



*Department of Environmental Quality*  
*Water Quality Division*

HATHAWAY BUILDING

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

March 12, 1976

Mr. Robert Wenger  
408 Juniper Lane  
Gillette, Wyoming 82716

CERTIFIED.

Dear Mr. Wenger:

REF. NO. 75-201

Our office has received "as built" plans for the sewage disposal system at your apartment building Southwest of Gillette. We have not completed the review, since we did not receive plans for the septic tanks or a percolation rate for the soil. I can, however, inform you that we have already found several items which do not meet the Wyoming Water Quality Rules and Regulations. These are as follows:

1. An apartment building of this size should have a total septic tank capacity of at least 3500 gallons.
2. Sewage lines from the washing machines should enter a septic tank.
3. Maximum length for any single run of perforated pipe is 100 ft.
4. An impermeable barrier, such as untreated building paper, should be in place below the backfill above all perforated lines.
5. Parallel perforated lines should be placed in separate trenches, at least 6 ft. apart.
6. Scoria is not an acceptable backfill material. Gravel between  $\frac{1}{2}$  and  $2\frac{1}{2}$  inches in size should be used.
7. Finally, seepage pits such as these shown are not allowed. A standard leachfield, or evapotranspiration bed, should be used in this situation.

Mr. Robert Wenger  
March 12, 1976  
Page 2

We have not evaluated the size of your disposal field, since a percolation rate for the soil was not provided. Nor has the septic tank design been evaluated, since no drawings or specifications were provided.

This sewage system is not acceptable, and you remain in violation of the Water Quality rules and regulations.

Extra copies of the plans for your system have been returned to Plains Engineering.

Yours truly,

*Tom Mueller*

Tom Mueller  
Environmental Engineer  
Water Quality Division

TM/js

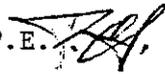
cc: Robert Farnsworth, Plains Engineering

Book

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF HEALTH AND SOCIAL SERVICES  
DIVISION OF HEALTH AND MEDICAL SERVICES  
SANITARY ENGINEERING SERVICES  
STATE OFFICE BUILDING  
CHEYENNE, WYOMING 82001

November 25, 1975

- 1. PROJECT: Clearfield #2 Addition Monte D. Fertig  
P.O. Box 787  
Douglas, Wyo. 82633
- 2. ARCHITECT OR ENGINEER: Kruback Engineering  
883 Cleveland Ave., Loveland, Colorado 80537
- 3. SANITARY ENGINEERING SERVICES REF. NO.: 75-202
- 4. REVIEWING ENGINEER: Jake Ströhman, Paul Schwieger P.E. 
- 5. DATE OF REVIEW: November 25, 1975
- 6. ACTION: Construction Authorized for Sewer Extension
- 7. COMMENTS:

Water distribution extension is not approved at this time due to incomplete specifications.

A letter of acceptance is required from town of Douglas accepting sewer and furnishing water at the rate of 350 gal/per/day per single family residence at a minimum pressure of 20 psi under all conditions of flow.

JS/jb  
cc: Malcolm Crawford

*guy book*

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Clearfield #2 Water and Sewer Extensions  
Douglas, Wyoming

ARCHITECT OR ENGINEER: Kruback Engineering Surveying, Inc. Neil M. Kruback, P.E.  
833 Cleveland Ave.  
Loveland, Colorado 80537

WATER QUALITY DIVISION REFERENCE NUMBER: 75-202R

REVIEWING ENGINEER: Jake *JS* Strohmman, Paul Schweiger, P.E. *PS*

DATE OF REVIEW: December 22, 1975

ACTION: Construction is not authorized

COMMENTS: Send specifications for thrust blocks stating minimum size to be used.  
Enclosed is the letter sent to town of Douglas and Clearfield Developers.

cc: Converse Co. Planning office 130 S. Cole, Douglas, Wyoming  
Malcolm Crawford, Sanitarian, Gillette

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Clearfield #2 Subdivision Water and Sewer extension,  
Douglas, Wyoming

ARCHITECT OR ENGINEER: N.M. Kurback, P.E.

Krback Engineering Inc.  
883 Cleveland Avenue  
Loveland, Colorado

WATER QUALITY DIVISION REFERENCE NUMBER: 75-202R

REVIEWING ENGINEER: Jake Strohman, Paul Schwieger, P.E. 

DATE OF REVIEW: January 27, 1976

ACTION: Construction Authorized

COMMENTS:

Blocks 4 & 5 will not be developed until water pressure minimum requirements of 20 psi under all conditions of flow has been satisfied.  
RE: Letter from Dean Fertig dated 1-13-76

cc: John Lambert, Town of Douglas  
Malcolm Crawford  
Fertig Construction Company Douglas, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Eastgate Addition - Water & Sewer Extension  
East 12th Street  
Natrona County

ARCHITECT OR ENGINEER: E.C. Lenhart P.E.

Casper Board of Public Utilities  
136 West 8th Street  
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-203

REVIEWING ENGINEER: Jake Strohmman, Paul Schwieger, P.E. 

