

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Water & Wastewater Facilities
Manual's Shamrock Trailer Court, Wamsutter, Wyoming 82096

ARCHITECT OR ENGINEER:

WATER QUALITY DIVISION REFERENCE NUMBER: 76-1

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

DATE OF REVIEW: January 6, 1976

ACTION: Not Authorized for Construction

COMMENTS:

All public water supplies and wastewater facilities to be constructed in the State of Wyoming must be designed by a professional engineer licensed in the State of Wyoming. The plans and specifications must bear the seal and/or signature of the designing engineer. Upon completion of design by a registered engineer these plans should be re-submitted for review to this agency. Non-compliance with the above constitutes a violation of State Statutes and is punishable by fine not to exceed \$10,000 a day for each day of violation.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Glandt Trailer Court, Lander, Wyoming 82520

ARCHITECT OR ENGINEER: None

WATER QUALITY DIVISION REFERENCE NUMBER: 76-2

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

DATE OF REVIEW: January 6, 1976

ACTION: Not Authorized for Construction

COMMENTS:

All water and sewerage systems must be designed by a professional engineer licensed in the State of Wyoming. All plans and specifications must bear the seal and/or signature of the designing engineer prior to review by this agency. A permit to construct said facility will not be granted until compliance with the above. Construction of such a facility without a permit is in violation of State Statutes punishable by a fine not to exceed \$10,000 a day for each day of violation.

REVIEW OF PLANS AND SPECIFICATIONS

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

Sanitary Facility, South Pass City, Wyoming 82520

PREPARED BY: Submitted by Bill Yannaccone, P.E.
Engineer, Wyoming Recreation Commission
604 East 25th Street, Cheyenne, Wyoming 82501

PROJECT REFERENCE NUMBER: 76-3

PREPARED BY: Frank R. Harman, P.E.

Frank R. Harman

DATE: January 13, 1976

APPROVED FOR CONSTRUCTION

Sanitary Facility approved. No treatment indicated. It is understood that this facility will be tied into the community treatment system at South Pass City when this treatment system is installed in the near future.

cc: Bill George, District Sanitarian, Worland, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Amoco Oil Company Potable Water Supply Filter

ARCHITECT OR ENGINEER: C.C. Hutton, P.E.

Amoco Oil Company
Attn: Manufacturing Dept.
Casper Refinery
West Yellowstone Highway
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-4R

REVIEWING ENGINEER: *JJ* Jake Strohman, Art Williamson P.E.

DATE OF REVIEW: January 27, 1976 *Art Williamson*

ACTION: Construction Authorized

COMMENTS:

Is your water supply chlorinated? If not, this filter will act as a breeding point for bacteria. Has a bacteriological analysis of the water been accomplished recently? If not, I would recommend that you contact Nix Anderson of the Natrona County Health and Social Services, Hathaway Office Building, Cheyenne, Wyoming 82002 and they will send you a sample bottle and test your water. If your well is shallow, chlorination will more than likely be required.

cc: Nix Anderson

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Amoco Oil Company Potable Water Supply Filter

ARCHITECT OR ENGINEER: C.C. Hutton, P.E. Amoco Oil Company Attn: Manufacturing Dept.
Casper Refinery
West Yellowstone Highway, Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-4R

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

DATE OF REVIEW: January 27, 1976

ACTION: Construction Authorized

COMMENTS:

Is your water supply chlorinated? If not, this filter will act as a breeding point for bacteria. Has a bacteriological analysis of the water been accomplished recently? If not, I would recommend that you contact Nix Anderson of the Natrona County Health Department or Public Health Laboratory Services, Wyoming Department of Health and Social Services, Hathaway Office Building, Cheyenne, Wyoming 82002 and they will send you a sample bottle and test your water. If your well is shallow, chlorination will more than likely be required.

cc: Nix Anderson

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: City of Sheridan, Standard Sewer Specifications
Sheridan County, Wyoming

ARCHITECT OR ENGINEER: Elmer Kuball, City Engineer, Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 76-5

REVIEWING ENGINEER: Roy E. Prior, ^{R.E.P.} Art Williamson, P.E.,
Art Williamson

DATE OF REVIEW: February 18, 1976

ACTION: Specifications approved. See Comments.

COMMENTS: These specifications shall cover the installation of all sanitary sewers in the City of Sheridan. Plans for sanitary sewer projects must still be submitted, but they may refer to these specifications.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: City of Sheridan, Standard Water Specifications, Sheridan County,
Wyoming

ARCHITECT OR ENGINEER: Elmer Kuball, City Engineer, Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 76-5

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

DATE OF REVIEW: August 27, 1976

ACTION: Specifications Approved. See Comments.

