base, Wyoming, I would offer the following comments. We understand that the only source of hazardous substances from such a fire event would be unknown amounts of the rocket propellants, monomethylhydrazine (MMH) and nitrogen tetraoxide (N_2O_4). No radiological components would be present in the deluge wastewater.

Provided that the retention pond is only a simple earthen pit which would not receive wastewater from any other base source, the Water Quality Division will not require a Permit to Construct for the pond. It is also understood, however, that the non-permitting of this pond does not relieve Air Force officials from any responsibility if waters of the State are contaminated from any wastewater contained in the pond. In the unlikely event a fire occurred in the missile storage area, we would consider the release of deluge wastewater as a discharge of a hazardous substance(s) under Chapter IV, Wyoming Water Quality Rules and Regulations, which would require immediate notification to this office by the appropriate Air Force officials. Our office would then respond to the base to ensure that adequate containment, cleanup, and disposal of all discharged fluids/debris have been properly initiated by the Air Force. Air Force officials should understand that complete immediate cleanup of any affected environs, including soils and groundwater, would be required by this office if contamination resulted from the discharged wastewater. Additionally, the Water Quality Division will require an amendment to the existing base Oil and Hazardous Substances Pollution Contingency Plan to outline what actions the base would take in the event of a discharge, and what management procedures will be implemented to help prevent unauthorized disposal of other base generated liquid wastes into the pond.

If Air Force officials desire to design and construct a permanent, lined wastewater treatment pond for any base-generated wastewaters, the Water Quality Division will require a Permit to Construct application along with three complete sets of plans/specifications for our review and permit processing. The plans/specifications must carry the seal or signature of the design engineer who is licensed in the State of Wyoming. I have included copies of division guidelines for wastewater pond construction.

If there are additional comments or questions, I may be contacted at the address indicated.

Sincerely,

LeRoy C. Feusner, P.E.
Southeast District Supervisor

LCF/kb
Enclosure
cc: Lt. Robert Harvey, Bioenvironmental Engineer, USAF Hospital/SGPB, F. E. Warren Air Force Base, Wyoming 82005
George Cormier, 90CSG/DEEU, F.E. Warren Air Force Base, Wyoming 82005

C-9

PERMIT TO CONSTRUCT

/ / New

/ / Renewal

/X/ Modified

Permit No. 85-129

SEE CONDITION REVERSE SIDE

MA 14542

HOY MOBILE HOME PARK SEPTIC SYSTEM MODIFICATIONS
(Name of Facility)

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

Phillip Hoy

P.O. Box 1656

Gillette, Wyoming 82716

to construct, install, or modify a additional leach bed area to alleviate a failing leach field facility according to the procedures and conditions of the application No. 85-129. The facility is located in Sec. 4, T.50N., R.72W. in the County of Campbell, 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 301, 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:

REGISTERED PROFESSIONAL ENGINEER ★ WILLIAM L. GARLAND RE # 1479 ★ STATE OF WYOMING

William L. Garland
Administrator
Water Quality Division

April 3, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER ROBERT E. SUNDIN NO. 285 ★ STATE OF WYOMING ★

Robert E. Sundin
Director
Dept. of Environmental Quality

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

CONDITION

The permittee shall notify the Campbell County Engineer's Office of the estimated day construction will commence and the estimated day of completion of this project. Inspection of the installed system is required prior to backfilling. The authorized representative in your area can be contacted at the following address:

Bill Flaherty
Campbell County Engineer's Office
500 South Gillette Avenue
Gillette, Wyoming 82716

xc: Wayne R. Haug
Chuck Costanza, w/plans

8-7

PERMIT TO CONSTRUCT

/XX/ New

/ / Renewal

/ / Modified

Permit No. 85-130RR

CONDITIONS ON PERMIT

MA 14542

Marathon Tierney S24 Evaporation Pit
(Name of Facility)

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

Marathon Oil Company

P.O. Box 2659

Casper, WY 82602

to construct, install, or modify a evaporation pit for produced water

facility according to the procedures and conditions of the application No. 85-130RR. The facility is located in Sec. 24, T19N, R94W 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:

REGISTERED PROFESSIONAL ENGINEER ★ ROBERT E. SUNDIN NO. 285 ★ STATE OF WYOMING ★

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

William L. Garland
Administrator
Water Quality Division

Robert E. Sundin
Director
Dept. of Environmental Quality

July 26, 1985
Date of Issuance

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 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.
2. Operator records or log must be kept on each load brought to the facility including the hauler's name, source of the load, oilfield operator, wastewater composition, and volume of wastewater. These records shall be retained for inspection by DEQ/WQD personnel as needed or submitted annually.
3. Monthly monitoring of the leak detection system and monitoring well are required of the owner. The results of all groundwater monitoring and analyses shall be submitted to: Tony Mancini, DEQ/WQD, Herschler Building, 122 W. 25th Street, Cheyenne, Wyoming, 82002 within thirty (30) days following each sampling event.
4. The DEQ/WQD shall be contacted prior to the reclamation of this facility. The method of reclamation must be accepted by this department.
5. In the event that seepage or a leak is detected or suspected, the DEQ/WQD must be notified immediately. (DEQ/Water Quality Division, 210 Lincoln, Lander, Wyoming, 82520, 307-332-3144). Investigative or mitigative measures must be accepted by the DEQ/WQD.
6. Background groundwater quality for the area shall be established by testing in accordance with Chapter VIII of the Water Quality Rules and Regulations.

Returned
7/30/85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-130RR

DATE SUBMITTED F 1985

NAME AND LOCATI File ION/TIERNEY 524
RATION PIT EXPANSION
TWATER COUNTY, WYOMING

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Thomas R. Williams

TITLE GROUNDWATER ENGINEERING ASSOCIATE E.I.T. NO. 2242

DATE 7/29/85

ACCEPTED FOR RECORD 7/29/85 (Date) ajm Groundwater Control Supervisor

MEMORANDUM

TO: Jack Bedessem, Southwest District Supervisor

FROM: Thomas R. Williams, Groundwater Engineering Associate TRW

DATE: July 29, 1985

SUBJECT: Groundwater Review of Revised Permit to Construct Application Number 85-130RR for the Marathon/Tierney S24 Evaporation Pit Expansion in Sweetwater County, Wyoming

I have reviewed the revised permit to construct application number 85-130RR for the Marathon/Tierney S24 Evaporation Pit Expansion in Sweetwater County, Wyoming for consistency with current groundwater protection procedures and requirements.

The explanation provided by CEI Consulting Engineers in a July 10, 1985 letter to you adequately addresses the review comments of my June 28, 1985 memorandum. However, I an still unconvinced that pit leakage will not occur. There should be strict monthly monitoring of the leak detection system and if any fluid is found, it should be reported immediately to the Water Quality Division. If pond leakage is ever detected, the operating company should know that remedial action will be required.

TW/nc

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Marathon/Tierney S24 Evaporation Pit Expansion, Sweetwater County

ENGINEER: CEI Consulting Engineers
ATTN: Dave Potter
P.O. Box 2000
Casper, WY 82602

OWNER: Marathon Oil Company
P.O. Box 2659
Casper, WY 82602

WATER QUALITY DIVISION REFERENCE NUMBER: 85-130R

REVIEWING EVALUATOR: Jack Bedessem/ Tom Williams

DATE OF REVIEW: June 26, 1985

ACTION: Not authorized.

COMMENTS:

The revised plans and specifications have been reviewed. The following items still need to be addressed and/or resolved:

1. Liner design and construction. The Dames and Moore investigation indicated clay liner materials with a permeability of 8.7×10^{-8} cm/sec (recompacted) located at a depth of 4-5 feet. The report also recommends a minimum liner thickness of 18 inches.

   (a) The plans indicate only 8 inches of bottom and 6 inches of side slope material is to be scarified and recompacted. Address how this complies with the liner requirement: equivalent 3 feet of material having a permeability of 10^{-7} cm/sec. or less. Six to eight inches of 8.7×10^{-8} cm/sec material does not appear to be equivalent to 3 feet of 10^{-7} cm/sec or less.

   (b) The construction specifications (Section 203) require two undisturbed core samples be taken from the liner and tested for permeability. Water Quality Rules and Regulations require a minimum of one core sample per acre of the in-place liner be tested for permeability.

2. The soil description states that the soil contains numerous discontinuous calcite and gypsum crystals and small nodules. Your response indicates the addition of water (2-4% above optimum) will tend to dissolve the minerals, with the result being an increase in the

amount of hydrated calcium sulfate (or hydrated "lime") throughout the liner material. This mixing of the hydrated lime will prevent the movement of clay particles during downward percolation of water, thereby reducing the permeability.

(a) Provide documentation on the conclusion that the addition of water to the clay containing evaporite mineral deposits will reduce the permeability of the clay liner.

(b) Analyses of the produced water indicate ranges of total dissolved solids concentrations from 300 to 24,000 mg/l. Address the affect and changes of the clay properties in contact with the produced water. It may be necessary to run a permeability test using the produced water.

(c) The dissolution of water soluble mineral components such as gypsum have been known to increase permeability or create channels that get larger or longer with time. Address the potential of channelization both within and beneath the liner.

3. Based on the subsurface geology, it is very difficult to determine the direction of flow if leak were to occur. The leak detection system should therefore provide a means of detection on each side of the pond.

The revised plans indicate means of leak detection on only the north, east and west sides. In conjunction with the fact that the expanded cells may not be constructed until next year, at a minimum, a means for detecting a leak along the south, north & east sides should be implemented.

4. Produced water analyses. OK.

Submit the required information and revised drawings to this office in triplicate. If you have any questions please feel free to contact us.

JB/jw

Returned 7-2-85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-130R

DATE SUBMITTED FOR REVIEW MAY 2, 1985

NAME AND LOCATION OF FACILITY MARATHON TIERNEY 5Z4
EVAPORATION PIT EXPANSION
SWEETWATER COUNTY, WY

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Thomas R. Williams

TITLE GROUNDWATER ENGINEERING ASSOCIATE E.I.T. NO. 2Z4Z

DATE 6/28/85

ACCEPTED FOR RECORD _____
(Date)

_____
Groundwater Control Supervisor

MEMORANDUM

TO: Jack Bedessem, Southwest District Supervisor

FROM: Thomas R. Williams, Groundwater Engineering Associate TRW

DATE: June 28, 1985

SUBJECT: Review of Revised Permit to Construct Application Number 85-130R for the Marathon Tierney S24 Evaporation Pit Expansion in Sweetwater County, WY

During the soils investigation for the Marathon Tierney Evaporation Pit, numerous discontinuous crystals and nodules were encountered in several of the soil borings. CEI Consulting Engineers, in a letter to Steven Gerber dated May 1, 1985, state that these crystals and nodules are evaporite deposits consisting of gypsum, halite, calcium carbonate and anhydrite. CEI makes the following conclusions regarding the evaporite deposits:

> "The mixing of these minerals with the clay, through proper scarification, will disperse or distribute them throughout the liner section. The addition of water at 2 to 4% above optimum will tend to dissolve the minerals, with the result being an increase in the amount of hydrated calcium sulfate (or hydrated "lime") throughout the liner material. This mixing of the hydrated lime will prevent the movement of clay particles during downward percolation of water through the clay thereby reducing the permeability."

In discussing the problem of piping of clay-soil liners in the U.S. Environmental Protection Agency's 1983 publication titled "Lining of Waste Impoundment and Disposal Facilities", H. R. Cedergren's 1967 publication on "Seepage, Drainage and Flow Nets" is cited as follows:

> "...differential leaching of limestone, gypsum and other water soluble mineral components can lead to development of solution channels that get larger with time and substantially increase permeability. He warned not to underestimate the importance of minor soil and geologic details on the permeability of soil formations as they cause the majority of failures in dams, reservoirs and other hydraulic structures."

Please have the consultant provide documentation to support the conclusion that hydration of evaporite deposits will decrease the vertical permeability of the soil liner. If the premise of maintaining a soil liner that meets DEQ regulations cannot be fully supported by the consultant, the alternative of requiring a synthetic liner should be considered.

TW/nc
cc: A. J. Mancini

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Marathon/Tierney S24 Evaporation Pit Expansion, Sweetwater County

ENGINEER: CEI Consulting Engineers
P.O. Box 2000
Casper, WY 82602
ATTN: Dave Potter

OWNER: Marathon Oil Company
P.O. Box 2659
Casper, WY 82602

WATER QUALITY DIVISION REFERENCE NUMBER: 85-130

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

DATE OF REVIEW: April 17, 1985

ACTION: **Not authorized.**

COMMENTS:

An initial review of your plans and specifications has been completed. The following items need to be addressed and/or resolved.

1. It appears that the pond liner will consist of the existing in-place material below the natural grade and will be the same as the embankment material above the natural ground elevation. The permeability tests reported in the soils report were performed on samples taken from depths of 15 and 24 feet. These soils are not the same as those located closer to the surface and therefore may not be representative of the permeability of the soils to be used as liner material. Submit data supporting that the liner material in conjunction with the construction techniques will meet the state requirements which state that "the groundwater shall be protected from contamination by the wastewater with a liner equivalent to three feet of soil having a permeability of 10^{-7} cm/sec or less." This data should include permeability tests on the material to be used for the liner.

2. The soil description states that the soil contains numerous discontinuous calcite and gypsum crystals. Discuss the reliability of the liner as these crystals come in contact with the wastewater. Past experience has shown that with time the crystals will dissolve and alter the natural permeability of the liner.

AC

3. It does not appear that the proposed leak detection trench will be adequate. Because of the terrain and soil geology it is very difficult to determine the direction of flow should a leak occur. Also since there are no pervious sand layers to direct the leakage to the trench it is doubtful that such a shallow trench would detect any leakage. This is especially true since the trench is barely below the pond bottom. An effective leak detection system should extend past the bottom of the pond a sufficient distance to ensure water leaking from the pond would be intercepted. Also the leak detection system should provide a means of detection on each side of the pond system. Re-evaluate the leak detection system. If monitoring wells are to be used careful consideration must be given to the depth, number and location of the wells. Regardless of which system is used we believe one monitoring well should be located so the perched water identified in test holes 7 and 8 can be sampled.

4. It has been our understanding that this evaporation pit is for the disposal of produced water. Please explain why you have submitted "Pit Discharge Reserve Pit Drilling Fluids Parameters." Also explain why the metals were not tested for Tierniey 1-23 and Creston 1-28. It does not appear that the organics are of the concentrations that these tests could not be run.

Please submit your response to the above comments in triplicate. If you have any questions do not hesitate to contact me.

copy: File (2)
Plans(3)

Returned to Landen
4-4-85 (morning)

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-130 REPLACES 84-573

DATE SUBMITTED FOR REVIEW 3/28/85

NAME AND LOCATION OF FACILITY MARATHON EVAPORATION FACILITY EXPANSION
SEC. 24, T19N, R94W
SWEETWATER COUNTY, WYOMING

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

(X) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

( ) Comments attached.