DATE OF REVIEW: February 10, 1976

ACTION: Construction Authorized.

COMMENTS:

Sorry this was misplaced causing the delay.

cc: Nix Anderson

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REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Clearfield #3 Sewer & Water Extensions  
Douglas, Wyoming

ARCHITECT OR ENGINEER: James H. Stewart and Associates, Inc., P.I. Robinson P.E.  
P. O. Box 429, Fort Collins, Colorado 80522

WATER QUALITY DIVISION REFERENCE NUMBER: 75-204

REVIEWING ENGINEER: Jake Strohman, Paul Schweiger, P.E. 

DATE OF REVIEW: December 22, 1975

ACTION: Construction is not authorized.

COMMENTS: The following items need revised to meet minimum State standards:

1. The specifications are incomplete. A possible solution would be to insert a note that in addition to your specifications, materials, construction and installation shall meet Town of Douglas specifications for water and sewer. In addition, send specifications for thrust block minimum size.
2. The minimum size for sewer lines is 8 inches diameter. The 6" line on Durango Street needs to be upgraded.
3. The dead end water main at the north end of Mesa Drive requires a blowoff valve, flushing hydrant or fire hydrant for flushing purposes. Send specifications if a fire hydrant is not utilized.

Enclosed is the letter sent to Town of Douglas and Clearfield developers.

*book*

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF HEALTH AND SOCIAL SERVICES  
DIVISION OF HEALTH AND MEDICAL SERVICES  
SANITARY ENGINEERING SERVICES  
STATE OFFICE BUILDING  
CHEYENNE, WYOMING 82001

November 21, 1975

- 1. PROJECT: Taco Time Restaurant
- 2. ARCHITECT OR ENGINEER: J. E. Kessner, 1304 Cottonwood Dr., Rock Springs, Wyoming, 82901
- 3. SANITARY ENGINEERING SERVICES REF. NO.: 75-205
- 4. REVIEWING ENGINEER: Robert H. Pinther, P.E. *Robert H. Pinther*
- 5. DATE OF REVIEW: 11-21-75
- 6. ACTION: Construction Not Authorized

7. COMMENTS:

- 1. Submit a letter of verification from the owner of the public water supply to which this establishment will be connected. The letter shall state that the required 500 gallons of water per day can be supplied to this establishment at a pressure of at least 20 psi under all conditions of flow.
- ✓ 2. Indicate the basis for the determination of the daily water usage of 500 gallons.
- ✓ 3. Submit the results of percolations tests on which the size of the drain field is based.  
Note: Percolation tests shall be run in accordance with the procedure outlined in Public Health Service publication No. 526.
- ✓ 4. The maximum depth to distribution pipe is 36 inches.
- ✓ 5. Disposal field gravel can range in size from 1/2 inch to 2 1/2 inches. Pit run gravel or fine materials under 1/2 inch are not acceptable.
- ✓ 6. Show the location of the tire shop property.  
Note: The drainfield shall be located at least 10 feet from all property lines.
- 7. The inlet to the septic tank shall be three (3) inches above the outlet.

RHP/jb

cc: Phil Hughes, District Sanitarian, Green River, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

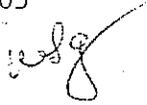
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

December 15, 1975

PROJECT: Taco Time Restaurant  
Sweetwater County

ARCHITECT OR ENGINEER: J. E. Kessner, 1304 Cottonwood Drive  
Rock Springs, Wyoming 82901

WATER QUALITY DIVISION REFERENCE NUMBER: 75-205

REVIEWING ENGINEER: William L. Garland, P.E. 

DATE OF REVIEW: December 15, 1975

ACTION: Authorized for Construction

COMMENTS:

cc: Mr. Phil Hughes, District Sanitarian, Green River, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Clearfield #3 Subdivision Water and Sewer Extension  
Douglas, Wyoming

ARCHITECT OR ENGINEER: P.I. Robinson, P.E. James H. Stewart & Associates  
P.O. Box 429  
Fort Collins, Colorado 80522

WATER QUALITY DIVISION REFERENCE NUMBER: 75-205R

REVIEWING ENGINEER: Jake Strohman, Paul Schwieger, P.E.