COMMENTS: These specifications shall cover the installation of all public water supply additions in the City of Sheridan. Plans for such projects must still be submitted, but they may refer to these specifications.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ernie Johnson's Trailer Park 25 Units Sec. 34, T.33N., R. 71 West
P.O. Box 111
Douglas, Wyoming

ARCHITECT OR ENGINEER: James R. Graves P.E. 3100 East Sinclair PL.
533 South 9th Street Casper, Wyoming 82601
Douglas, Wyoming 82633

WATER QUALITY DIVISION REFERENCE NUMBER: 76-6

REVIEWING ENGINEER: Jake Strohmman, Art Williamson, P.E.

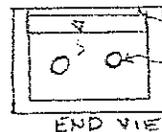
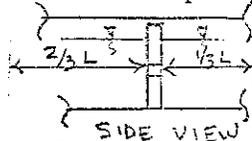
DATE OF REVIEW: January 28, 1976

ACTION: Construction is not Authorized

COMMENTS: The following items must be furnished to determine if the plans and specifications meet minimum state standards or upgraded to meet minimum state requirements:

1. The "typical sewer hookup" detail will not be sufficient for lots #1 thru 16.
2. The slope of the sewer line for the final (10) ten feet preceeding the septic tank shall not exceed 2 feet per 100 feet. What does CAP. 7854 stand for under "Septic Tank" on the profile sheet?
3. What is the wall thickness of the septic tank and the specifications for the concrete to be used in the septic tank?
4. Inlet and outlet into septic tank shall be schedule 40 PVC or cast iron.
5. Access manhole shall be located over inlet and outlet.

6. Recommend baffle in septic tank be built as shown below.



1" AIR GAP AT TOP OF BAFFLE (VARIABLE LENGTH)
4" DIA. HOLES 1 FT BELOW LIQUID SURFACE

7. Specify thermaline water connection to be 4" above ground surface, standing water or runoff water, whichever is higher.
8. Show the well pit sump pump discharge line and its termination with respect to ground. Give specifications for sump pump.
9. Well must be located 50 feet from sewer line or 20 feet from well if sewer is made of Cast Iron with welded joints and pressure tested to 50 psi. Recommend well be located by storage tank or playground area.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ernie Johnson's Trailer Park 25 Units Sec. 34, T.33N., R. 71 West
P.O. Box 111
Douglas, Wyoming

ARCHITECT OR ENGINEER: James R. Graves P.E. 3100 East Sinclair PL.
533 South 9th Street Casper, Wyoming 82601
Douglas, Wyoming 82633

WATER QUALITY DIVISION REFERENCE NUMBER: 76-6

REVIEWING ENGINEER:

DATE OF REVIEW:

ACTION:

COMMENTS:

10. Locate valves at various locations on water distribution system to prevent entire trailer park from being without water due to a line break or maintenance.
11. What size are the water lines? Are all sewer lines 6 inches diameter?
12. Water and Sewer lines are to have a minimum of ten (10) feet horizontal spacing. RE. "typical trailer space detail".
13. Show exact locations of sewer and water riser locations on "typical trailer space detail."
14. Drain field should be as flat as possible. Are the ends of the leachfield lines connected together?
15. Show a cross section of the leach field.
16. What is the percolation rate for the leach field? Does the maximum ground water level come within 7 feet of the surface at any time during the year? Are there any impermeous soil layers within 7 feet of the ground surface?
17. Send backfill compaction specifications for backfilling sewer and water trenches and bedding specifications.
18. Your manhole numbering on your profile sheet does not coincide with the numbering on the plan sheet.
19. Drop type manholes are required for MH-1 and MH-2 as shown on the profile portion. Send details and specifications.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ernie Johnson's Trailer Park 25 Units Sec. 34, T. 33N., R. 71 West
P.O. Box 111
Douglas, Wyoming
ARCHITECT OR ENGINEER:

WATER QUALITY DIVISION REFERENCE NUMBER:

REVIEWING ENGINEER:

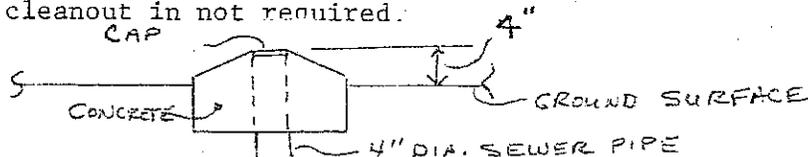
DATE OF REVIEW:

ACTION:

COMMENTS:

20. Minimum state requirements is 150 feet or less of sewer collection line where a cleanout may be substituted for a manhole. An alternate solution would be to install a cleanout at 150 feet collections lines A, B, C & D and run a 4" line from the outer lot to the cleanout. The cleanout cannot be located under a trailer. A mobile home riser is also not considered a cleanout.