COMMENTS INCLUDED IN MEMO ADDRESSING PERMIT TO CONSTRUCT APPLICATION NUMBER 84-573

SIGNED Thomas R. Williams

TITLE GROUNDWATER COMPLIANCE SPECIALIST E.I.T NO. 2242

DATE 4/3/85

ACCEPTED FOR RECORD [redacted] 4/3/85 (Date)

gjm
Groundwater Control Supervisor

Binder

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-131RRR
MA 14689

Silvergate, 4th Filing
(Name of Facility)

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

Cheyenne Building

2100 Pioneer Avenue

Cheyenne, WY 82001

to construct, install, or modify a municipal water distribution and wastewater collection facility according to the procedures and conditions of the application No. 85-131RRR. The facility is located in Section 33, 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:

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

William E. Garland
Administrator
Water Quality Division

June 17, 1983
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: AVI
1700 Estland Road
Cheyenne, WY 82001

Review of Plans and Specifications

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

PROJECT: Silvergate Addition, 4th Filing, Laramie Co.

ARCHITECT OR ENGINEER: James Voeller, AVI
1700 Westland Road, Cheyenne, WY 82001

APPLICANT:

WATER QUALITY DIVISION REFERENCE NUMBER: 85-131R

REVIEWING ENGINEER: Thomas S. Norman TSNorman

DATE OF REVIEW: April 26, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

1. An application form was not submitted.

2. Three sets of plans are required; only two were received.

3. The minimum slope for 8 inch sewers is 0.40%. Because of the way you calculate slope, the following actual sewer slopes do not meet our minimum requirements:

   MH 'CC' to MH 'DD'

   MH 'R; to MH 'Q'

   MH 'G' to MH that is replacing clean-out

THE STATE OF WYOMING

MIKE SULLIVAN
GOVERNOR

1890-1990 WYOMING CENTENNIAL A LASTING LEGACY

Department of Environmental Quality

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

Administration	Air Quality Division	Land Quality Division	Solid Waste Management Program	Water Quality Division
(307) 777-7937	(307) 777-7391	(307) 777-7756 FAX (307) 634-0799	(307) 777-7752	(307) 777-7781

July 30, 1990

John J. Horn
P.O. Box 1228
Jackson, Wyoming 83001

RE: Residential Heatpump Injection Well
Permit UIC 85-132
Teton County, Wyoming

Dear Mr. Horn:

The above referenced permit requires that an annual report be submitted detailing the status of the system. The last such report was received on February 9, 1987 and it did not detail the status of this system. This department must have the required reports. Enclosed please find copies of the above referenced permit and the required form GPC-7 on which to make the annual reports. Section G of the permit, found on page 4 describes the required annual reports.

Sincerely,

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

RL/jt

xc: Jake Strohman

5-3-85

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

May 2, 1985

Mr. John J. Horn
Powder Horn Ranch
Box 1228
Jackson, WY 83001

RE: GPC 85-132

Dear Mr. Horn:

Enclosed is your permit to inject, GPC 85-132, for a residential groundwater heat pump injection well.

Please note that section G states monitoring the discharge is not required by this permit. The only periodic report of section I required by this permit is an annual report. The annual report should be submitted within 30 days following the anniversary date of the permit, and should indicate the status of the operation (active or otherwise), any major modifications to the injection well or operation made during the year, and any problems that may have developed and how they were resolved.

The permittee should keep relevant on-site operation records, for review by the permitting authority as may be necessary or required. The type(s) of records kept for this operation to be determined by the permittee.

Form GPC 7 enclosed with this letter should accompany all reports.

If you have any questions, please feel free to contact Matt Langenfeld at (307) 777-7084.

Sincerely,

William L. Garland
Administrator

WLG/MML/nc
Enclosures
cc: A. J. Mancini, DEQ/WQD
Ed Baruth, DEQ/WQD

5-3-85

MA 14542

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

(X) New

( ) Modified

Permit Number:

GPC 85-132
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),

John H. Horn
Powder Horn Ranch
Box 1228
Jackson, WY 83001

is authorized to operate

a residential groundwater heat pump injection well at the Powder Horn Ranch main house, Jackson, Wyoming, Teton County, in W1/2, NW1/4 Section 5, T40N, R116W, as a miscellaneous discharge to groundwater

according to procedures and conditions of the application GPC 85-132 and requirements and other conditions of this permit.

This permit shall become effective on date of issuance.

William L. Garland

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

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

May 1, 1985
Date

Robert E. Sundin

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

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

May 2, 1985
Date

Rev. 4/85

FORM GPC 6

A. Discharge (Injection) Zone and Area of Review

The discharge (injection) zone is a subsurface gravel "bed" from the interval of 6 to 9 feet below the ground surface and located 35 feet south of the Powder Horn residence. The discharge is conveyed from the heat pump structure to an outside well. The outside well is a pit 9 feet deep, filled with varying layers of natural material; 3 feet of pea gravel at the bottom, overlain by 6 feet of fill dirt. The water table is reported at 6 feet below the surface in the spring and 10 feet below the surface in the fall.

The conveyance consists of a length of buried 3/4 inch type "K" copper line connected from the heat pump to a 40 foot length of 4 inch diameter perforated PVC water line. The PVC pipe has been placed horizontally in the well at a depth of 8 feet. The PVC pipe is cemented on both ends. Refer to the application for a schematic diagram.

The area of review is the circular area described as having its center in the vicinity of the subject well and a minimum radius of one-quarter mile. The permittee has reported a well in the area of review belonging to Lewis H. Wilson, being approximately 600 feet north by northwest of the Powder Horn Ranch. This well, U.W. Permit #23140, is 20 feet deep and has been driven in sand and gravel.

This well is designated for domestic use. The reinjection of water in the groundwater heat pump injection well should have no impact on the quality of the water coming from this well, inasmuch as the reinjected water is from a closed system and is subjected to no influences which would cause a change in characteristics other than temperature.

B. Groundwater Classification

Groundwater in the recharge/discharge zone is classified as Class I. The groundwater is to be protected for its existing and potential uses. Any discharge into a Class I groundwater of the state shall not result in variations in the range of any parameter, or concentrations or constituents in excess of the standards (Water Quality Rules and Regulations, Chapter VIII) at any place or places of withdrawal or natural flow to the surface.

C. Authorized Operations

The permittee is authorized to reinject natural groundwater withdrawn for heat pump use. Groundwater will be utilized in a completely enclosed system. The heat pump and injection well system were constructed in 1983.

The permittee has reported that the discharge will vary, with a winter maximum of 20 gallons per minute. A minimum temperature of 40°F and a maximum temperature of 44°F is reported.

No other use for or by the discharge (injection) well is authorized by this permit.

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:

None required by this permit

G. Requirements for Monitoring the Discharge

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

Monitoring the discharge is not required by this permit. The only periodic report of Section I required by this permit is an annual report. The annual report should be submitted within 30 days following the anniversary date of the permit, and should indicate the status of the operation (active or otherwise), any major modifications to the injection well or operation made during the year, and any problems that may have developed and how they were resolved.

Note "Signatories Requirement" on page 8 of this permit.

The permittee should keep relevant on-site operation records, for review by the permitting authority as may be necessary or required. The type(s) of records kept for this operation to be determined by the permittee.

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.

Sample collection and analysis not required unless prior written notification is provided by the Administrator.

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

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

Item I.10. is 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.

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 ten (10) years by the Administrator.

Public notice is not required for this permit.

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:

Not required for this permit.

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

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.

L. Abandonment

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

The discharge (injection) well will cease operation when the operation of the associated heat pump is permanently discontinued. Abandonment of this injection well will conform to the then-current State regulations and requirements.

M. Duties of the Permittee

It is a duty of the permittee to:

1. Comply with all permit conditions;

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

3. Take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;

4. Furnish to the Administrator within a reasonable time, any information which the Administrator may request to determine whether cause exists for

modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit; and furnish to the Administrator, upon request, copies of records required to be kept by this permit.

N. Financial Responsibility

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

Certification of financial responsibility is waived.

O. Special measures the Director finds necessary:

This permit does not over-ride local ordinances.

P. Special permit conditions:

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

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

Q. Signatories Requirement

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

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

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

For a municipality, State, Federal or other public agency -- by either a principal executive officer or ranking elected official; or

By a duly authorized representative for any of the above. A person is a duly authorized representative only if:

1. The authorization is made in writing by one of the described principals;

2. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

3. The written authorization is submitted to the Administrator.

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Administrator prior to or

together with any reports or information, to be signed by an authorized representative.

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

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

R. Noncompliance

Any permit noncompliance constitutes a violation of the permit.

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

S. Permit Transfer

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

T. Responsibilities

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

U. Property Rights

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

V. Severability

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

4-10

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

April 9, 1985

CERTIFIED

Mr. John J. Horn
Powderhorn Ranch
Box 1228
Jackson, WY 83001

RE: GPC 85-132

Dear Mr. Horn:

The Department of Environmental Quality, Water Quality Division, is in receipt of your letter dated April 5, 1985, in response to my letter dated March 18, 1985. This letter does not address all of the questions put forth in my letter.

Please submit construction specifications and procedures for your heat pump injection well including a cementing and casing program, surface and subsurface construction details, total depth, interval of perforations, gravel pack, method of excavation, groundwater elevation, and method of conveyance. A drawing showing the complete injection well and method of conveyance would help illustrate these construction specifications. Please submit this information within 15 days of receipt of this letter.

If you have any questions, please feel free to contact me at (307) 777-7084.

Sincerely,

Matt Langenfeld

Matthew M. Langenfeld
Groundwater Compliance Specialist

MML/nc

cc: Ed Baruth, DEQ/WQD, Lander

3-18-85

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

March 18, 1985

CERTIFIED

John J. Horn
Powderhorn Ranch
Box 1228
Jackson, WY 83001

RE: GPC 85-132

Dear John:

The Department of Environmental Quality, Water Quality Division, is in receipt of your application for a subsurface discharge (injection) permit. The following additional information is necessary before the permit can be completed:

1. Number name and location of all producing wells and injection wells.
2. Construction specifications and procedures including a cementing and casing program and subsurface construction details.
3. Identify building 1100 and 1125 as found on your topographic map.
4. Distances from your residence to the injection and production wells.
5. State engineer permit reference number for your producing well.
6. Approximate temperature of your discharge water.

Please submit this information within 30 days of receipt of this letter. If you have any questions, please feel free to contact me at (307) 777-7084.

Sincerely,

Matt Langenfeld

Matthew M. Langenfeld
Groundwater Compliance Specialist

MML/nc

cc: Ed Baruth, DEQ/WQD, Lander

4-10-85

PERMIT TO CONSTRUCT

/x/ New

/ / Renewal

/ / Modified

Permit No. 85-133R

MA 14542

Althoff, Inc.
Wash Plant Holding Ponds
(Name of Facility)

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

Althoff, Inc.

P.O. Box 2017

Cody, WY 82414

to construct, install, or modify a gravel wash plant holding pond facility according to the procedures and conditions of the application No. 85-133R. The facility is located in Secs. 19 and 24, T53N, R101W 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 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:

REGISTERED PROFESSIONAL ENGINEER
WILLIAM L. GARLAND
No. 4479
STATE OF WYOMING

William L. Garland
Administrator
Water Quality Division

April 30, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

RECEIVED
NOV 27 1985
WATER QUALITY DIVISION
WYOMING

horna
85.13f

November 25, 1985

Western Sun Electric, Inc.
P.O. Box 653
Big Piney, WY 83113

Dear Gentlemen:

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 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 and Regulations, must be followed.

Sincerely,

William L. Garland

William L. Garland
Administrator

WLG/BL/jw

File: Sub-Little Co.
General File

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

210 LINCOLN STREET LANDER, WYOMING 82520 TELEPHONE 307-332-3144

November 12, 1985

CERTIFIED P 399 271 386

Western Sun Electric, Inc.
P.O. Box 653
Big Piney, WY 83113

Dear Gentlemen:

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

Facility Name: Western Sun Electric Septic Tank/Leach Field

DEQ/WQD Reference Number: 85-134

Engineering Consultant: Keith McNinch

DEQ/WQD Review Engineer: Jack Bedessem/Bill Locke

Date of DEQ/WQD Review: 4-23-85

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

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

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Western Sun Electric Disposal System
Sublette County

ENGINEER: Keith McNinch
P.O. Box 633
Big Piney, WY 83113

OWNER: Western Sun Electric, Inc.
P.O. Box 653
Big Piney, WY 83113

RECEIVED
APR 29 1985
WATER QUALITY DIVISION
WYOMING

WATER QUALITY DIVISION REFERENCE NUMBER: 85-134

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

DATE OF REVIEW: April 23, 1985

ACTION: **Not authorized.**

COMMENTS:

An initial review of your plans and specifications has been completed. The following items need to be addressed and/or resolved:

1. Absorption system cannot be located beneath parking lots, roadways or other similarly compacted areas. Identify access and parking areas.

2. The water depth shall be no less than four feet nor greater than six feet. The profile view of the septic tank shows the liquid depth as a minimum of 2.5 feet and a maximum of 5 feet. Clarify the liquid depth.

3. The outlet shall be provided with a tee or baffle that extends into the middle third of the water depth. Provide dimension to verify this.

4. Submit septic tank manufacturer's standard detail with dimensions.

5. Pump out pipe must be a minimum of 6 inches in diameter.

6. Piping in horizontally constructed absorption systems shall have a maximum slope of three inches per 100 feet. The bottom of soil absorption systems shall be level.

Please submit your response to the above items in triplicate. If you have any questions do not hesitate to call.

AC

copy: File (2)
Plans (3)

9-29-86

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

September 30, 1986

Mayor Tim Conner
Town of Pine Bluffs
P.O. Box 378
Pine Bluffs, WY 82082

RE: O & M Manual - Wastewater Facilities, DEQ/WQD Ref. No. 85-135RRRR

Dear Mayor Conner:

We have received the final O & M manual for the Town of Pine Bluffs and find that it meets the requirements of construction permit 85-135RRRR. This submittal also satisfies the violation that was pending against the Town of Pine Bluffs.

Sincerely,

Thomas S Norman

Thomas S. Norman
Southeast District Supervisor

TSN/nc
cc: Charles Haas
Wells Engineering
P.O. Box 554
Gering, NE 69341

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

June 9, 1986

Charles A. Haas
Wells Engineering
P O Box 554
Gering, NE 69341

RE: Pine Bluffs Wastewater Treatment Plant O & M Manual, DEQ/WQD Ref. No. 85-135

Dear Mr. Haas:

The Water Quality Division has reviewed the revisions to the Pine Bluffs O&M Manual. Upon receipt of the following two items, the Water Quality Division will be able to approve the O&M manual.

1. A copy of the final O&M manual with all the agreed revisions.

2. A commitment letter from the town regarding the equipment identified in the manual.

The new schedule for groundwater sampling as identified in your May 23, 1986 letter is acceptable.

Sincerely,

Tom

Thomas S. Norman
Engineering Area Evaluator

TSN/pjb
cc: Town of Pine Bluffs

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

April 28, 1986

Charles A. Haas
Wells Engineering
P O Box 554
Gering, NE 69341

RE: Pine Bluffs wastewater treatment plant O&M manual, DEQ/WQD Ref. No. 85-135

Dear Mr. Haas:

The Water Quality Division has reviewed the draft O&M manual for the Pine Bluffs wastewater treatment facility. The review comments are attached. Once these comments are adequately addressed, final copies must be sent to the town and the Water Quality Division. The final O&M manual must be approved by the Water Quality Division prior to start-up.

Sincerely,

Thomas S. Norman
Engineering Evaluator

TSN/pjb

cc: Town of Pine Bluffs

Town of Pine Bluffs O&M Manual Wastewater Treatment Facilities

Review Comments

1. The O&M Manual should be in a 3-ring binder to encourage continual updating by the Town.

2. Specific equipment is identified in the manual as being necessary to operate and maintain the facility (i.e. protective clothing, safety equipment, emergency equipment, field sampling equipment, spare parts, etc). The Water Quality Division will need a commitment from the Town that this equipment will be purchased. If funds are limited, a priority listing with a time schedule would be acceptable.