DATE OF REVIEW: January 27, 1976

ACTION: Construction Authorized (See Compliance items)

COMMENTS:

1. Stop and waste valves are not acceptable for a flushing valve at the end of Mesa Drive. The outlet of the flusing hydrant shall be a minimum of 4 inches above ground water, standing water or runoff water, whichever is higher. A drain system such as a fire hydrant utilizes or a air tube to blow the water out after use, are acceptable methods for freeze protection.
2. The lots as shown on plans sent to this office on January 20, 1976 by Mr. P.I. Robinson will not be developed until a minimum pressure of 20 psi under all conditons of flow can be met.

cc: Malcolm Crawford  
John Lambert, Douglas, Wyoming  
Charles Palmer, Monarch Development, Douglas, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Water & Sewerage System, Northside Mobil Home Park  
Lander, Wyoming

ARCHITECT OR ENGINEER: Gerald Crews, Tudor Engineering  
P.O. Box 2301, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 75-206R

REVIEWING ENGINEER: William L. Garland, P.E. *WLG*

DATE OF REVIEW: January 5, 1976

ACTION: Authorized for Construction

COMMENTS:

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Northside Mobile Home Park, Water and Sewer Plans  
Lander, Fremont County, Wyoming

ARCHITECT OR ENGINEER: Jerald B. Crews, P.E., Tudor Engineering Company  
516 East Main, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 75-206R

REVIEWING ENGINEER: David W. Hill, William L. Garland, P.E. *DWH*

DATE OF REVIEW: April 26, 1976

ACTION: Authorized for Construction

COMMENTS:

Booke

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

November 25, 1975

PROJECT: Highway Crossing  
Wardwell Water & Sewer District, P.O. Box 728, Mills, Wyo. 82644

ARCHITECT OR ENGINEER: Western Engineers - Architects, Inc.  
2111 East 2nd, Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-207

REVIEWING ENGINEER: Jake Strohmman, Paul Schwieger, P.E. 

DATE OF REVIEW: November 25, 1975

ACTION: Construction Authorized

COMMENTS:

JS/jb

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

December 2, 1975

PROJECT: Hickman Addition (Arrow Court) Water & Sewer lines  
Rawlins, Wyoming

ARCHITECT OR ENGINEER: Robert Jack Smith & Associates  
P. O. Box 1104, Rawlins, Wyoming 82301

WATER QUALITY DIVISION REFERENCE NUMBER: 75-208

REVIEWING ENGINEER: Frank R. Harman, P.E. *Frank R. Harman*

DATE OF REVIEW: December 2, 1975

ACTION: Authorized for Construction

COMMENTS:

FRH/jb

cc: Philip Hughes, District Sanitarian, 138 Railroad, Green River, Wyo. 82301

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Star Valley Ranch Water System  
Lincoln County

ARCHITECT OR ENGINEER: Coon, King & Knowlton  
1055 East 3900 South  
Salt Lake City, Utah 84117

WATER QUALITY DIVISION REFERENCE NUMBER: 75-209

REVIEWING ENGINEER: William L. Garland, P.E. *wlg*

DATE OF REVIEW: January 21, 1976

ACTION: Not Authorized for Construction

COMMENTS:

The documents submitted do not constitute a complete design of the water system proposed. Wyoming Water Quality Rules & Regulations, Chapter III require that all public waters supply designs must be reviewed and approved by the Water Quality Division prior to construction. Before approval of this system is granted a complete design package must be submitted in triplicate following the criteria outlined in the "Recommended Standards for Water Works" as prepared by the Great Lakes - Upper Mississippi River Board of State Sanitary Engineers, with 1973 changes.

cc: Glenn Payne, Lincoln - Vinta Company Planner, Kemmerer  
Phil Hughes, District Sanitarian, Green River

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Star Valley Ranch Subdivision, Plat 9 & 10. Lincoln County

ARCHITECT OR ENGINEER: Koon, King & Knowlton, 1055 East 3900 South, Salt Lake City,  
Utah 84117

WATER QUALITY DIVISION REFERENCE NUMBER: 75-209R

REVIEWING ENGINEER: William L. Garland, P.E. *WLG*

DATE OF REVIEW: March 15, 1976

ACTION: Authorized for Construction (See Comments)

COMMENTS: Authorization for construction on this project is contingent upon meeting the following requirements:

1. Provide a detail & specifications for the storage tank including disinfection procedures for storage tanks.
2. Need applicable spring data, i.e. ultimate volume available, chemical analysis of water, bacteriological analysis prior to putting system into use, etc.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

December 4, 1975

PROJECT: Drain Field design for Melvin Zwonifer, Tract 20 Dell Range  
Addition, Laramie County, Wyoming

ARCHITECT OR ENGINEER: N.N.B. Consulting Engineers,  
1709 Carey Avenue, Cheyenne, Wyoming, 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 75-211

REVIEWING ENGINEER: Frank R. Harman, P. E. *Frank R. Harman*

DATE OF REVIEW: December 4, 1975

ACTION: Authorized for Construction

COMMENTS:

FRH/jb

cc: Don Pack, Sanitarian, Cheyenne-Laramie County Health Unit  
315 West 20th Street  
Cheyenne, Wyoming 82001

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF HEALTH AND SOCIAL SERVICES  
DIVISION OF HEALTH AND MEDICAL SERVICES  
SANITARY ENGINEERING SERVICES  
STATE OFFICE BUILDING  
CHEYENNE, WYOMING 82001

December 9, 1975

1. PROJECT: Sewer, Water & Dump Station Work, Glendo State Park  
Platte County, Wyoming
2. ARCHITECT OR ENGINEER: Plans submitted by Bill Yannaccone, P.E. Engineer  
Wyoming Recreation Commission, 604 East 25th Street, Cheyenne, Wyo. 82001
3. SANITARY ENGINEERING SERVICES REF. NO.: 75-213
4. REVIEWING ENGINEER: Frank R. Harman, P.E. *Frank R. Harman*
5. DATE OF REVIEW: December 9, 1975
6. ACTION: Construction not Authorized
7. COMMENTS:

The proposed standard hydrants have a summer (non-draining) and a winter (self-draining) settings. This constitutes a stop and waste valve arrangement which is not approved by this Department. This is due to the possibility of back syphonage of contaminated water at the self-draining setting.