3. Page 111-6. The 'plus' sign should be a 'division' sign.

4. Page 111-7. All operators don't need to be certified. For Pine Bluffs, only the chief operator and the backup operator need to be certified.

5. Page 111-8. Operators only need to be recertified every three years.
Item 3) correct to "require that it's operators be certified."

6. Page 111-10. John Carter is no longer the correct contact for WWQ & PCA. A more consistent contact is the association's secretary - Dorothy Shoup, City of Rawlins.

7. Page VII-2. Delete Mr. Mancini's named and just address to the Groundwater Section.

8. Page VIII-7.

   a. Same as item #7.

   b. The equation could be made simpler by calculating the constants into one constant. Thereby leaving only the depth time a single constant.

   c. Are these wells 6-inch or 12-inch diameter? I thought they were 6-inch which would make radius 3-inches.

9. Page IX-26, 27. On cells 2 and 3, the effluent from the primary cell could be used to fill the cells to the 2-foot level rather than the well water.

10. Page IX-28. I believe that spring and fall odors are due to "turnover" of the stratified layers rather than bacterial activity.

11. Page I-3,7. Pine Bluffs lagoon are considered facultative and not aerobic lagoons. Aerobic lagoons are only 2-3 feet deep.

Groundwater Comments

(Phil Pucel)

The manual should specify:

12. Proper recording methods for field measurements. The time of the measurements of casing volumes pumped and the volume pumped up to the time of measurements should be recorded alongside the readings.

13. The procedure for cleaning meters.

14. The importance of maintaining the wells' integrity and protection from contamination at the surface.

15. D.O. is not a required field parameter.

16. On page VIII-8, Section C, it should be noted that well purging continues until the field parameter measurements are stabilized.

WELLS ENGINEERS, INC.
1915 TENTH STREET
P.O. BOX 554
GERING, NEBRASKA 69341
(308) 436-7157

RECEIVED
JUL 16 1985
WATER QUALITY DIVISION
WYOMING

Laramie Co.
5-135RRR

July 15, 1985

Re: Pine Bluffs, Wyoming
Waste Treatment Facility
WE No. 840253

Wyoming Department of Environmental Quality
Herschler Building
Cheyenne, Wyoming 82002

Attn: Mr. Thomas Norman

Dear Mr. Norman:

Please be advised that construction has commenced on the above referenced project as of July 8, 1985 and will be completed 150 consecutive calendar days thereafter.

Should you have any questions, please feel free to contact this office.

Very truly yours,

WELLS ENGINEERS, INC.

Stephen O. Sandvik

Stephen O. Sandvik, P.E.

SOS:jkh

CC: File

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-135RRRR

MA 14542

Pine Bluffs Wastewater Treatment Facility
(Name of Facility)

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

Town of Pine Bluffs

P.O. Box 378

Pine Bluffs, WY 82082

to construct, install, or modify a municipal wastewater treatment facility (3 cell discharging lagoon) facility according to the procedures and conditions of the application No. 85-135RRRR. The facility is located in Section 3 and 10, T14N, R60W 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.

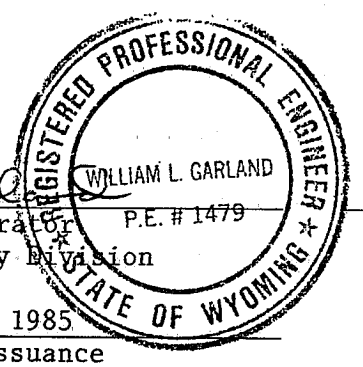
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions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



William L. Garland
Administrator
Water Quality Division

Robert E. Sundin
Director
Dept. of Environmental Quality

July 3, 1985
Date of Issuance

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

cc: Stephen O. Sandvik
Wells Engineers, Inc.
P.O. Box 554
Gering, NE 69341

7-8

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

July 5, 1985

Mr. Chip Haas
Wells Engineers, Inc.
P.O. Box 554
Gering, NE 69341

RE: Pine Bluffs Wastewater Facility, DEQ/WQD Ref. No. 85-135RRRR

Dear Chip:

Enclosed is the permit to construct for the Pine Bluffs Wastewater Facility. Also enclosed is a memoradum outlining some additional information that will need to be addressed in the O & M Manual.

Please call if you have any questions.

Sincerely,

Thomas S Norman

Thomas S. Norman
Water Quality Engineer

TSN/nc
Enclosures

cc: Tom Williams

F 85-135RRR

MEMORANDUM

TO: Thomas S. Norman, Water Quality Engineer

FROM: Thomas R. Williams, Groundwater Engineering Associate TRW

DATE: July 2, 1985

SUBJECT: Groundwater Review for the Pine Bluffs Wastewater Treatment Facility Operation and Maintenance Manual

I have reviewed the groundwater sampling plan for the Pine Bluffs Wastewater Treatment Facility for consistency with current groundwater protection procedures and requirements. The following additions should be made to the sampling plan before it is incorporated into the Operation and Maintenance Manual:

1. Well evacuation - After the static water level measurement has been taken, at least three casing volumes of water should be evacuated from each well prior to sampling. One casing volume of water is calculated using the following equation:

$$\pi \times r^2 \times d \times \frac{230 \text{ in}^3}{\text{Gallon}} = \frac{\text{Gallons}}{\text{Casing Volume}}$$

Where r = radius of well in inches
And d = amount of standing water in inches
= total depth of well in inches - static water level in inches

If the well does not recharge fast enough to remove three casing volumes of water, it should be pumped dry and allowed to recharge before the water samples are collected. Well evacuation information should be included with the records that are kept during each well sampling.

2. Equipment decontamination - All equipment used during the sampling should be decontaminated with soap and triple rinsed with deionized water between wells. The submersible pump should be thoroughly flushed with deionized water.

3. The amount of suspended sediment in the water samples should be minimized. After the well has been evacuated, pump the water into a stainless steel bucket. Decant the water from the bucket into the sample containers. Decontaminate the bucket along with the other sampling equipment.

4. Records - The records listed in the sampling plan that are obtained during each sampling event should be kept on-site at the wastewater treatment facility and be available for review by an authorized representative of the Wyoming Department of Environmental Quality.

5. Quarterly groundwater sampling results should be submitted to the following person within 30 days from the end of each quarter:

A. J. Mancini
Wyoming Department of Environmental Quality
Water Quality Division
Herschler Building, 4th Floor West
122 West 25th Street
Cheyenne, WY 82002

6. Ph and conductivity meters should be standardized before use. The Operation and Maintenance Manual should include a section describing procedures for calibrating these field instruments.

TW/nc

cc: A. J. Mancini
Phil Pucel

85-135RRRR
7-3

MEMORANDUM

TO: Thomas S. Norman, Water Quality Engineer

FROM: Thomas R. Williams, Groundwater Engineering Associate TRW

DATE: July 2, 1985

SUBJECT: Groundwater Review for the Pine Bluffs Wastewater Treatment Facility Operation and Maintenance Manual

I have reviewed the groundwater sampling plan for the Pine Bluffs Wastewater Treatment Facility for consistency with current groundwater protection procedures and requirements. The following additions should be made to the sampling plan before it is incorporated into the Operation and Maintenance Manual:

1. Well evacuation - After the static water level measurement has been taken, at least three casing volumes of water should be evacuated from each well prior to sampling. One casing volume of water is calculated using the following equation:

$$\pi \times r^2 \times d \times \frac{\text{GALLON}/230\ \text{in}^3}{\text{Gallon}} = \frac{\text{Gallons}}{\text{Casing Volume}}$$

Where r = radius of well in inches
And d = amount of standing water in inches
= total depth of well in inches - static water level in inches

If the well does not recharge fast enough to remove three casing volumes of water, it should be pumped dry and allowed to recharge before the water samples are collected. Well evacuation information should be included with the records that are kept during each well sampling.

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A. J. Mancini
Wyoming Department of Environmental Quality
Water Quality Division
Herschler Building, 4th Floor West
122 West 25th Street
Cheyenne, WY 82002

6. Ph and conductivity meters should be standardized before use. The Operation and Maintenance Manual should include a section describing procedures for calibrating these field instruments.

TW/nc

cc: A. J. Mancini
Phil Pucel

6-20

Review of Plans and Specifications

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

PROJECT: Pine Bluffs Waste Treatment Facility, Laramie Co.

ARCHITECT OR ENGINEER: Stephen O. Sandvik, Wells Engineers, Inc.
P.O. Box 554, Gering, NE 69341

APPLICANT: Town of Pine Bluffs
P.O. Box 378, Pine Bluffs, WY 82082

WATER QUALITY DIVISION REFERENCE NUMBER: 85-135RR

REVIEWING ENGINEER: Thomas S. Norman TSN

DATE OF REVIEW: June 20, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

Enclosed are the comments from Phil Pucel of the groundwater section. Please feel free to contact him directly if you have questions.

Water Quality Division
Groundwater Section
Permit Application Review

Application Number 85-135 RRR

Date Submitted For Review 6-18-85

Name and Location of Facility Pine Bluffs
Wastewater Treatment Facility
Laramie Co

I have reveiwed the plans and specifications with regard to all aspects of groundwater quality and find the following:

[ ] No Comment. The submittal is consistent with current groundwater protection procedures and requirements.

[X] Comments attached.

Signed Phil Pucel

Title WQ Engineer

Date 6-18-85

Approved 6-19-85
(Date)

(Signed)
Groundwater Control Supervisor

To: Tom Norman
From: Phil Pucel
Subject: Pine Bluffs Waste Treatment Facilities
#85-135RR
June 13, 1985 letter from Wells Engineers, Inc. to DEQ re. groundwater section comments dated May 20, 1985.

Introduction

Six comments were forwarded in the referenced DEQ memo to file. The second comment requested that a detailed sampling program be specified in order to assure that useable data is collected during baseline and operational monitoring. The comments also recommended that the full suite of parameters would be sampled quarterly for one year to establish baseline. The technical specifications should aslo be explicit in specifying sampling procedures, sample preservation techniques, record keeping, chain of custody, and reporting.

Wells' response

The contractor's response does not address the comments concerning the quarterly baseline sampling and the written submittal of the details of the baseline sampling program. The June 13 letter only mentions that the sampling procedures will be coordinated with Wells, the testing lab, and DEQ. The coordination of activities is commendable and necessary, but the groundwater section continues to recommend a sampling plan so that representative data collected with a degree of quality assurance is provided.

Baseline

If the requirements for baseline sampling are too burdensome for Wells or the Town, then some adjustment may be possible. Perhaps, a reduction in the total number of baseline samples could be made upon a review of each quarter's data. However, it is important to keep in mind that a paucity of baseline data often results in subsequent difficulties in interpreting impacts to groundwater.

Operation and Maintenance Manual

This manual should include the baseline sampling procedures and any available results of those sampling events, field data forms, graphs for plotting field and lab data, and a list of the equipment needed for sampling.

_ing

Observation of the drilling would be useful if staff scheduling can accomodate the activity.

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality
Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

May 30, 1985

Stephen O. Sandvik, P.E.
Wells Engineers, Inc.
P.O. Box 554
Gering, NE 69341

RE: Waste Treatment Facilities, Town of Pine Bluffs, DEQ/WQD Reference Number 85-135RR

Dear Mr. Sandvik:

This office has reviewed further the plans and specifications, and the project design memo for this project. Your design and the review by this office was based upon the assumption that the NPDES permit had been or would be modified to a BOD5 limit of 45 mg/l. An investigation into the permit shows that the NPDES permit has not been modified and an application to modify the permit has not been received. The permit limit for BOD5 remains at 30 mg/l.

The plans and specifications submitted to this office are for a system which appears to meet or exceed the minimum state standards for a lagoon with the current permit limits. Therefore, the size of the proposed system would not cause a concern for this office with respect to the Farm Loan Board grant funds involved.

If the town desires to pursue modifying the permit to reduce the size and cost of the facilities, you would need to contact John Wagner of this office at (307) 777-7082 for information regarding the NPDES permit process.

Sincerely,

Alan Edwards

Alan Edwards
Engineering/Grants Evaluator

AE/nc

cc: Timothy Conner, Mayor, Pine Bluffs
Jerry Placzek, Department of Public Lands
Tom Norman, DEQ/WQD, Cheyenne
File

5-22-85

Review of Plans and Specifications

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

PROJECT: Pine Bluffs Waste Treatment Facility, Laramie Co.

ARCHITECT OR ENGINEER: Wells Engineer, Inc.
P.O. Box 554, Gering, NE 69341

APPLICANT: Town of Pine Bluffs
P.O. Box 378, Pine Bluffs, WY 82082

WATER QUALITY DIVISION REFERENCE NUMBER: 85-135RR

REVIEWING ENGINEER: Thomas S. Norman TSN

DATE OF REVIEW: May 21, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

Attached are some additional comments from the groundwater review section. The appropriate place to address some of these items may not be in the specifications if the Town will be doing the work. The O&M manual may be more appropriate. However, we need sufficient detail so that the Town understands and agrees to the monitoring requirements.

TSN/nc

MEMORANDUM

TO: File

FROM: Phil Pucel phil

DATE: May 20, 1985

SUBJECT: Pine Bluffs Waste Treatment Facilities

1. In 8.03 Testing, the parameter list may be abbreviated by eliminating:

   Aluminum
   Beryllium
   Boron
   Cobalt

2. The technical specifications document fails to convey the full details for baseline and operating groundwater quality data collection as specified in the DEQ review letter of April 30, 1985. Even though a quarterly review of data may result in a reduction in the parameter list, the technical specifications should specify that the full suite of parameters will be sampled quarterly for one year to establish baseline.

   The technical specifications should also be explicit in specifying sampling procedures, sample preservation techniques, record keeping, chain of custody, and reporting.

3. Data will be reported to DEQ WQD within 30 days from the end of each quarter.

4. Due to physical limitations at this site, a deviation is granted from the specified minimum depth of seal required in Chapter XI Section 65(a). The surface seal will be designed to prevent contamination of the well by precipitation, pond, or other surficial sources of fluid.

5. It is recommended that a third monitor well be located south of lagoon #3.

6. Well construction specifications are needed in order to assure that the monitor wells are installed in a manner that will allow the collection of representative samples from the shallow aquifer. Exact depths and screened intervals are difficult to recommend due to the limited depth of the borings, the potential for mounding, and the lack of information on high and low groundwater levels. Generally, the screened interval should intersect the water table throughout the year.

PP/nc

To Tom N 5-20-85

Water Quality Division
Groundwater Section
Permit Application Review

Application Number 85-135 RR

Date Submitted For Review May 15 1985

Name and Location of Facility Pine Bluffs
~~Town Sewage Lagoons~~
Waste Treatment Facilities

I have reveiwed the plans and specifications with regard to all aspects of groundwater quality and find the following:

[ ] No Comment. The submittal is consistent with current groundwater protection procedures and requirements.

[✓] Comments attached.

Signed Phil

Title Engr

Date May 17 1985

Approved 5/17/85
(Date)

(Signed)
Groundwater Control Supervisor

MEMORANDUM

TO: File

FROM: Phil Pucel phil

DATE: May 20, 1985

SUBJECT: Pine Bluffs Waste Treatment Facilities

1. In 8.03 Testing, the parameter list may be abbreviated by eliminating:

   Aluminum
   Beryllium
   Boron
   Cobalt

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PP/nc

5-1-85

Review of Plans and Specifications

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

PROJECT: Pine Bluffs Waste Treatment Facility, Laramie Co.