If the same hydrants are to be used it is suggested that a 1/4-inch copper tubing be fitted on to the drainage hole and be brought up to the handle level and be fitted with an air valve such as is used on automobile tires. Then during the winter months when bleeding of the riser pipe is necessary, compressed air can be blown into the copper tubing which will expel air from the riser pipe.

FRH/jb

cc: Malcolm Crawford, District Sanitarian, Gillette, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Glendo State Park - Sewer, Water & Dump Station.

ARCHITECT OR ENGINEER: Robert J. Drobish Designer, Wyoming Recreation Commission  
604 East 25th Street, Cheyenne, Wyoming

WATER QUALITY DIVISION REFERENCE NUMBER: 75-213R

REVIEWING ENGINEER: Frank R. Harman, P.E. *Frank R. Harman*

DATE OF REVIEW: February 10, 1976

ACTION: Authorized for Construction.

COMMENTS:

cc: Malcolm Crawford, District Sanitarian, Gillette, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: KOA Campground, Mr. and Mrs. Bob Hokansan owner. Buffalo, Wyoming 82834

ARCHITECT OR ENGINEER: Plains Engineering, P.O. Box 432, Buffalo, Wyoming 82834  
Dan Epperson, Engineer

WATER QUALITY DIVISION REFERENCE NUMBER: 75-214

REVIEWING ENGINEER: Roy E. Prior, Paul Schwieger, P.E. *RS*

DATE OF REVIEW: January 9, 1976

ACTION: Not authorized for construction

COMMENTS: The following information is needed to evaluate this facility.

- A. Back fill specifications
- B. How will the line be cleaned out from the plant end?
- C. If this is a new manhole send details.
- D. What is the outlet of the plant like?
- E. What about the flood protection for the plant.
- F. Is there an O & M manual?
- G. How did you arrive at your design data?
- H. Operators must be able to sample the influent and the effluent for the discharge permit.

Ten State Standards are used for a review criteria.

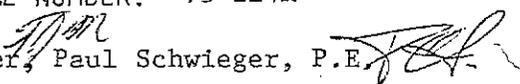
REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Buffalo KOA Campground, Sewer Extension and Sewage Treatment Plant

ARCHITECT OR ENGINEER: Plains Engineering, P.O. Box 432, Buffalo, Wyoming 82834

WATER QUALITY DIVISION REFERENCE NUMBER: 75-214R

REVIEWING ENGINEER: Tom Mueller, Paul Schwieger, P.E. 

DATE OF REVIEW: March 16, 1976

ACTION: Construction not Authorized

COMMENTS:

The following information is needed to evaluate your plans.

1. Details of the final plant outfall.
2. How can this system be monitored for the NPDES discharge permit?
3. Complete details on chlorination facility. From the drawings submitted it is not clear what type of structure is involved or what the internal parts look like. What is its design detention time?

In light of the fecal coliform and residual chlorine limitation imposed by the NPDES permit, this facility may not provide sufficient control for meeting said limitations.

4. Contrary to manufacturer's claims there is a sludge production with this type of system. Sludge handling and disposal must be addressed.

PERMIT TO CONSTRUCT

New  
 Renewal  
 Modified

Permit No. 75-214RR

K.O.A. Campground Waste Treatment  
(Name of Facility)

This permit hereby authorizes the applicant:

<u>Hokanson</u> (Last)	<u>Robert</u> (First)	<u></u> (Middle)
<u>P.O. Box 865</u> (Street or P.O. Box)		
<u>Buffalo</u> (City)	<u>Johnson</u> (County)	<u>Wyoming</u> (State)

to construct, install, or modify a Waste Treatment Facility  
facility located in Sec. 25, T51N, R82W  
(Legal Description)

in the County of Johnson, in the State of  
Wyoming. This permit shall be effective for a period of 2 years  
from the date of issuance of this permit not to exceed five (5) years.

Authorized by:

*APM for AEW*  
Arthur E. Williams  
Director  
Wyoming Dept. of Environmental Quality

April 14, 1976  
Date of Issuance

book

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Sewer Extension to Block 3 of Highland Park and Lots 40-48  
of Fairdale Addition No. 2

ARCHITECT OR ENGINEER: City of Casper  
E.C. Lenhart  
632 South David Street  
Casper, Wyoming  
Casper Board of Public Utilities  
136 West 8th Street  
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-215

REVIEWING ENGINEER: Jake Strohman, Paul Schwieger P.E. 

DATE OF REVIEW: December 23, 1975

ACTION: Construction is Authorized

COMMENTS:

cc: Nix Anderson

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Bairoil Sewer and Lagoon Plan - Sweetwater County, Wyoming  
Bairoil, Wyoming

ARCHITECT OR ENGINEER: Thomas E. Burnett, P.E.  
Nelson - Haley - Patterson and Quirk  
2021 Clubhouse Drive, Greeley, Colorado 80631  
WATER QUALITY DIVISION REFERENCE NUMBER: 75-216

REVIEWING ENGINEER: David W. Hill, William Garland, P.E. *wlg*

DATE OF REVIEW: January 21, 1976

ACTION: Not Authorized for Construction

COMMENTS:

- 1) The 10 State Standard of 100 gpcd or greater for the permanent population should be used. This should provide a safety factor for Bairoil's retention lagoon.
- 2) Drop pipes should be provided for sewers entering manholes at elevations 24 inches or more above manhole invert. A detail, showing types and dimensions of drop manholes must be shown.
- 3) Please specify size of existing sewer lines. Manholes may be needed at survey station 24 + 19.2 on Line "B".
- 4) Specify invert elevations of all sewer lines entering Manhole #E1.
- 5) A detail drawing or explanation of the joints used between the Coal Tar Coated steel pipe and the RPMP or PVC pipe should be provided.
- 6) Appropriate signs should be provided to designate the nature of the facility, and advise against trespassing.
- 7) It may be advisable to connect sewer Line "D" with manhole directly into septic tank. If line is connected to septic tank outfall, sufficient ground cover should be provided to prevent freezing in outfall pipe.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Bairoil Sewer and Lagoon Plan - Sweetwater County, Wyoming  
Bairoil, Wyoming

ARCHITECT OR ENGINEER: Thomas E. Burnett, P.E., Nelson, Haley, Patterson, and Quirk  
2021 Clubhouse Drive, Greeley, Colorado 80631

WATER QUALITY DIVISION REFERENCE NUMBER: 75-216R

REVIEWING ENGINEER: David W. Hill, <sup>out</sup>William L. Garland, P.E. *edg*

DATE OF REVIEW: March 29, 1976

ACTION: Authorization for construction contingent upon meeting the following items.

COMMENTS:

- 1) The plans and specifications for the possible construction of the second lagoon will be submitted to our office and authorized for construction by our office.
- 2) If the 1.1 acre cell starts to discharge construction of the second cell will proceed as quickly as possible.
- 3) a NPDES discharge permit will be required for the facility. Applications are enclosed.

PERMIT TO CONSTRUCT

New  
 Renewal  
 Modified

Permit No. 75-216RR

Bairoil Sewage Lagoon

(Name of Facility)

This permit hereby authorizes the applicant:

Amoco Production Company  
(Last) (First) (Middle)

P.O. Box 2520  
(Street or P.O. Box)

Casper Natrona Wyoming 82601  
(City) (County) (State)

to construct, install, or modify a Sewage Lagoon  
facility located in Section 11, T26N, R90W  
(Legal Description)

in the County of Sweetwater, in the State of  
Wyoming. This permit shall be effective for a period of 2 years  
from the date of issuance of this permit not to exceed five (5) years.

Authorized by:  
*William S. Gaudin*

Supervisor - Director  
Water Quality Div.  
Wyoming Dept. of Environmental Quality

January 31, 1977

Date of Issuance

cc: Jim Gores, Nelson, Haley, Patterson, and Quirk, Inc.,  
625 East Madison, Suite 5, Riverton, Wyoming 82501



*Department of Environmental Quality*  
*Water Quality Division*

210 LINCOLN STREET

LANDER, WYOMING 82520

TELEPHONE 307-332-3144

November 4, 1981

Mr. Robert Adams  
Amoco Production Company  
P. O. Box 2520  
Casper, WY 82602

RE: Town of Bairoil Wastewater Lagoons

Dear Mr. Adams:

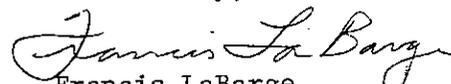
As a result of our October 27, 1981 phone conversation, a second search of our Cheyenne files was made for a "Permit to Construct" for the North lagoon serving the Town of Bairoil. Using the reference number you provided, a "Permit to Construct" has been found for this lagoon. The permit number is 75-216RR and was issued on January 31, 1977.

I reviewed a set of the approved plans and they show a two-cell lagoon. As you know, the North lagoon consists only of a single cell, but it appears to be substantially under-loaded; therefore, there appears to be no need for a second cell at this time. I did notice that the plans called for a concrete headwall on each of the three discharge pipes on the cell that has been constructed. These headwalls were apparently never constructed, as I did not see them during my inspection. I am requesting that these headwalls be installed.