ARCHITECT OR ENGINEER: Wells Engineer, Inc.
P.O. Box 554, Gering, NE 69341

APPLICANT: Town of Pine Bluffs
P.O. Box 378, Pine Bluffs, WY 82082

WATER QUALITY DIVISION REFERENCE NUMBER: 85-135R

REVIEWING ENGINEER: Thomas S. Norman TSNorman

DATE OF REVIEW: April 30, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

1. Operation and maintenance manuals are required in accordance with Section 24 of Chapter XI, Water Quality Rules and Regulations. A draft manual is required at 50% of completion and final approval is required prior to plant startup.

2. The application must address the reclamation of the abandoned wastewater treatment or disposal facilities. Please see attached memo. Basically if the abandoned lagoon is not setting in groundwater, we are looking for the sludge to be dried and incorporated with soil. Then a 6 inch cap of tight soil should be placed over the top and graded to avoid ponding.

3. Plans, sheet 2/11: I question the necessity of the manhole between the flow measurement structure and the wet pit. I see no reason why these lines can't go directly into the wet pit.

   The flow measurement structure is mislabeled as the "new out-fall structure".

4. Plans, sheet 5/11:

   a. It is recommended that the "2nd pump on" float be placed at the same level as the alarm. This will allow the immediate detection of the 1st pump failure.

   b. Hopper walls of wet wells must be sloped at no less than 1.75:1.

   c. Suction intakes shall be bell-mouthed.

   d. Cleanouts must be provided for pump suctions.

5. Plans, sheet 9/11: The drain line from cell #1 to cell #2 will not be effective as the water level in the cell cannot drop below the water level in cell #2. Same comment for drain line from cell #2 to cell #3.

I suppose if you closed the effluent line out of each structure, you could use the structure as a pumping chamber to drain the pond.

6. Plans, sheet 9/11: The influent structure appears to be more complicated than necessary. The design will result in accumulation of floating solids on both sides of the structure. It is suggested that an influent structure be provided which allows the free flow of wastewater.

   The design should prevent splashing of the sewage out of the influent structure.

7. A C-factor of 140 is generally used only for water mains. A C-factor of 120 is more appropriate for wastewater calculations.

8. Is the riprap adequately graded to prevent the washing out of fines underneath it?

9. The following groundwater comments were received from Phil Pucel of the Water Quality Division groundwater section:

   a. Under Technical Specifications, Section 8.00, Groundwater Monitoring Wells, the scope of work should specify that an adequate number of wells will be installed. The number of wells will probably range between 2 and 4.

   b. In 8.03, Testing, the parameters tested to establish baseline should include those listed below:

Aluminum	Fluoride	Sulfate
Ammonia	Iron	Total Dissolved Solids
Arsenic	Lead	Zinc
Barium	Manganese	pH
Beryllium	Mercury	Magnesium
Boron	Nickel	Sodium
Cadmium	Nitrate	Calcium
Chloride	Oil & Grease	Potassium
Chromium	Phenol	Carbonate
Cobalt	Selenium	Bicarbonate
Copper	Silver	

   Baseline conditions are established by the collection and analysis of an adequate number of samples; usually numbering four quarterly sampling events. However, the baseline sampling frequency and the list of parameters can be reviewed quarterly, provided the results are received in a timely manner. A reduced parameter list may be the result of the quarterly review. An operational monitoring program usually includes an abbreviated list of parameters based upon the results of the baseline sampling.

   The sampling procedures, sample preservation techniques, record keeping, chain of custody, data analyses, and reporting schedule should be specified and included in the Operation and Maintenance Manual. Proper sampling procedures are critical both to the establishment of baseline conditions and to the monitoring of impacts to groundwater. For a full discussion of sampling protocol, consult the "Procedures Manual for Groundwater Monitoring at Solid Waste Disposal Facilities" SW-611, December 1980, EPA; or contact Tom Williams at 777-7085.

   Recommendations on the location and depth of groundwater monitor points are contingent upon the presentation of borings locations and geologic cross-sections, if available.

10. The following comments were received from Alan Edwards who is a Water Quality Division representative to the Farm Loan Board:

    a. The plans indicate that riprap will be placed on all interior slopes of each cell of the lagoon system. Slope protection is recognized as being an important factor in lagoon operation. It is questioned, though, if slope protection (riprap) would be necessary for all interior slopes of the lagoon system.

    b. A detention time of 120 days needs to be provided to meet a discharge limit of 45 BOD5 under the wastewater design standards. The lagoon system was designed to provide 150 days detention which may be a reasonable, conservative design. The lagoon sizing would indicate that the detention time is actually closer to 200 days. The engineer should verify the sizing. if it is intended to construct a facility with a detention time of 200 days, the reasons for doing so should be identified to support the increased costs.

11. This project has been forwarded to the Department of Fire Prevention and Electrical Safety and the Wyoming OHSA for their review.

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: Water Quality Division Professional Staff

FROM: William L. Garland wlg

DATE: April 2, 1985

SUBJECT: Reclamation of Abandoned Wastewater Treatment or Disposal Facilities

The Water Quality Division shall require the following whenever a wastewater treatment facility is abandoned:

1. Ponds, lagoons, etc shall be drained to facilitate drying of remaining sludges or, if the wastewater is not of a quality which can be discharged, they should be allowed to dry-out naturally (contact the NPDES section for restrictions on discharges);

2. Dried sludges shall be moved to a disposal site authorized by the Solid Waste Division or, if the owner wishes to leave the sludge in-place, the owner must submit the documentation necessary for the Groundwater Section to determine if a groundwater pollution problem could result;

3. Obvious health problems or hazardous conditions shall be eliminated. For example, manholes, wet wells, and other deep holes or pits shall be backfilled, chemical stores shall be removed from the site and properly disposed, etc.

4. Conditions which could cause future environmental problems shall be corrected. For example, non-vegetated areas which would be subject to water or wind erosion shall be re-seeded.

Normally, abandonment of an existing facility will be concurrent with construction of a new replacement facility. In such cases, the requirements for reclamation of the abandoned site should be part of the submission for the permit to construct the new facility. A permit to construct the new facility should not be issued unless the plans for reclamation of the abandoned site are satisfactory.

In cases where abandonment is not associated with construction of a new site the matter should be referred to the Engineering Supervisor (Jake Strohman) along with your recommendations for reclamation and your assessment of the environmental problems associated with abandonment of the facility. The Engineering Supervisor shall then be responsible for taking the steps necessary to insure that the site is properly reclaimed.

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-135R

DATE SUBMITTED FOR REVIEW 4-11-85

NAME AND LOCATION OF FACILITY Town of Pine Bluffs
Sec 3 + 10 T 14N R 60W

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(✓) Comments attached.

SIGNED Phil Parel

TITLE Engr

DATE 4-11-85

ACCEPTED FOR RECORD 4/12/85 (Date)

ajm
Groundwater Control Supervisor

Under Technical Specifications, Section 8.00, Groundwater Monitoring Wells, the scope of work should specify that an adequate number of wells will be installed. The number of wells will range between 2 and 4, probably

In 8.03, Testing, the parameters tested to establish ~~background~~ baseline should include those listed ~~in Chapter VIII, 40 CFR Parts 264 and 265~~ on the attachment. ~~Applicable.~~ ~~An adequate number of samples to establish~~ Baseline conditions ~~should be need to be~~ are established by the collection and analysis of an adequate number of samples; usually numbering four sampling events. However, ~~this~~ quarterly baseline sampling frequency and the ~~Saw~~ the list of parameters can be reviewed quarterly, provided the results are received in a timely manner. A reduced parameter list may be the result of the quarterly review. An operational monitoring program usually includes an abbreviated list of parameters based upon the results of the baseline sampling.

The sampling procedures, ~~pre~~ sample preservation techniques, recordkeeping, chain of custody, data analyses, and reporting schedule should be specified and included in the O & M manual. Proper sampling procedures are critical both to the establishment of baseline conditions and to the monitoring of impacts to groundwater. For a full discussion of ~~proper~~ sampling protocol, consult the "Procedures Manual for Ground Water Monitoring at Solid Waste Disposal Facilities." SW-611, Dec 1980, EPA; or contact Tom Williams at 777-7085.

Recommendations on the location and depth of groundwater monitor points are contingent upon the presentation of borings locations and geologic cross-sections, if available.

TABLE I

UNDERGROUND WATER CLASS Use Suitability Constituent or Parameter	I Domestic Concentration*	II Agriculture Concent.*	III Livestock Concent.*
Aluminum (Al)	---	5.0	5.0
Ammonia (NH_3-N)	0.5[8]	---	---
Arsenic (As)	0.05	0.1	0.2
Barium (Ba)	1.0	---	---
Beryllium (Be)	---	0.1	---
Boron (B)	0.75	0.75	5.0
Cadmium (Cd)	0.01	0.01	0.05
Chloride (Cl)	250.0	100.0	2000.0
Chromium (Cr)	0.05	0.1	0.05
Cobalt (Co)	---	0.05	1.0
Copper (Cu)	1.0	0.2	0.5
~~Cyanide (CN)~~	0.2	---	---
Fluoride (F)	1.4-2.4[7]	---	---
~~Hydrogen Sulfide~~ (H_2S)	0.05	---	---
Iron (Fe)	0.3	5.0	---
Lead (Pb)	0.05	5.0	0.1
~~Lithium (Li)~~	---	2.5	---
Manganese (Mn)	0.05	0.2	---
Mercury (Hg)	0.002	---	0.00005
Nickel (Ni)	---	0.2	---
Nitrate (NO_3-N)	10.0	---	---
~~Nitrite (NO_2-N)~~	1.0	---	10.0
(NO_3+NO_2)-N	---	---	100.0
Oil & Grease	Virtually Free	10.0	10.0
Phenol	0.001	---	---
Selenium (Se)	0.01	0.02	0.05
Silver (Ag)	0.05	---	---
Sulfate (SO_4)	250.0	200.0	3000.0
Total Dissolved Solids (TDS)	500.0	2000.0	5000.0
~~Uranium (U)~~	5.0	5.0	5.0
~~Vanadium (V)~~	---	0.1	0.1
Zinc (Zn)	5.0	2.0	25.0
pH	6.5-9.0s.u.	4.5-9.0s.u.	6.5-8.5s.u.
SODIUM CALCIUM ~~SAR~~ potassium	---	8	---
~~RSC~~	---	1.25 meq/l	---
Combined Total Radium 226 and Radium 228[9]	5pCi/l	5pCi/l	5pCi/l
Total Strontium 90	8pCi/l	8pCi/l	8pCi/l
Gross alpha particle radioactivity (including Radium 226 but excluding Radon and Uranium)[9]	15pCi/l	15pCi/l	15pCi/l

*mg/l, unless otherwise indicated

3-20-85

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

March 19, 1985

Mr. Bill Smith
Willard Given & Associates
115 East 22nd Street, Suite 208
Cheyenne, WY 82001

RE: Pine Bluffs Wastewater Facility, Electrical Plans, Ref. No. 85-135

Dear Mr. Smith:

The Water Quality Division has received the electrical plans for the wastewater facility for the Town of Pine Bluffs. We will not be able to review these plans until the complete set is submitted so that we can obtain an overall review of the project. Since our review of the electrical system will be quite general, we request you contact the Wyoming Fire Prevention and Electrical Safety Department for their review and approval.

Sincerely,

Thomas S. Norman

Thomas S. Norman
Water Quality Engineer

TSN/nc

3-29-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-136

MA 14542

Burn's Luther Avenue Water Improvements
(Name of Facility)

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

Town of Burns

P.O. Box 66

Burns, WY 82053

to construct, install, or modify a municipal water distribution facility according to the procedures and conditions of the application No. 85-136. The facility is located in Section 7, T14N, R62W 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:

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

William L. Garland
Administrator
Water Quality Division

March 21, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

This permit <u>does not</u> supercede the requirements for obtaining any permit from local agencies.

cc: Henry F. Sostrom
AVI p.c.
1700 Westland Road
Cheyenne, WY 82001

PERMIT TO CONSTRUCT

/ / New

/ / Renewal

/x/ Modified

Permit No. 85-137
MA 14542

6TH STREET PARK WATER DISTRIBUTION SYSTEM
(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 line replacement

facility according to the procedures and conditions of the application No. 85-137. The facility is located in Sec. 23, T.56N., R.84W.

in the County of Sheridan, in the State of Wyoming. This permit shall be effective for a period of two (2) years (five (5) years maximum) from the date of issuance of this permit.

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

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 301, 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:

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

William L. Garland
Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

April 3, 1982
Date of Issuance

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

xc: William A. Mentock
Engineering Inc.
45 E. Loucks, Suite 301
Sheridan, WY 82801

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

August 4, 1986

Whitlock Disposal
ATTN: Mr. Whitlock
P.O. Box 981
Powell, WY 82435

RE: Whitlock Wastewater Pond, Permit 85-138

Dear Mr. Whitlock:

Your application is considered inactive and is being returned since you have indicated that you do 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

WLG/SG/jw
cc: Norma Coulson, DEQ/WQD, Cheyenne

RECEIVED
AUG 5 1986
WATER QUALITY DIVISION
WYOMING

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

210 LINCOLN STREET LANDER, WYOMING 82520 TELEPHONE 307-332-3144

July 18, 1986

Whitlock Disposal
ATTN: Mr. Whitlock
P.O. Box 981
Powell, WY 82435

Dear Mr. Whitlock:

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: Whitlock Wastewater Pond

DEQ/WQD Reference Number: 85-138

Engineering Consultant: Overthrust Management

DEQ/WQD Review Engineer: Steve Gerber

Date of DEQ/WQD Review: 2-5-86

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

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

SG/jw

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

RECEIVED
FEB 10 1986
WATER QUALITY DIVISION
WYOMING

PROJECT: Whitlock Wastewater Pond

ENGINEER: Lowell Schellack
Overthrust Management
P.O. Box 2814
Jackson, WY 83001

OWNER: Whitlock Disposal
P.O. Box 981
Powell, WY 82435

WATER QUALITY DIVISION REFERENCE NUMBER: 85-138R

REVIEWING ENGINEER: Steven P. Gerber, P.E. and Tom Williams

DATE OF REVIEW: February 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. Based on the geologic environment at this site, monitor wells are not adequate for leak detection. Because of the fractured shale, leakage may travel along a very narrow band. For this reason a more reliable leak detection system must be developed. Two possibilities would be acceptable if properly designed. A trench keyed into the bentonite layer along the east edge would intercept any leakage from the pond. A second option would be to construct a leachate collection system under the pond. In any case, you must be aware that if any leakage is detected, the operation must be shut down, abandoned, and reclaimed.

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
copy: Tom Williams

C

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-138R

DATE SUBMITTED FOR REVIEW JANUARY 13, 1986

NAME AND LOCATION OF FACILITY WHITLOCK DISPOSAL FACILITY
BIG HORN COUNTY, WY

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED Thomas R. Williams

TITLE GROUNDWATER ENGINEERING ASSOCIATE E.I.T. # 2242

DATE 2/5/86

ACCEPTED FOR RECORD 2/5/86 (Date)

gg m
Groundwater Control Supervisor

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: Steve Gerber, Northwest District Engineering Supervisor

FROM: Thomas R. Williams, Groundwater Engineering Associate TRW

DATE: February 10, 1986

SUBJECT: Groundwater review of permit to construct application number 85-138R for the Whitlock Disposal Facility in Big Horn County, Wyoming

I have reviewed permit to construct application number 85-138R for the Whitlock Disposal Facility in Big Horn County, Wyoming for consistency with current groundwater protection procedures and requirements.