Other than the headwall item, I have no additional concerns about the North lagoon at this time. Please be aware that there is always the possibility that if it appears there may be potential groundwater contamination problems at the South lagoons, this Department may request a groundwater study be conducted at the North lagoon. This determination will be made when your groundwater report on the South lagoon is received.

If you have any questions, please contact me at this office.

Yours truly,

  
Francis LaBarge  
Water Quality Evaluator  
Southwest District

FL:nb

Copy: Mayor Cindy Lou Bartlett, Town of Bairoil  
✓ Cheyenne DEQ/WQD  
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*Cook*

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF HEALTH AND SOCIAL SERVICES  
DIVISION OF HEALTH AND MEDICAL SERVICES  
SANITARY ENGINEERING SERVICES  
STATE OFFICE BUILDING  
CHEYENNE, WYOMING 82001

1. PROJECT: Water and Sewer Layout - North Fertig Addition, Wheatland, Wyoming
2. ARCHITECT OR ENGINEER: J. Kenneth Kennedy of K&H Engineering  
P.O. Box 856, Wheatland, Wyoming 82201
3. SANITARY ENGINEERING SERVICES REF. NO.: 75-218
4. REVIEWING ENGINEER: Frank R. Harman *Frank R. Harman*
5. DATE OF REVIEW: December 30, 1975
6. ACTION: Authorized for Construction
7. COMMENTS:

cc: Malcolm Crawford, District Sanitarian, Gillette, Wyoming

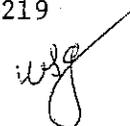
REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Kingsborough Addition  
Upland Industries, Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman  
Suite 1000, 110 N. Fourteenth St., Omaha, Nebr.

WATER QUALITY DIVISION REFERENCE NUMBER: 75-219

REVIEWING ENGINEER: William L. Garland, P.E. 

DATE OF REVIEW: January 19, 1976

ACTION: Construction NOT Authorized

COMMENTS:

This project will not be authorized for construction until which time sufficient evidence is presented to our Division to indicate that satisfactory treatment will be provided necessary to conform with all provisions of NPDES Permit # Wy-0022497.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Kingsborough Addition, Upland Industries, Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman, Suite 1000, 110 North Fourteenth Street  
Omaha, Nebraska 68100

WATER QUALITY DIVISION REFERENCE NUMBER: 75-219 (Continuation)

REVIEWING ENGINEER: <sup>DWH</sup> David W. Hill, William L. Garland, <sup>WLG</sup> P.E.

DATE OF REVIEW: April 6, 1976

ACTION: Not Authorized for Construction

COMMENTS:

This review covers comments we have concerning the design of Kingsborough Additons water and sewer systems.

However, construction will not be authorized even with our authorization of the design until adequate wastewater treatment facilities are available. (i.e. - hook up to the Green River Wastewater Treatment Plant).

General

- 1) Please provide design information for water and sewer systems in Kingsborough Addition. (i.e. - Future population, future flows).

Water Lines

- 2) Water service valves of the stop and drain type are not acceptable.
- 3) Profiles of the water distribution network are needed for adequate review.
- 4) Specify the normal water pressure in the distribution system. A minimum of 20 psi is needed throughout the distribution system.
- 5) Provide detail drawings of the blow-off valves on the water system.
- 6) Detail drawings and specifications are needed for the pressure reducing -pressure sustaining valve in a concrete vault.
- 7) The pressure testing of the installed pipe shall be according to AWWA C603-65 Section 19 - for asbestos - cement water pipe.

Project: Kingsborough Addition, Upland Industries, Green River, Wyoming

Reference Number: 75-219

The pipe shall be filled with water for a minimum of 24 hrs. and then subjected to the pressure test.

- 8) Disinfection of the waterlines shall be accomplished to AWWA standard C601-68. After chlorination and flushing of the water line is completed, bacteriological tests shall be performed before placing the pipeline into service. (A minimum of two samples in different parts of the distribution system).
- 9) The amount of leakage allowed will be specified in the specifications, according to AWWA standard C603-65, for asbestos cement pipe.
- 10) The hydrants shall be installed as per AWWA C603-65, Installation of Asbestos - Cement water pipe - Section 17.4. The drainage pit shall be at least 2 ft. in diameter and 2 ft. deep below each hydrant. The gravel shall be laid to a depth of 6 inches above the waste opening.
- 11) Latest AWWA standard for fire hydrants:  
Dry Barrel Fire Hydrants - C502-73  
Wet Barrel Fire Hydrants - C503-75  
Information only.

#### Sewer Lines

- 12) Sewer risers shall be protected by concrete at the ground service a minimum of 4 inches thick and 12 inches in diameter.
- 13) According to Ten State Standards infiltration or exfiltration shall not exceed 200 gallons per inch of pipe diameter per mile per day. The town of Green River sewer specifications require that infiltration shall not exceed 50 gallons per inch of pipe diameter per mile per day.
- 14) Appropriate sewer line leakage testing shall be specified. If the testing is in accordance with Green River sewer specifications please indicate so in the specifications.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Kingsborough Addition, Upland Industries, Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman, Suite 1000, 110 North Fourteenth Street,  
Omaha, Nebraska 68610

WATER QUALITY DIVISION REFERENCE NUMBER: 75-219R

REVIEWING ENGINEER: David W. Hill, William L. Garland, P.E. *wlg*

DATE OF REVIEW: May 24, 1976

ACTION: Not Authorized for Construction

COMMENTS:

Kingsborough Addition will be authorized for construction when the following are taken care of.