The geologic setting of the Whitlock disposal pits is not conducive to using monitoring wells to detect potential leakage from either pit. Shale deposits such as the Mowry Formation are often highly fractured. Although it is true that leakage from the pit would probably perch on one of the bentonite beds and migrate down the dip of the bed, fractures in the Mowry shale would provide preferential pathways for the pit fluids to move. Unless the monitoring wells happened to be completed along one of these fractures, the fluid might totally bypass the monitoring wells.

The potential for this scenario happening is increased because only four monitoring wells are proposed for the approximately 1100 foot length of the two pits. However, even if more monitoring wells were installed with a closer spacing between each well, the potential for pit leakage going undetected still would exist.

There are two alternative systems that could reliably monitor the possibility of pit leakage at this facility. They are:

1. A leachate collection trench running along the entire length of the eastern side of both pits. This trench would have to be keyed into a locally continuous bentonite bed that ran beneath each pit.

2. A leachate collection system beneath the bentonite liner in both pits.

Either of these systems would have to be sloped to a collection sump. Regular monitoring for fluids in these sumps would be required as a condition of the permit to construct. If fluids are ever detected in any of the collection sumps, discharge into that pit would have to cease immediately. If a water sample analysis showed that the fluid contained wastewater from the pit, the pit would have to be permanently closed and reclaimed in a manner acceptable to the Water Quality Division.

pjb

cc: 85-138R
A.J. Mancini

REVIEW OF PLANS AND SPECIFICATIONS

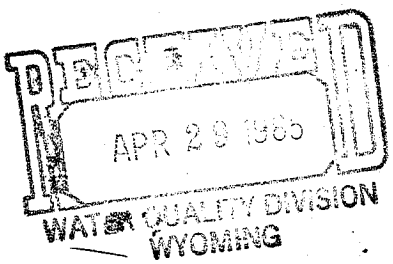
WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Whitlock Wastewater Pond

ENGINEER: Overthrust Management
ATTN: Lowell Schellack, Shel Codman
Box 2814
Jackson, WY 83001

OWNER: Whitlock Disposal
Box 981
Powell, WY 82435



WATER QUALITY DIVISION REFERENCE NUMBER: 85-138

REVIEWING EVALUATORS: Tom Williams, Tony Mancini, Ed Baruth Ed

DATE OF REVIEW: April 25, 1985

ACTION: **Not authorized.**

COMMENTS:

1. The proposed use of on-site bentonite materials for a 12" bentonite liner raises the following concerns:

a. On page 4 of the report, an operating plan for pit leakage is described. Provide more specifics on the electromagnetic survey that might be performed. Is there a record of success using this technique?

b. Is the bentonite that was analyzed the same bentonite that will be used as liner material? Will all the bentonite to be used be of equal quality and from the same location?

c. Maximum lifts for lining materials (or other dirt work), is 8". Address this in the bentonite liner specifications.

d. Concerning the specified liner integrity testing; find reprinted below a section from Chapter 11, from pages 77 and 78.

"Soil or bentonite liners used to protect groundwater quality shall meet the following criteria: Written certification that the soil liner was constructed in accordance with specifications shall be provided by a Wyoming registered professional engineer or an independent soils laboratory. Tests for water content and density shall be taken during application of each lift.

AC

Additionally, either permeability testing of undisturbed core samples from the in-place seal, or detailed tests such as particle size distribution and Atterburg limits confirming that the soil used in the liner construction was the same soil initially tested, shall be provided. In all cases, at least one test shall be provided per acre per lift, except for core sampling of the in-place liner, where one core of the completed liner shall be tested per acre."

e. The barrel testing should be accomplished with waste material. A detailed report of the test(s) should be submitted and evaluated prior to putting wastewater into the ponds. Further this department would like to witness the tests if possible.

f. We are concerned that the single analysis of bentonite material with a single waste fluid does not fully access the suitability of the liner proposal. Past documented increases in the permeability of a compacted clay liner due to waste liquids are usually associated with a shift in the pore size distribution toward more macropores. Characteristics which can alter soil flow properties include:

F.1. The dispersing/flocculating tendencies of the soil when contacted by the waste-liquid.

F.2. The alterations in the shrink/swell properties of the soil.

F.3. The change of pore-size distribution characteristics.

F.4. The dissolution/precipitation of chemical species, thus inducing an alteration of the proportion of soil volume available for flow.

F.5. The modification of the adsorption properties of the soils.

Therefore, more information is requested on both before and after chemical analysis of pit fluids on bentonite. Provide details on compaction of the tested 6" bentonite sample. Describe how a proposed permanent head of 19' of possible wastes correlates with 2' of wastes for 240 hours. The saturation of 2 inches of the 6 inch cylinder sample in 10 days, with a 2' head, suggests a possible permeable situation.

2. On page 8 of the Geologic Report prepared by Brian Noel, the following conclusion is made:

"If a monitoring well becomes required, a good location is on the south to southeast side of the south end of the pit area. This position should detect seepage due to gravity. It is assumed that fluids will try to migrate down-dip on bedding planes and also to move down the plunge of the structure until an equilibrium is reached."

It is recommended that monitoring Well #3 be moved further to the northwest to a point midway along Pit #2. An additional monitoring well should be added near the southeast corner of Pit #2 to detect any fluid movement down the plunge of the anticline. If any groundwater is encountered during the installation of the monitoring wells, samples should be taken to establish background water quality. These samples should be analyzed for the parameters listed in Table I of Chapter VIII of the Wyoming Water Quality Rules and Regulations excluding the radionuclides. (Find attached)

3. Monitoring well construction shown in Exhibit #2 is not in accordance with Part G of Chapter XI of Wyoming Water Quality Rules and Regulations. If the applicant has specific questions regarding proper monitoring well construction standards, please contact the DEQ/WQD groundwater section.

4. Provide details of an inlet structure for dumping of waste materials into the ponds. (Reference page 84, Chapter 11)

5. Provide a detail of the 18" CMP with headgate inter-pond control structure. Include provisions for erosion control of a discharge from the pipe.

6. Current regulations specify the flatest permittable inner dike slope to be 3:1 (horizontal/vertical). The minimum top of dike width is 8'. Please re-evaluate your 2:1 and 10' width design.

7. Name your plans to insure that no hazardous or other dangerous wastes will be allowed into the ponds.

8. List your method to transfer fluids from one pond to the other.

9. Can it be documented that the pits will be used only for drilling fluids as described in the application and will not accept other oil field wastes such as very saline fluids, polymers, other organic chemicals, drilling/production additives, etc.

10. Provide more complete dirt work specifications. The concerns listed in the below section from Chapter 11 (pages 84 and 85) need to be covered in your specification:

> "(d) Pond construction.
>
> (i) Soils used in constructing the pond bottom and dike cores (not including the liner) shall be relatively incompressible, have a low permeability, and be free from organic material or trash. The soil shall be compacted at a water content that will insure structural stability, minimize hydraulic seepage, and minimize settling. The soil shall provide an adequate foundation for the liner, if used.

(ii) On ponds that are not specified to receive an artificial liner, no rocks larger than six inches in length shall be permitted in any of the designated embankment.

On ponds that are specified to be lined with an artificial liner, rocks larger than six inches in length shall not be placed within five feet of the interior slope surface of any pond embankment. Material containing by volume less than 25 percent of rock larger than six inches and less than 12 inches in length may be placed in the remainder of the embankment."

11. The p.e. signature must cover all of the construction specifications for this application. Please provide complete certification for this application.

12. Concerns of the BLM need to be met. The DEQ/WQD will aid the BLM and the applicant to the maximum extent to provide a workable solution to any additional concerns.

13. For purposes of defining possible future liabilities, the DEQ/WQD requests information from the applicant on releases of all liens and claims on the site from WYO-BEN.

EB/jw
copy: Tony Mancini, DEQ/WQD, Cheyenne
Tom Williams, DEQ/WQD, Cheyenne
Jake Strohman, DEQ/WQD, Cheyenne
Gary Rosenlieb, BLM, Worland
Paul Meyer, BLM, Worland
Thomas Enright, BLM, Cody

TABLE I

GROUND WATER CLASS Use Suitability Constituent or Parameter	I Domestic Concentration*	II Agriculture Concent.*	III Livestock Concent.*
Aluminum (Al)	---	5.0	5.0
Ammonia (NH_3-N)	0.5[8]	---	---
Arsenic (As)	0.05	0.1	0.2
Barium (Ba)	1.0	---	---
Beryllium (Be)	---	0.1	---
Boron (B)	0.75	0.75	5.0
Cadmium (Cd)	0.01	0.01	0.05
Chloride (Cl)	250.0	100.0	2000.0
Chromium (Cr)	0.05	0.1	0.05
Cobalt (Co)	---	0.05	1.0
Copper (Cu)	1.0	0.2	0.5
Cyanide (CN)	0.2	---	---
Fluoride (F)	1.4-2.4[7]	---	---
Hydrogen Sulfide (H_2S)	0.05	---	---
Iron (Fe)	0.3	5.0	---
Lead (Pb)	0.05	5.0	0.1
Lithium (Li)	---	2.5	---
Manganese (Mn)	0.05	0.2	---
Mercury (Hg)	0.002	---	0.00005
Nickel (Ni)	---	0.2	---
Nitrate (NO_3-N)	10.0	---	---
Nitrite (NO_2-N)	1.0	---	10.0
(NO_3+NO_2)-N	---	---	100.0
Oil & Grease	Virtually Free	10.0	10.0
Phenol	0.001	---	---
Selenium (Se)	0.01	0.02	0.05
Silver (Ag)	0.05	---	---
Sulfate (SO_4)	250.0	200.0	3000.0
Total Dissolved Solids (TDS)	500.0	2000.0	5000.0
Uranium (U)	5.0	5.0	5.0
Vanadium (V)	---	0.1	0.1
Zinc (Zn)	5.0	2.0	25.0
pH	6.5-9.0s.u.	4.5-9.0s.u.	6.5-8.5s.u.
SAR	---	8	---
RSC	---	1.25 meq/l	---
Combined Total Radium 226 and Radium 228[9]	5pCi/l	5pCi/l	5pCi/l
Total Strontium 90	8pCi/l	8pCi/l	8pCi/l
Gross alpha particle radioactivity (including Radium 226 but excluding Radon and Uranium)[9]	15pCi/l	15pCi/l	15pCi/l

*mg/l, unless otherwise indicated

Returned to Lander 4-15-85

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

APPLICATION NUMBER 85-138

DATE SUBMITTED FOR REVIEW 3/21/85

NAME AND LOCATION OF FACILITY Whitlock Disposal Facility
Sec. 24, T 54N, R 95W
Big Horn Co.

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(X) Comments attached.

SIGNED AJM & Tom Williams

TITLE

DATE 4/12/85

ACCEPTED FOR RECORD 4/12/85 (Date)

AJM
Groundwater Control Supervisor

MEMORANDUM

TO: Ed Baruth

FROM: A. J. Mancini

DATE: April 12, 1985

SUBJECT: Comments on Application for Permit to Construct Whitlock Disposal Facility, Big Horn County, #85-138

These comments are made on the assumption that, if the facility is constructed as proposed, and if a barrel test(s) is accomplished, the test will not indicate liner(s) failure. It would be convenient if enough prior notice could be given so that the test might be witnessed. In any event, a detailed report of the test(s) should be submitted and evaluated prior to putting wastewater into the ponds.

On page 4 of the report, an operating plan for pit leakage is described. I would like more specifics on the electromagnetic survey that might be performed. Is there a record of success using this technique? How will fluid be transferred, if necessary? Will there be enough capacity for fluid transfer?

Is the bentonite that was analyzed the same bentonite that will be used as liner material? Will all the bentonite to be used be taken from the same location? In short, is one bentonite analysis sufficient for an evaluation of the liner material?

It is stated in the report that, "... the pit fluids used in the study are representative of drilling fluids used in the Big Horn area." Can it be documented that the pits will be used only for drilling fluids as described in the application and will not accept other oil field wastes such as very saline fluids, or polymers and other organic chemicals, or drilling/production aids such as corrosion inhibitors, oxygen scavengers and the like?

Additional comments by Tom Williams are also submitted as part of this review.

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: A. J. Mancini, Groundwater Control Supervisor

FROM: Thomas R. Williams, Groundwater Compliance Specialist TRW

DATE: April 11, 1985

SUBJECT: Comments on Permit to Construct application number 85-138 for the Whitlock Disposal Facility in Big Horn County, Wyoming

I have reviewed Permit to Construct application number 85-138 for the Whitlock Disposal Facility in Big Horn County, Wyoming for consistency with current groundwater protection procedures and requirements. I have these comments:

1) On page 8 of the Geologic Report prepared by Brain Noel, the following conclusion is made:

> "If a monitoring well becomes required, a good location is on the south to southeast side of the south end of the pit area. This position should detect seepage due to gravity. It is assumed that fluids will try to migrate down-dip on bedding planes and also to move down the plunge of the structure until an equilibrium is reached."

Monitoring Well #3 should be moved further to the northwest to a point midway along Pit #2. An additional monitoring well should be added near the southeast corner of Pit #2 to detect any fluid movement down the plunge of the anticline. If any groundwater is encountered during the installation of the monitoring wells, samples should be taken to establish background water quality. These samples should be analyzed for the parameters listed in Table I of Chapter VIII of the Wyoming Water Quality Rules and Regulations excluding the radionuclides.

Monitoring well construction shown in Exhibit #2 is not in accordance with Part G of Chapter XI of Wyoming Water Quality Rules and Regulations. If the applicant has specific questions regarding proper monitoring well construction standards, have them contact the groundwater section.

3-29-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-139
Ref. No. 85-20
SEE CONDITIONS ATTACHED TO THIS PERMIT

Lake Creek Unit - Tank Battery #1, #4, & #6
(Name of Facility)

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

Texaco Producing, Inc.

P.O. Box 3360

Casper, WY 82602-3360

to construct, install, or modify a road dust control facility according to the procedures and conditions of the application No. 85-139. The facility is located in Sections 3, 4, 10, 11, 13 and 14, T43N, R92W in the County of Hot Springs, in the State of Wyoming. This permit shall be effective for a period of five 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:

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

Administrator
Water Quality Division

March 25, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

This permit <u>does not</u> supercede the requirements for obtaining any permit from local agencies.

This permit authorizes you to dispose of 105,000 gallons annually of oil treater sludges on the adjoing 20 miles of roads, comprising 48.5 acres, a total liquid application of 0.25 inches.

CONDITIONS TO PERMIT TO CONSTRUCT 85-139 (Ref. No. 85-20)

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 defineable high water mark of perennial and intermittent drainages, irrigation canals, lakes and reservoirs.