WATER LINES

1. Water service valves of the stop and drain type are not acceptable.
2. Specify the normal water pressure in the system. A minimum of 20 psi is needed throughout the distribution system.
3. The pressure testing of the installed pipe shall be according to AWWA 603-65 Section 19 for Asbestos - Cement water pipe. The pipe shall be filled with water for 24 hrs, and then subjected to the pressure test. This should be inserted into the specifications.
4. The amount of leakage allowed should be specified in the specifications, according to AWWA standard C603-65, for Asbestos-Cement Pipe.
5. Disinfection of the water lines shall be accomplished to AWWA standard C601-68. After chlorination and flushing of the water line is completed, at least one to two bacteriological tests shall be performed before placing the pipeline into service. Supply details in specifications which provide for this testing.

SEWER LINES

6. A reference should be made in the specifications referring to the Green River Sewer specifications for leakage tests and the maximum amount of infiltration allowed.
7. Sewer risers shall be protected by concrete at the ground surface a minimum of 4 inches thick and 12 inches in diameter.

PROJECT: KINGSBOROUGH ADDITION, UPLAND INDUSTRIES, GREEN RIVER, WYOMING

REFERENCE NUMBER: 75-219R

8. Plans and specifications for the storm drainage system in Kingsborough Addition should be submitted for our review.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Kingsborough Addition, Upland Industries, Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman, Suite 1000, 110 North Fourteenth  
Street, Omaha, Nebraska 68610

WATER QUALITY DIVISION REFERENCE NUMBER: 75-219RR

REVIEWING ENGINEER: David <sup>DWH</sup> W. Hill, William L. Garland, P.E. <sup>WLG</sup>

DATE OF REVIEW: June 8, 1976

ACTION: Authorized for Construction (Comment must be complied with)

COMMENTS:

1. Part 5-05 Testing part e. shall be deleted from the specifications.  
This is not acceptable in lieu of testing.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Evaporation Pond (sewage) for Lance Creek Field Camp, Marathon Oil Company, Niobrara County, Wyoming.

ARCHITECT OR ENGINEER: E. L. Spieles P.E. Submitted by W. C. Sylvester, Manager  
Casper Division P. O. Box 120 Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-221

REVIEWING ENGINEER: F. R. H. P.E. *Frank R. Hanna*

DATE OF REVIEW: December 19, 1975

ACTION: Authorized for construction

COMMENTS:

cc: Malcolm Crawford, District Sanitarian, Gillette, Wyoming

Earl L. Spieles, Marathon Oil Company P. O. Box 120, Casper, Wyoming 82601

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Craig Taco Industries  
Gillette, Wyoming, Campbell County

3680 Pacific Avenue  
Ogden, Utah 84403

ARCHITECT OR ENGINEER: David Kwiert, A.I.A.  
Architect  
Gillette, Wyoming

WATER QUALITY DIVISION REFERENCE NUMBER: 75-224

REVIEWING ENGINEER: Roy E. Prior, Paul Schwieger, P.E. 

DATE OF REVIEW: January, 2, 1976

ACTION: Not authorized for construction

COMMENTS:

Please send details on the sewer service connection to the facility.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Antelope Creek Mobile Home Park, Douglas, Wyoming

ARCHITECT OR ENGINEER: John Lambert P.E.  
Box 34  
Douglas, Wyoming 82633

WATER QUALITY DIVISION REFERENCE NUMBER: 75-225

REVIEWING ENGINEER: Jake Strohman, A. E. Williamson, P.E.

DATE OF REVIEW: December 29, 1975

ACTION: Construction authorized (see compliance items 1 - 5)

COMMENTS:

1. Maximum distance on a collection line with a cleanout is 150 feet. The cleanout should be moved to the 150 foot length and 4 inch service branch lines installed from the trailers to the cleanouts. Another alternative would be to move the sewer and water lines to the north to decrease this distance to 150 feet. 4 inch sewer lines require a slope of 1 ft./100 ft.
2. Water and sewer risers shall terminate 4" above ground surface, standing water or runoff water, whichever is higher. Sewer riser shall be encased with concrete a minimum of 4" thick and 12" in diameter at ground surface and have a screw cap to be installed when not in use.
3. Minimum size of sewer riser pipe is to be 4 inches diameter.
4. A complete set of plans should be sent to Environmental Surveillance and Control for their portion of the review.  
Malcolm Crawford  
P.O. Box 973  
Gillette, Wyoming 82716
5. Send owner's name and address and acceptance letter from town.

cc: Malcolm Crawford  
Mr. Coffman

Cook

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Boatright and Smith Construction Company, Gillette, Wyoming

ARCHITECT OR ENGINEER: Plains Engineering, P.O. Box 117, Gillette, Wyoming 82716

WATER QUALITY DIVISION REFERENCE NUMBER: 75-226

REVIEWING ENGINEER: Roy E. Prior, <sup>RE</sup> Frank R. Harman P.E. *Frank R. Harman*

DATE OF REVIEW: December 30, 1975

ACTION: Not authorized for construction (see comments)

COMMENTS:

Additional information is needed to evaluate the system.