85-139
Ref. No. 85-20

A J Sanford
District Manager

Texaco USA

951 Werner Court Suite 360
PO Box 3360
Casper WY 82602
307 234 5353

MAR 1[illegible]
[illegible] DIVISION
WYOMING

March 15, 1985

Department of Environmental Quality
Water Quality Division
1111 East Lincolnway
Cheyenne, WY 82002

Attention: Mr. E.J. Fanning

SUBJECT: New Permit to Construct
Texaco Producing Inc.
Lake Creek Unit Tank Battery Nos.1, 4, and 6
Sections 3,4,10,11,13 and 14-T43N-R92W
Hot Springs County, Wyoming

Dear Mr. Fanning:

Texaco Producing Inc. respectfully requests an amendment to the above-referenced permit (copy enclosed), as described below:

The original Application No. 85-20 requested that 600 bbls, 25,200 gallons, of treater sludge be applied to the lease roads for the purpose of road dust control. It has come to our attention that in order to more efficiently dispose of the total amount of waste treater sludge at this lease, we will instead, need to apply approximately 2500 bbls of waste annually.

It is understood that all other portions of the Application No. 85-20 and Conditions of Approval will remain as originally permitted.

If you request further information, please contact this office.

Very truly yours,

A.J. Sanford
District Manager

SLP/slp

Attachment

Norma -
You can change the 25,200 gallons to 105,000 gallons and the road mileage to 20 miles, and acreage to 48.5 acres. I will follow this up with a letter. Thanks SLP 3/22/85

3-29-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-140
Ref. No. 85-21
SEE CONDITIONS ATTACHED TO THIS PERMIT

J. F. Gardner Tank Battery
(Name of Facility)

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

Texaco Producing, Inc.

P.O. Box 3360

Casper, WY 82602-3360

to construct, install, or modify a road dust control facility according to the procedures and conditions of the application No. 85-140. The facility is located in Section 2, T43N, R92W and Section 35, T44N, R92W in the Counties of Hot Springs and Washakie, in the State of Wyoming. This permit shall be effective for a period of five 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:

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

William L. Garland
Administrator
Water Quality Division

March 25, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
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 65,100 gallons annually of oil treater sludges on the adjoing 60 miles of road, comprising 145 acres, a total liquid application of 0.25 inches.

CONDITIONS TO PERMIT TO CONSTRUCT 85-140 (Ref. No. 85-21)

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 defineable high water mark of perennial and intermittent drainages, irrigation canals, lakes and reservoirs.

85-170 85-140
Ref. No. 85-21

A J Sanford
District Manager

Texaco USA

951 Werner Court Suite 360
PO Box 3360
Casper WY 82602
307 234 5353

RECEIVED
MAR 19 1985
WATER QUALITY DIVISION
WYOMING

March 15, 1985

Department of Environmental Quality
Water Quality Division
1111 East Lincolnway
Cheyenne, WY 82002

Attention: Mr. E.J. Fanning

SUBJECT: New Permit to Construct
Texaco Producing Inc.
J.F. Gardner Tank Battery
Section 2-T43N-R92W and
Section 35-T44N-R92W
Hot Springs and Washakie Counties, Wyoming

Dear Mr. Fanning:

Texaco Producing Inc. respectfully requests an amendment to the above-referenced permit (copy enclosed), as described below:

The original Application No. 85-21 requested that 100 bbls, 4200 gallons, of treater sludge be applied to the lease roads for the purpose of road dust control. It has come to our attention that in order to more efficiently dispose of the total amount of waste treater sludge at this lease, we will, instead, need to apply approximately 1550 bbls of waste annually.

It is understood that all other portions of the Application No. 85-21 and Conditions of Approval will remain as originally permitted.

If you request further information, please contact this office.

Very truly yours,

A.J. Sanford
District Manager

SLP/slp

Attachment

Norma -
you can change the waste volume to 65,100 gallons, the road mileage to 60 miles, and the acreage to 145 acres. I will follow this up with a letter. Thanks Ed 3/22/85

Norma
+ ?

United States Department of the Interior

BUREAU OF RECLAMATION
NORTH PLATTE RIVER PROJECTS OFFICE
P.O. BOX 1630
MILLS, WYOMING 82644

IN REPLY
REFER TO: C-420
120.1

FEB 28 1986

RECEIVED
MAR 0 3 1986
WATER QUALITY DIVISION
WYOMING

District Engineer
Wyoming Department of Environmental Quality
Water Quality Division
122 West 25th Street
Herschler Building, 4th Floor West
Cheyenne, WY 82202

Dear Sir:

Please be advised that work approved under Section 402 Permit No. 85-141R was completed on February 20, 1986.

Sincerely yours,

David G. Wilde

David G. Wilde
Project Manager

cc: Mr. Larry Peterson
Area Fisheries Supervisor
Wyoming Game and Fish Department
200 Pheasant Drive
Casper, WY 82604

United States Department of the Interior
BUREAU OF RECLAMATION
[illegible]
P.O. BOX [illegible]
MILLS, WYOMING 82644

IN REPLY
REFER TO C-420
120.1

MAR 0 3 1986
WATER QUALITY DIVISION
WYOMING

District Engineer
Wyoming Department of Environmental Quality
Water Quality Division
122 West 25th Street
Herschler Building, 4th Floor West
Cheyenne, WY 82202

Dear Sir:

Please be advised that work approved under Section 307 Permit No. 85-141R was completed on February 20, 1986.

Sincerely yours,

David G. Wilde
Project Manager

cc: Mr. Larry Peterson
Area Fisheries Supervisor
Wyoming Game and Fish Department
200 Pheasant Drive
Casper, WY 82604

B-30

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-141R

MA 14542

Alcova Dam Percolation/Evaporation Ponds
(Name of Facility)

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

David G. Wilde, Project Manager

U.S. Bureau of Reclamation

P.O. Box 1630

Mills, WY 82644

to construct, install, or modify a temporary evaporation/percolation ponds for North Platte River waters facility according to the procedures and conditions of the application No. 85-141R. The facility is located in Section 24, T30N, R83W in the County of Natrona, 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:

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

William L. Garland
Administrator
Water Quality Division

April 25, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER * ROBERT E. SUNDIN NO. 285 * STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: David G. Wilde
U.S. Bureau of Reclamation
P.O. Box 1630
Mills, WY 82644

4-3-85

Review of Plans and Specifications

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

PROJECT: Alcova Dam Percolation/Evaporation Ponds, Natrona Co.

ARCHITECT OR ENGINEER: David G. Wilde
P.O. Box 1630, Mills, WY 82644

APPLICANT: SAME AS ABOVE

WATER QUALITY DIVISION REFERENCE NUMBER: 85-141

REVIEWING ENGINEER: LeRoy C. Preusner, P.E.

DATE OF REVIEW: April 3, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

1. The proposed plans must carry the seal or signature of a professional engineer licensed in the State of Wyoming.

2. Provide profile drawing of water pond containment area. How will security be monitored around the pond to prevent accidents? Show elevation of leach field as related to the pond elevations.

3. Are there any private or public water supply water wells within a 1/4 mile of the pond area which could be impacted by the water quality in the ponds?

4. What is the estimated life expectancy of the ponds?

5. What is the source of the leach field wastewater?

Water Quality Division
Groundwater Section
Permit Application Review

Application Number 85-141

Date Submitted For Review 28 March 1985

Name and Location of Facility Alcova Dam Percolation/
Evaporation Ponds
Alcova Reservoir, Natrona Co.

I have reveiwed the plans and specifications with regard to all aspects of groundwater quality and find the following:

[ ] No Comment. The submittal is consistent with current groundwater protection procedures and requirements.

[X] Comments attached.

Signed Phil Ward

Title WY Eng Eval

Date 3-28-85

Approved 3/28/85
(Date)

ajm
(Signed)
Groundwater Control Supervisor

MEMORANDUM

TO: LeRoy Feusner, P.E., Southeast District Supervisor

FROM: Phil Pucel, Groundwater Engineering Evaluator phil

DATE: March 28, 1985

SUBJECT: Alcova Dam, DEQ/WQD Ref. No. 85-141

Is there any debris or spillage in the pit areas?

I suppose you are concerned about flooding the leach field and causing wastewater to surface. This can be evaluated by looking at groundwater levels, the projected pond levels, and the level of the leachfield itself. Does any of this information exist? Are there any wells in the area? Is there standing water in the borrow areas?

With respect to the potential impact to groundwater, it is difficult to say without any water quality analyses. The disposal can actually improve groundwater quality or it may degrade it. I suppose salinity levels in the river water vary seasonally, as do discharges from various upstream sources, but impacts can only be assessed by looking at water quality analyses.

Is the proposed disposal area in the sands and gravels of the alluvium?

My first impression is that the impact will be non-existent or negligible, but, as I mentioned earlier, an assessment of such an impact requires water quality analyses of both the groundwater and the pumped water from the cofferdam.

4-2-85

PERMIT TO CONSTRUCT

/XX/ New

/ / Renewal

/ / Modified

Permit No. 85-142

MA 14542

Fontenelle Gravel Pit Wash Ponds
(Name of Facility)

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

Eagle Concrete Products Inc.

P.O. Box 6077

Rock Springs, WY 82901

to construct, install, or modify a sediment control ponds for a sand and gravel wash operation facility according to the procedures and conditions of the application No. 85-142. The facility is located in Sec. 1, T 23 N., R 112W in the County of Lincoln, in the State of Wyoming. This permit shall be effective for a period of 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:

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

Administrator
Water Quality Division

March 26, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Director
Dept. of Environmental Quality

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

PERMIT TO CONSTRUCT

/ X / New

/ / Renewal

/ / Modified

Permit No. 85-143
* Condition on Permit *
MA 14689

Teton Pines Water & Sewer Lines, Phase I
(Name of Facility)

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

Jackson Hole Racquet Club Limited Partnership

Star Route 362A

Jackson, WY 83001

to construct, install, or modify a water and sanitary sewer lines

facility according to the procedures and conditions of the application No. 85-143. The facility is located in

Sec. 11 and 14, T41N, R117W

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:

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

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

William L. Garland
Administrator
Water Quality Division

Robert E. Sundin
Director
Dept. of Environmental Quality

April 17, 1985
Date of Issuance

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

* CONDITIONS ON PERMIT *

The improvements authorized by this permit to construct are considered only a portion of the necessary package to allow handling of the water and sewage utilities within the development. The applicant is encouraged to maintain the schedule listed in the Teton Pines Development-Master Plan Utility Report. Written notification of any deviations should be forwarded to DEQ/WQD.

Although not a component of this application, your proposed sludge handling plan, mentioned in the Master Plan Utility Report, requires official response. It appears that the present Teton Co. Landfill is approaching capacity. Present Teton County and DEQ Solid Waste Division plans seem to indicate that no additional low solids sludge will be considered for disposal.

copy: Tim Link, DEQ/Solid Waste, Cheyenne
Joe Chalfont, Teton County

4-2-85

PERMIT TO CONSTRUCT

/x/ New

/ / Renewal

/ / Modified

Permit No. 85-144
MA 1454

1985 Water Improvements, Town of Shoshoni
(Name of Facility)

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

Town of Shoshoni

Box 267

Shoshoni, WY 82649

to construct, install, or modify a waterline replacement

facility according to the procedures and conditions of the application No. 85-144. The facility is located in Sec. 27 & 28, T. 38N., R. 94W.

in the County of Fremont, in the State of Wyoming. This permit shall be effective for a period of 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:

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

William L. Garland
Administrator
Water Quality Division

March 27, 1983
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-145R
MA 1454

RAWHIDE MINE COYOTE 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 control reservoir

facility according to the procedures and conditions of the application No. 85-145R. The facility is located in Sec. 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 301, 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:

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

William L. Garland
Administrator
Water Quality Division

April 25, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

4-2-85

PERMIT TO CONSTRUCT

/ / New

/ / Renewal

/X/ Modified

Permit No. 85-146
Ref. No. 84-322R
MA 14689

Riverside Wastewater Collection and Stabilization Pond
(Name of Facility)

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

Town of Riverside

P.O. Box 94

Encampment, WY 82325

to construct, install, or modify a municipal wastewater collection and treatment facility according to the procedures and conditions of the application No. 85-146. The facility is located in Section 1, T14N, R84W and Section 36, T15N, R84W 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:

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

William L. Garland
Administrator
Water Quality Division

March 25, 1985
Date of Issuance

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

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

cc: Theodore D. Coyer
Simons Li & Associates, Inc.
1780 Westland Road
Cheyenne, WY 82001

4-11-85

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING | CHEYENNE, WYOMING 82002 | TELEPHONE 307 777-7781

April 10, 1985

Mr. Richard R. Severns
Technical Superintendent
FMC Corporation
Phosphorus Chemicals Division
Box 431
Kemmerer, WY 83101

RE: FMC Coke Plant Monitor Wells, DEQ/WQD Permit #85-147

Dear Mr. Severns:

Enclosed is a signed copy of the permit to construct 33 monitor wells as part of the groundwater assessment at the FMC Coke Plant near Kemmerer. I want to thank you for FMC's timely attention to this matter.

Sincerely,

Katherine J. Laudon

Katherine J. Laudon
Groundwater Engineering Evaluator

KJL/nc
Enclosures

cc: Timothy Shangraw, Engineering-Science, 10 Lakeside Lane, Suite 310, Denver, CO 80212
Jack Bedessem, DEQ/WQD, Lander
Dave Finley, DEQ/SWM, Cheyenne

4-1-85

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-147
SEE CONDITIONS ON BACK

FMC Coke Plant
(Name of Facility)

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

FMC Corporation

P.O. Box 431

Kemmerer, WY 83101

to construct, install, or modify 33 groundwater monitor wells, ranging in depth from 20 feet to 80 feet according to the procedures and conditions of the application No. 85-147. The facility is located in Sections 12 and 13, T20N, R117W in the County of Lincoln, 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.

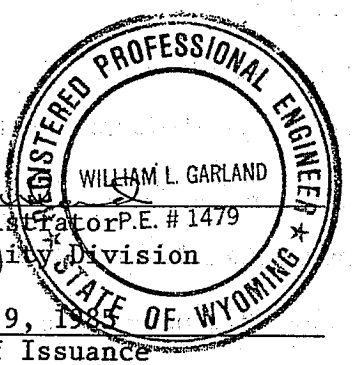
The permittee shall allow authorized representatives from the Department of Environmental Quality, Water Quality Division, upon the presentation of credentials and during working hours, to have access to inspect the facilities, at the above location, for the purpose of compliance with the provisions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

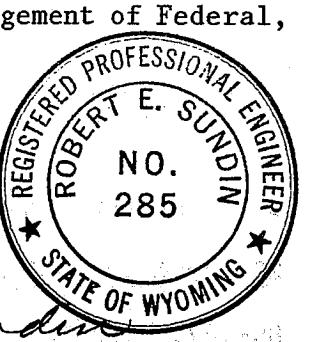
The permittee shall notify representatives from the Department of Environmental Quality, Water Quality Division the day construction commences and give an estimate of completion of the project. The authorized representative in your area can be contacted at the following address: Groundwater Section,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

Director
Dept. of Environmental Quality

April 9, 1985
Date of Issuance

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

Conditons to Permit to Construct #85-147

1. All wells will be constructed according to the specifications included in the FMC Kemmerer Coke Plant Groundwater Assessment Plan Proposal - February, 1985.

2. All wells will be abandoned according to procedures specified in Chapter XI, Part G, Section 70, of the Wyoming Department of Environmental Quality, Water Quality Division, Rules and Regulations.

3. Within 15 days after a well has been plugged and abandoned, the owner shall file a plugging record with the Wyoming Department of Environmental Quality, Water Quality Division.

7-30

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-148RRR
EPA C560157-94
SEE CONDITION ON BACK
MA 14689

Sinclair Wastewater Treatment Facilities
(Name of Facility)

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

Town of Sinclair

P.O. Box 247

Sinclair, WY 82334

to construct, install, or modify two new lift stations, sewage force mains, gravity sewers, and a three celled lagoon system according to the procedures and conditions of the application No. 85-148RRR. The facility is located in Section 8, 17, 20, 21, T21N, R86W 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:

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

William L. Garland
Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

July 18, 1985
Date of Issuance

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

Condition to Permit to Construct #84-148RRR (EPA C560157-94)

A 1-inch gate valve and 1-inch quick disconnect air hose coupling shall be installed ahead of the gate valve on the suction side of each pump in the lift stations.

cc: Charles A. Haas
Wells Engineers, Inc.
P.O. Box 554
Gering, NE 69341

85-1481

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

June 17, 1985

The Honorable Dennis Eckes
Mayor of Sinclair
P. O. Box 247
Sinclair, Wyoming 82334

Re: Federal Sewage Works Grant
C560157-94 Sinclair, Wyoming

Dear Mayor Eckes:

This letter is a confirmation of our verbal authorization for the above referenced project to be advertised and bids opened. Another letter will follow which will approve the plans and specifications and provide a Permit to Construct. You are reminded to complete the enclosed checklist and associated documentation when bids are opened.

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

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

2. Prior Department of Environmental Quality approval is required for rejection of bids on any contract on this project.

3. Current wage rates must be in the specifications prior to bid opening.

4. Bidders must submit a signed statement as to whether they have previously performed work subject to the President's Executive Order, No. 11246, with their bids.

5. Contact Environmental Protection Agency if any questions arise concerning MBE/WBE utilization on this project.

The procedure for submission and approval of modifications to the approved plans and specifications is the same as for the original set; i.e., 5 copies of any proposed modifications, together with an explanation of the reasons therefore should be forwarded to us. Unauthorized modifications of the approved set of plans and specifications may result in suspension of federal participation in the project.

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

If you have any questions, please contact Mr. Tom Conrardy of my staff.

Sincerely,

Michael Hackett

Michael Hackett
Engineering Control Supervisor
Municipal Operations Supervisor

MH/jw

Enclosure

cc: Wells Engineers (w/encl.)
cc: Grant File (w/encl.)

Date:

Subject: Bid Documents for Review and Approval

From: _____ Grant number:

3 sets to: Department of Environmental Quality
Water Quality Division
1111 East Lincolnway
Cheyenne, Wyoming 82002

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

_____ Proof of advertising

_____ Tabulation of bids

_____ Recommendation of proposal grantee wishes to accept and contract amount

_____ Any addendum not previously submitted and bidder acknowledgement of all addenda

_____ EPA Form 5700-32 signed by authorized representative

_____ Three (3) lowest proposals for each schedule

_____ Bid bond of three (3) lowest bidders

_____ Certification on non-segregation of facilities

_____ MBE/WBE proposals for lowest proposal

_____ Current Engineers estimate

The proposals expire _____.
date

For additional information contact:

Name:

Address:

Phone Number:

_____
Signature of Authorized Representative

Note:
Please include the Cheyenne Department of Environmental Quality office on the mailing list of plan holders for plans, specifications and all addenda.

85-148

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

June 6, 1985

Mr. Stephen O. Sandvik
Wells Engineers, Inc.
1915 Tenth Street
P. O. Box 554
Gering, Nebraska 69341

Re: Federal Sewage Works Grant C560157-94, Sinclair, Wyoming

Dear Steve:

The enclosed comments must be addressed prior to plan and specification approval and authorization for construction.

The Wyoming Construction Grants Program requires prior authorization before a project is advertised and bids opened. By advertising this project before proper authorization, Sinclair may be jeopardizing project eligibility for federal participation. It should be insured that bids are not opened until all outstanding comments are addressed and the plans and specifications approved.

If you have any questions, please call.

Sincerely,

Tom Conrardy

Tom Conrardy
Engineering Evaluator

TC/jn

Enclosure

cc: Town of Sinclair
Tom Norman, DEQ/WQD
Grant File

Review of Plans and Specifications

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

PROJECT: Sinclair, Wyoming Waste Treatment Facility, Carbon Co.

ARCHITECT OR ENGINEER: Wells Engineers, Inc.
P.O. Box 554, Gering, NE 69341

APPLICANT: Town of Sinclair
P.O. Box 247, Sinclair, WY 82334

WATER QUALITY DIVISION REFERENCE NUMBER: 85-148R EPA C560157-94

REVIEWING ENGINEER: Tom Norman, Tom Conrardy, and Phil Pucel

DATE OF REVIEW: June 3, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

Below, each of the comments of our April 23, 1985 review letter is addressed with regard to your response.

1. Satisfactory.

2. Satisfactory.

3. Satisfactory.

4. Satisfactory.

5. Satisfactory.

6. The appearance of a highspot in the force main may result in it being installed as such by a contractor. Will this be manageable during construction without a change order?

7. The utility of day to day influent monitoring to Sinclair is questionable. In the event flows need to be monitored for design purposes some day, the running time of the lift station pumps could be used to determine flows. The influent flow monitoring will not be eligible for federal reimbursement.

8. Satisfactory.

9. It is felt that requiring the operator to physically enter the wet well to rod the pumps is an unnecessary hazard. Consideration should be given to providing an alternate cleanout mechanism.

10. Satisfactory.

11. Satisfactory.

12. Satisfactory.

13. It is our feeling that the excess detention time provided is probably not extensive enough to warrant a redesign at this time, especially in light of requirements by the State Engineer's office for 3 feet of freeboard above the high water level. In the future however, we suggest closer communication between the Department of Environmental Quality, Water Quality Division, and Wells Engineers during initial design on the mode of operation and detention time to be provided.

14. Satisfactory.

15. The simplified structure provided is an improvement, however, this design will still result in accumulation of floating solids in the structure. We suggest having the bottom above the lagoon water level. This may require locating the structure partially above ground.

16. This deficiency has not been corrected.

17. Satisfactory.

18. This deficiency has not been corrected.

19. Satisfactory.

20. This deficiency has not been corrected.

21. This deficiency has not been corrected.

22. Satisfactory.

23. Satisfactory.

24. Satisfactory.

25. It is important to include the 8 inch sewer as a separate bid item so the ineligible cost may be determined.

26. Satisfactory.

27. Satisfactory.

Additional Comments:

1. Enclosed is a new Heavy and Highway Wage Rate to be inserted in the specifications. The building rate which is currently in the specifications should remain.

2. This office should be provided with copies of all addenda issued for our review and approval.

3. We are still waiting for the following information which has been requested to amend the Finding of No Significant Impact (FONSI):

   a. Engineer's estimate of construction cost.

   b. Engineer's estimate of annual O&M cost.

The National Environmental Policy Act requires the preparation of a FONSI to make a public record of the recommended alternative to construct sewage treatment facilities with grant assistance from the Environmental Protection Agency. The original FONSI prepared by this office described a lagoon and infiltration/percolation system. Changing alternatives to a facultative lagoon system requires an amendment to the FONSI. We have completed the FONSI amendment except for the information requested. Authorization to advertise and open bids will not be provided until this information has been submitted and the FONSI is published for public comment.

4-25-85

85-148

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

April 23, 1985

Mr. Charles A. Haas
Wells Engineers, Inc.
1915 Tenth Street
P.O. Box 554
Gering, NE 69341

RE: Federal Sewage Works Grant C560157-94, Sinclair, Wyoming

Dear Mr. Haas:

The enclosed comments must be addressed prior to plan and specification approval and authorization for construction.

Please feel free to contact me to discuss and resolve these comments prior to a written response.

Sincerely,

Tom Conrardy

Tom Conrardy
Engineering Evaluator

TC/nc
Enclosures

cc: Town of Sinclair
Tom Norman
Phil Pucel
Grant File

Review of Plans and Specifications

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

PROJECT: Sinclair, Wyoming Waste Treatment Facility, Carbon Co.

ARCHITECT OR ENGINEER: Wells Engineers, Inc.
P.O. Box 554, Gering, NE 69341

APPLICANT: Town of Sinclair
P.O. Box 247, Sinclair, WY 82334

WATER QUALITY DIVISION REFERENCE NUMBER: 85-148 EPA C560157-94

REVIEWING ENGINEER: Tom Norman, Tom Conrardy, Jim Murphy and Phil Pucel

DATE OF REVIEW: April 22, 1985

ACTION: NOT AUTHORIZED FOR CONSTRUCTION

COMMENTS:

1. The design calculations provided show that a C-factor of 140 was used to determine the friction head loss in the force main. Typically, C=140 is used for a clean pipe (e.g., water main), however for pumping raw wastewater, a lower C-factor (suggest 120) should be used.

2. The static head for the East Lift Station was taken as the elevation difference between the top of the discharge line in the manhole and the low water level in the wet well pit (21.82 feet). For the West Lift Station, this elevation difference appears to be either 1.87 feet (from the L.W.L. given on sheet 10 and the weir elevation on sheet 12) or .7 feet (from the hydraulic profile on sheet 3), however 2.04 feet was used in the design calculations. The TDH in the specification (page 4-1) is different from that calculated in the design report.

3. The purpose of the 12 inch replacement sewer running up Lincoln Street, the sewer extenstions north and east of M.H. No. 6, and the 140 feet of sewer on Third Street should be explained.

4. Profiles of all sewers should be provided. Those omitted include the sewer extensions north and east of M.H. No. 6 and the short section of sewer running from manhole No. 5 to the West Lift Station. On sheet 14 of 17, Third Street sewer, a slope was not provided.

5. Can any justification be provided for the size of building provided for the generator at the West Lift Station?

6. Should an air release valve be installed in the vicinity of Sta. 47+00?

7. Only effluent monitoring is required by the NPDES permit. Why has a flow metering manhole been provided?

8. Has consideration been given to providing block heaters for the standby generators?

9. Chapter XI, Water Quality Rules and Regulations, include the following requirements for lift stations:

   a) Hopper walls of wet wells must be sloped at no less than 1.75:1.

   b) Suction intakes shall be bell-mouthed.

   c) Cleanouts must be provided for pump suctions.

10. It is recommended that the "2nd pump on" level be at the same level as the alarms. Otherwise, with both pumps capable of pumping the peak flow, the alarm will not sound when the first pump goes out.

11. Should details of the control panel in the lift stations be provided or does the manufactured lift station come with a standard panel?

12. Details should be provided of the required fuel tank for the emergency generators.

13. Our calculations show the lagoons will have a detention time of about 200 days at design flow if the full 6 feet depth is utilized. This detention time was determined in your design calculations by assumed BOD removal efficiencies per cell. This is satisfactory however we only require 150 days detention time.

14. Some type of cover should be provided over the force main outlet at the influent structure to keep it from splashing.

15. The design of the influent structure appears to be more complicated than necessary. No influent flow monitoring is required and the design will result in accumulation of floating solids on both sides of the structure. It is suggested that an outlet structure be provided which allows free flow of wastewater. A structure such as the force main tie at 11th and Cleveland, shown on sheet 13, with the bottom above the operating depth of cell one would be sufficient.

16. On sheet 11 of 17 a word is missing on note G of General Notes.

17. Cost savings could possibly result if the pipes running parallel between ponds 1 and 2 were located in the same trench.

18. The labeling of the two lines coming out of cell one is not consistent between the site plan and section 1, 3/3 (both on sheet 11) and the plan view of flow control structure No. 1 (sheet 12). A similar inconsistency exists for flow control structure No. 3.

19. The design of flow control structure No. 2 will not allow lagoon cell 2 to be drained completely. If the drain line from cell 2 is opened and wastewater flow is bypassed to cell 3 through flow control structure 2, the water level in cell 2 will not drop below the surface level of cell 3.

20. The notes on sheet 11 for riprap along lagoon one are mislabeled. North should be west and west should be south.

21. The 8 inch influent line to cell one is not shown in section 1, 3/3.

22. The location of the manual switch for lights and ventilation at the lift station should be shown in the plans.

23. The lineal footage of sewer between manholes should be provided in lateral views.

24. Standard detail SW-5 should call for non-corrosive steps in manholes.

25. Why are no manholes included on the bid schedule? The plans show 140 feet of 8 inch sanitary sewer to be installed in Third Street, however, no 8 inch sewer is included in the bid schedule.

26. On page 2 of the Nondiscrimination in Employment section of the specifications, the minority (7.5%) and the female (6.9%) work force goals should be inserted. The geographical description should also be provided on this page.

27. The following discussion applies to the groundwater monitoring wells:

Recommendations

The earlier suggestions for well locations should be superceded by two shallow wells perforated throughout the alluvium, the sand seams, and the fractured shale to a depth of about 25 feet. Possible locations include: (1) a site near borehole #45 which had water in the bottom of the weathered sandstone; and (2) near borehole #35 which seemed to be located in a channel and produced water from a sand seam. South of #45 and #35, the water appears lower in the stratigraphic column, in the fracture shale. Should a lagoon leak occur, it is anticipated that percolation will occur through the alluvium and horizontal flow will occur in the sand seams of the weathered sandstone or in the fractured shale.

First observations seem to indicate a thin saturated zone so recharge to the wells may be slow. A short interval of blank casing should be installed below the fractured shale to provide capacity for collection of a sufficient quantity of water for analyses. However, if there is adequate recharge, normal purging should be implemented prior to sampling.

If a sufficient quantity of water collects in the wells, baseline analyses should be made using the parameters listed in Chapter VIII, Water Quality Rules and Regulations with exception of the radionuclides. If only a small quantity appears, then at least SWL (static water level) conductivity, and pH readings should be made. The necessity for additional sampling events and a monitoring schedule will be developed upon receipt of well completion information and the first round of analyses.

Well construction

The monitor wells should be constructed according to Chapter XI, Water Quality Division Rules and Regulations.

Sampling protocol

Sampling methods, preservation techniques, quality assurance, chain of custody procedures, record keeping and reporting procedures should be documented, recorded in the O&M manual and implemented according to WQD guidelines.

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

FROM: Phil Pucel phil

DATE: April 10, 1985

SUBJECT: Sinclair wastewater treatment facility #85-148

Introduction

Previous discussions with the consultant delineated the need for definition of the site hydrogeology, establishment of baseline groundwater quality, an understanding of the potential impacts to waters of the state, and a determination of the best locations for monitor wells. The January 15, 1985 letter from Tom Conrardy to Charles A. Haas of Wells Engineers, Inc., reiterates the verbal agreements made at the January 7 meeting as follows:

"At our meeting, Mr. Sandvik said he would examine the geologic profiles of the site and propose locations for three monitoring wells to establish the background water quality at the site. These wells could then be used for the permanent lagoon monitoring wells. The locations proposed at our meeting were Drill Hole 33, Drill Hole 43 and somewhere in between. The proposed locations and rationale for selection should be submitted to this office for concurrence prior to drilling."

Detailed lagoon drawings and logs of soil borings were produced in March, 1985, and referred to the groundwater section on April 2, 1985. Only one monitoring well was shown on the drawings at a point between Drill Holes #33 and #43.