- A. Details on sewer lines to the trailers
- B. Septic tank details
- C. 10 foot separation between tank and leach field
- D. Where are the water lines
- E. Riser details
- F. Drawings need to be signed by registered engineer.

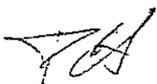
REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Boatright Smith, Septic Sewage System,  
Gillette, Campbell County, Wyoming

ARCHITECT OR ENGINEER: Plains Engineering, P.O. Box 117  
Gillette, Wyoming 82716

WATER QUALITY DIVISION REFERENCE NUMBER: 75-226RR

REVIEWING ENGINEER: Roy E. Prior, Paul C. Schwieger, P.E. 

DATE OF REVIEW: February 19, 1976

ACTION: Construction authorized.

COMMENTS:

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REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Run-off controls for Bard Ranch feedlots, Platte County

ARCHITECT OR ENGINEER: Plan submitted by C. Patrick Cullen, Civil Engineer  
Soil Conservation Service U.S.D.A. P.O. Box 449, Wheatland, Wyoming 82201

WATER QUALITY DIVISION REFERENCE NUMBER: 75-227

REVIEWING ENGINEER: Frank R. Harman P.E. *Frank R. Harman*

DATE OF REVIEW: December 30, 1975

ACTION: Authorized for Construction

COMMENTS:

cc: Malcolm Crawford, District Sanitarian, Gillette, Wyoming

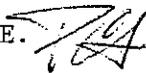
REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Jones Subdivision. Campbell County, Developer, Gerald Jones  
Jones Construction, Drawer C, Gillette, Wyoming 82716 PH. 682-3158

ARCHITECT OR ENGINEER: Plains Engineering, Gillette Wyoming  
R.J. Timm, Engineer

WATER QUALITY DIVISION REFERENCE NUMBER: 75-228

REVIEWING ENGINEER: Roy E. Prior, Paul Schwieger, P.E. 

DATE OF REVIEW: January 12, 1976

ACTION: Construction Authorized - See Comments

COMMENTS:

- A. Send a chemical water analysis of well for final authorization to place system into service.

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: 3 Barrel inverted siphon, Town of Mills

ARCHITECT OR ENGINEER: Worthington, Lenhart, and Carpenter Inc., 632 S. David  
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-229

REVIEWING ENGINEER: Jake S. Sirohman, Paul Schwieger, P.E. *PSH*

DATE OF REVIEW: February 6, 1976

ACTION: Construction is not authorized.

COMMENTS: The following items need clarification or upgrading:

1. Minimum diameter of manholes is 42 inches.
2. Seal prefab manhole joints with bituminous base seal during installation
3. Manhole steps are required by Wyoming Occupational Health and Safety.
  1. 1 inch diameter steps, if not corrosion resistant. 3/4 inch diameter if steps are corrosion resistant.
  2. Steps are 7 inches from the wall.
  3. Steps are set on 12 inch spacing.
  4. Steps are 16 inches in width.
  5. 6 inch embedment of wall thickness in manholes.
4. Does Cretex Type 434C meet ASTM C478 specifications?
5. Type II, Class 150, Federal Specifications WW-P-421 for Cast Iron.

What is the equivalent ASTM or AWWA Specification? ASTM A44; AWWA 1908. The reason for inquiring is that our office only has AWWA and ASTM specifications available.

cc: Nix Anderson

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: 3 Barrel inverted Siphon & 12 inch Sewer Main from 8th Street to inverted Siphon, Town of Mills

ARCHITECT OR ENGINEER: E.C. Lenhart, P.E., 632 South David, Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-229R

REVIEWING ENGINEER: Jake Strohmman, William L. Garland, P.E. *WLG*

DATE OF REVIEW: March 12, 1976

ACTION: Construction Authorized

COMMENTS:

REVIEW OF PLANS AND SPECIFICATIONS

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION  
State Office Building  
Cheyenne, Wyoming 82002

PROJECT: Mills Sewage Siphon  
Casper, Wyoming

ARCHITECT OR ENGINEER: E.C. Lenhart, P.E.  
632 South David, Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 75-229R

REVIEWING ENGINEER: Jake Strohman, Paul Schwieger, P.E. *PS*

DATE OF REVIEW: March 23, 1976

ACTION: Construction Authorized

COMMENTS:

Designing engineer is required to sign or seal plans.