Site conditions

The lagoon site is situated on alluvium comprised of silty sand, sand seams, and some fine gravel, varying from about three to eight feet in thickness. Underlying the alluvium is a weathered sandstone varying from 0 to unknown depth. This weathered sandstone overlies a gray brown to dark gray, soft to very hard, shale with a silty clay texture. The shale is fractured and produces water in some of the holes. This site is a local recharge zone for the Sugar Creek alluvium, and water was found at a depth of 19 feet in boring #45 drilled directly beneath the lagoon site. The logs of other borings show water in holes #34, #35, #43, #46 and #48. In

hole #34, water was found in broken shale at 17.5 feet. In hole #35, water was found in a sand seam at 18.5 feet (the depth to shale was not determined in this hole); in hole #43, water was found in the shale at 10 feet. In hole #46, water was found in a silty sand seam at 8 feet. In hole #48, water was found in the sandstone at 20 feet. The hydrogeology suggests that channels may exist in the bedrock topography and that there may be some discontinuous perched water-bearing sand seams.

From the information presented, only a sketchy understanding can be gained of the shallow flow regime in terms of permeability, continuity, and flow rates. Although a general flow direction toward Sugar Creek may be assumed, there is not sufficient information to show flow directions directly beneath and adjacent to the lagoons. In addition, the channels, perched zones, and fractures are expected to govern the direction of groundwater flow. The existence of channels and perched zones are inferred from the logs, but good definition of these features is not presented.

Water quality

No analyses have been made.

It is not yet clear if there is an aquifer with a sustainable yield below the site which can be characterized according to water quality parameters. The general information presented so far seems to indicate the presence of water on the south edge of the site in perched sand seams, in the weathered sandstone, and in the fractured shale. Assuming that a competent shale several thousand feet thick underlies the fractured shale, the water found in the testholes is recharged by precipitation and any intermittent flow in Sugar Creek.

Recommendations

The earlier suggestions for well locations should be superceded by two shallow wells perforated throughout the alluvium, the sand seams, and the fractured shale to a depth of about 25 feet. Possible locations include: (1) a site near borehole #45 which had water in the bottom of the weathered sandstone; and (2) near borehole #35 which seemed to be located in a channel and produced water from a sand seam. South of #45 and #35, the water appears lower in the stratigraphic column, in the fracture shale. Should a lagoon leak occur, it is anticipated that percolation will occur through the alluvium and horizontal flow will occur in the sand seams of the weathered sandstone or in the fractured shale.

First observations seem to indicate a thin saturated zone so recharge to the wells may be slow. A short interval of blank casing should be installed below the fractured shale to provide capacity for collection of a sufficient quantity of water for analyses. However, if there is adequate recharge, normal purging should be implemented prior to sampling.

If a sufficient quantity of water collects in the wells, baseline analyses should be made using the parameters listed in Chapter VIII, Water Quality Rules and Regulations with exception of the radionuclides. If only a small quantity appears, then at least SWL (static water level) conductivity, and pH readings should be made. The necessity for additional sampling events and a monitoring schedule will be developed upon receipt of well completion information and the first round of analyses.

Well construction

The monitor wells should be constructed according to Chapter XI, Water Quality Division Rules and Regulations.

Sampling protocol

Sampling methods, preservation techniques, quality assurance, chain of custody procedures, record keeping and reporting procedures should be documented, recorded in the O&M manual and implemented according to WQD guidelines.

pjb

cc: A. J. Mancini, WQD
Tom Conrardy, WQD

PERMIT TO CONSTRUCT

/XX/ New

Permit No. 85-149RR

/ / Renewal

/ / Modified

Chevron Phosphate Chemical Complex
(Name of Facility)

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

Chevron Chemical Co.

P.O. Box 1928

Rock Springs, WY 82902

to construct, install, or modify a wastewater treatment and collection facility

facility according to the procedures and conditions of the application No. 85-149RR. The facility is located in

Sec. 15, T18N, R104W

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:

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

Administrator
Water Quality Division

January 22, 1986
Date of Issuance

Director
Dept. of Environmental Quality

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

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Chevron Phosphate Chemical Complex W.W.T.P.

ENGINEER: Walt Dombroski
Badger Engineers
P.O. Box 22317
Tampa, FL 33622-2317

OWNER: Chevron Chemical Co.
ATTN: Dean Forsgren
P.O. Box 1928
Rock Springs, WY 82902

WATER QUALITY DIVISION REFERENCE NUMBER: 85-149R

REVIEWING ENGINEER: Bill Locke, P.E. BL

DATE OF REVIEW: September 18, 1985

ACTION: **Not authorized.**

COMMENTS:

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

1. It is proposed to have the solids removed from the sludge holding tank and disposed of by a local septic tank service. A sludge management plan should be formulated to address the following items:

- project volume of sludge production

- volume of sludge holding tank

- frequency of solids removal

- sludge to be placed in an approved, permitted disposal site. Provide a letter of agreement from the receiver stating that they will accept this waste.

BL/jw

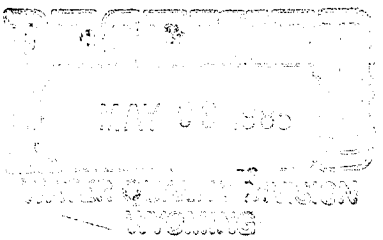
(1

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: Chevron Phosphate Chemical Complex WWTP



ENGINEER: Badger Engineers
ATTN: Mr. Walt Dombroski
P.O. Box 22317
Tampa, FL 33622-2317

OWNER: Chevron Chemical Co.
ATTN: Dean Forsgren
P.O. Box 1928
Rock Springs, WY 82902

WATER QUALITY DIVISION REFERENCE NUMBER: 85-149

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

DATE OF REVIEW: May 3, 1985

ACTION: **Not authorized.**

COMMENTS:

An initial review of your plans and specifications has been completed. The following items need to be addressed and/or resolved.

1. An engineering design report is required for each project. In addition to what has been provided the following information is needed:

a. A scaled vicinity map showing elevations and topographic features.

b. Projected average, maximum day and peak flows for the design of the facility, per capita design flows, extraneous flows, and industrial waste flows.

c. Vicinity map showing predicted 25 and 100 year flood stages.

d. A detailed description of the disposal technique for effluent and solids. If effluent water is to be discharged an application shall be submitted for a National Pollution Discharge Elimination System Permit.

e. Design conditions shall be described to include:

(A) Proposed effluent standards.

(B) Design population.

(C) Projected flows and flow variations. AC

(D) Shock loads, with cause and frequency.

(E) Projected wastewater characteristics including BOD, suspended solids, pH, etc.

(F) Projected flow, loads, and characteristics of industrial wastes, and toxic materials.

(G) Proposed water supply.

(H) Description of wastewater treatment plant operation and controls.

2. Plans and specifications must be stamped and signed by an engineer registered in the State of Wyoming.

3. Provide a detailed plan view at a legible scale of each sewer line. The location and size of all sewer lines, manholes, cleanouts and other appurtenances shall be indicated.

4. Provide profiles of all sewer lines at legible horizontal and vertical scales, with a profile of existing and finished grades, elevations of sewer inverts at all manholes, pipe size and material and the slope of the sewer line.

5. Provide detail drawings of all sewer appurtenances such as manholes, cleanouts, force main thrust blocks, etc. and cross section of the sewer's bedding.

6. Location of waterlines within 30 feet horizontally shall be shown on the plan. Water lines that intersect sewers shall be shown on the profile drawings.

7. Lift station sketches are not consistent with the plans. Sump depths are inaccurate, piping arrangements are inaccurate, etc. Provide accurate lift station details indicating piping arrangement, pipe sizes, pump control levels, etc. Valves shall not be located in the wetwells.

8. Explain how the force main from lift station no. 1 is to be freeze protected where it is above grade at the treatment plant inlet.

9. Provide larger scale drawings of treatment facility with specific construction details, features and pertinent elevations and dimensions. Details should include, inlet and outlet devices, baffles, valves, aeration equipment, etc.

10. Explain how the sludge holding tank is to be operated and controlled. Explain how and when sludge is to be wasted from the facility. Also address a sludge disposal plan.

11. Provide specifications for sewer piping and appurtenances.

12. All electrical equipment in the lift station shall be suitable for Class 1, Division 1, Groups C and D hazardous environments, as defined in the National Electrical Code.

13. It appears that the pumps are rated at 30 gpm and the pump discharge piping is four inches. The minimum pipe size for raw sewage is four inches and a minimum velocity of 2.5 fps must be maintained. 30 gpm in a four inch pipe will have a velocity of only .8 fps. Therefore, larger pumps are required.

14. Discuss the need for a backup power source to operate the lift stations and treatment plant during power failures.

15. Both audio and visual alarms shall be provided to indicate high wetwell water level.

16. Low pressure air used for basin aeration shall be metered. Separate meters shall be used to indicate the flow rate to each aeration basin and to the ancilliary uses.

17. Adequate nonpotable washdown water shall be provided around the treatment facility.

18. Sampling ports, pipes or other access shall be provided on aeration basin inlets, return sludge piping, waste sludge piping, and secondary settling basins.

19. Explain what measures are being taken to obtain and train an operator qualified to operate this treatment facility.

Submit the required information and revised drawings to this office in triplicate. Call if you have any questions.

7-1

PERMIT TO CONSTRUCT

/X/ New

/ / Renewal

/ / Modified

Permit No. 85-150R
MA 14542

PS RV Park Subdivision
(Name of Facility)

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

Kilburn Porter

P.O. Box 547

Evanston, WY 82930

to construct, install, or modify a well and water distribution system, sewage collection system with septic tanks and leach fields facility according to the procedures and conditions of the application No. 85-150R. The facility is located in Sec. 11, T16N, R121W 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:

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

William L. Garland
Administrator
Water Quality Division

REGISTERED PROFESSIONAL ENGINEER
ROBERT E. SUNDIN
NO. 285
STATE OF WYOMING

Robert E. Sundin
Director
Dept. of Environmental Quality

June 25, 1985
Date of Issuance

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

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

Rcd to Lander 4-30-85

APPLICATION NUMBER 85-150

DATE SUBMITTED FOR REVIEW 4-25-85

NAME AND LOCATION OF FACILITY PS RV Park Subdivision
S11 T16N, R121W
UINTA, Co.

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

( ) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

(✓) Comments attached.

SIGNED [signature]

TITLE Eng Ed

DATE 4-29-85

ACCEPTED FOR RECORD 4/29/85 (Date)

[signature]
Groundwater Control Supervisor

MEMORANDUM

TO: A. J. Mancini

FROM: R. J. Lennox

DATE: April 29, 1985

SUBJECT: PS RV Park Subdivision, DEQ/WQD Ref. No. 85-150

1. At the request of Jeff Hermansky, Lander field office, I re-reviewed the subject application for groundwater mounding concerns.

2. Based on discussions with Mr. Kevin Jones, the consulting engineer on April 26, 1985 and a review of the submitted material, I have the following comments:

   a. The leach fields are within the minimum spearation distance of 100' as specified by Water Quality Rules and Regulations, Chapter XI. However, Mr. Jones has indicated that several observation trenches have been dug parallel to the Chapman Canal in order to determine whether or not any infiltration or exfiltration is occurring at the canal with the results showing that there is no water movement into or out of the canal. Additionally when reviewing the topography and the submitted cross section of the underlying geology, it appears that any water generated from the leach fields should follow the clay/shale layer and move down and under the canal.

   b. I used the "Microcomputer Model of Artificial Recharge Using Glover's Solution" by D. Molden, D. K. Sunoda and J. W. Warner and applied worst case conditions; i.e. full loading 360 days/year, and calculated that the mounding effect would remain below the minimum separation between the leach field gravel and the mounded level of groundwater. Again conditions were based on submitted data showing the clay/shale layer dipping under the canal and away from the leach field to the NNE.

3. Conclusion: I don't consider the proximity of the Chapman Canal or the potential for groundwater mounding to be a limiting factor for permit issuance.

4. Recommendation: If there is a need that some control be maintained concerning groundwater mounding between the leach field and the canal, I would recommend two monitor wells be installed, one between each leach field and the canal. These wells would only need to be monitored for water level on a monthly basis. If the water level indicates excessive mounding is occurring, i.e. above the level of the canal bottom, then the leach fields would have to be shut down and mitigating measures determined.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF EVIRONMENTAL QUALITY

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

PROJECT: PS RV Park Subdivision

ENGINEER: Kevin D. Jones, P.E.
516 Sage St.
Evanston, WY 82930

OWNER: Kilburn Porter
P.O. Box 547
Evanston, WY 82930

WATER QUALITY DIVISION REFERENCE NUMBER: 85-150

REVIEWING EVALUATOR: Jeff Hermansky

DATE OF REVIEW: April 19, 1985

ACTION: **Not authorized.**

COMMENTS:

The project as shown on the plans submitted does not meet all of the minimum requirements. The following questions and comments need to be addressed before a Permit to Construct can be issued:

1. How did you determine that the washing machine will have a peak load of 10 uses per day? Please substantiate.

2. I believe that the flows expected from the restaurant and store could be too low. Again, please substantiate your design with similar facilities for which data is available.

3. Appendix A does not show proposed flows for the Sanitary Station which is shown next to leach field No. 2. Please include and substantiate these flows.

4. How are the people in the park to determine if the disposal sites are for sanitary wastes or solid waste disposal? The detail shows no distinction yet I feel a pad sloped to the pipe must be provided for the sanitary disposal site.

5. I don't feel that there is justification for locating the proposed leach fields less than 100 feet from the Chapman Canal.

6. Regardless of where the leach fields are located, they must be protected from traffic and parking. How will this be accomplished?

AC

7. I am very concerned that the clay/shale layer beneath the R.V. park could cause problems with mounding under the leach fields. Mounding needs to be addressed in detail.

8. There are a couple of items regarding the sewage collection piping that needs to be addressed:

a. Manholes are required at changes in direction of mains, at the ends of mains, and at least every 400 feet. Parts of your proposed design deviate from this regulation.

b. The regulations state that sewers shall be located at a depth that will protect them from freezing and frost heave as prudently possible. Your design has the lines located well above the frost line.

9. The grease trap sizing may be questioned pending the outcome of your substantiation of the kitchen wastewater flows. I don't believe that the two washing machines in the proposed laundry will produce sufficient grease and silt to make routing of the wastewater through the grease trap necessary.

10. Although the regulations allow for a maximum slope for the absorption system piping of 3 inches per 100 feet, I would strongly recommend that the field be designed with level pipes.

11. Your design for the water system peak flow requirements allows only 4 gpm for miscellaneous flows. This is too low when you consider the restaurant and laundry.

12. The top of the well casing must terminate at least 12 inches above the finished grade.

13. Provisions must be made for the possible need for disinfection of the water supply. Could disinfection equipment be installed in the room where the pressure tank is to be located?

Please contact me after you receive this review letter. There are many items that we need to discuss before a permit can be issued.

WATER QUALITY DIVISION
GROUNDWATER SECTION
PERMIT APPLICATION REVIEW

Norm Rel. to Lawler 4-4-85

APPLICATION NUMBER 85-150

DATE SUBMITTED FOR REVIEW 3-28-85

NAME AND LOCATION OF FACILITY PORTER'S CUT-O-KING
RV PARK SUBDIVISION
S11, T16N, R12W
UINTA Co.

I have reviewed the plans and specifications with regard to all aspects of groundwater quality and find the following:

(✓) No comment. The submittal is consistent with current groundwater protection procedures and requirements.

** ( ) Comments attached.

SIGNED Richard J. Lemmon

TITLE Eng. Geol

DATE 4-4-85

ACCEPTED FOR RECORD 4/4/85 (Date)

Groundwater Control Supervisor

→ Will RECORD WITH CLASS V well listing As Septic System over 2000gpd.