21. Specify the distance that the sewer riser is to protrude above the concrete pad. The cleanout is not required.



22. Well shall be grouted to a depth of ten feet.

23. The following well information is required:

1. depth of well
2. yield of well
3. Actual well output of pump in g.p.m. (30 gallons per hour will not meet the peak demand of 65 g.p.m. required for this park)
4. Bacteriological and chemical analysis of the well water is required.

If the well has not been drilled you may drill the well so that the above information may be furnished after getting approval from the State Engineer's office. Ensure that the well is located 50 feet from all sewer lines and 100 feet from the leach field.

24. Send plans and specifications for the water storage tank. Is the tank to feed the distribution system by gravity. Show elevations of the subdivision with reference to the water tank. Show design calculations to ensure water distribution system can maintain 20 psi pressure under all conditions of flow. Storage tanks also requires disinfection.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ernie Johnson's Trailer Park 25 Units Sec. 34, T. 33N., R. 71 West
P.O. Box 111
Douglas, Wyoming
ARCHITECT OR ENGINEER:

WATER QUALITY DIVISION REFERENCE NUMBER:

REVIEWING ENGINEER:

DATE OF REVIEW:

ACTION:

COMMENTS:

25. Fence is not required around the leach field unless you are trying to keep livestock or vehicle traffic off of the facility.
26. All water lines shall be pressure tested to $1/2$ times operating pressure prior to burial.
27. What SDR and pressure rating for PYC water lines are you proposing?
28. The 4" lines in the leach field and from sewer riser to collection line may be ASTM 2729 but the sewer collection lines and main line shall meet ASTM D3033 or D3034 specifications.

cc: Malcolm Crawford

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ernie Johnson's Trailer Park, 25 units, Sec. 34, T33N, R71W
P.O. Box 111
Douglas, Wyoming

ARCHITECT OR ENGINEER: James R. Graves, P.E. 3100 East Sinclair PL.
533 South 9th Street Casper, Wyoming 82601
Douglas, Wyoming 82633

WATER QUALITY DIVISION REFERENCE NUMBER: 76-6R

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

DATE OF REVIEW: March 8, 1976

ACTION: Construction is not Authorized

COMMENTS:

The following items from the review of January 28, were not answered or are not acceptable:

1. Lots #1 through 16 will require a 4 inch service connection to mainline on the sewer risers. State minimum slope.
2. The slope of the sewer line for the final ten (10) feet preceeding the septic tank shall not exceed 2 feet per 100 ft.
3. Where does the sump pump from the well pit discharge to? Show this piping.
4. An "SDR" ratio of 25 is the minimum acceptable for water lines and this is for 100 ps: pressure rating. Preferable pressure ratings for water lines are 150 or 200 psi.
5. Send plans and specifications for water storage facility. (See section 7 of "Ten State Standards".)
6. The water storage tank will not be approved as a gravity system. A hydro-constant pump or equivalent will be required to supply the distribution system and keep the pressure above 20 psi. The storage tank at the elevation shown on plans would supply about 16 psi at elevation 4909. The head loss in a four inch water main is about 0.1 psi per 100 ft. when supplying a peak demand of 65 gpm. Show your design calculations to ensure water distribution can maintain 20 psi under all conditions of flow.

7. The following well information is required:
 1. depth of well
 2. yield of well
 3. Bacteriological and chemical analysis of the water well is required.
8. Install the clean out at 150 feet on collection lines A,B,C,& D. No 6 inch main line should extend past this clean. Install the 4 inch sewer service lines from the lot sewer riser to the clean out. Another alternative would be to install manholes at the end of each lateral.
9. The leach field appears to have adequate area but your percolation rate seems high for the type of material in this area. Could you varify that the tests were accomplished per appendix A of the enclosed gray book.
10. Your cross over specifications on page 2 are acceptable, but this work is not required under all circumstances.

See section 3 of Appendix A of the enclosed green book.

JS/js

Enclosures

cc: Malcolm Crawford

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ernie Johnson's Trailer Park, 25 Units, Sec. 34, T33N, R71W
P.O. Box 111, Douglas, Wyoming

ARCHITECT OR ENGINEER: James R. Graves, P.E., 533 South 9th Street, Douglas, Wyoming 82633
3100 East Sinclair PL., Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-6RR

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

DATE OF REVIEW: April 5, 1976

ACTION: Construction Authorized (see comments)

COMMENTS:

- 1) Steel water tank to meet material specifications of AWWA D100-67
- 2) Send the yield of the well along with chemical and bacteriological analysis to this office after aquisition of the information.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Amax Coal Belle Ayr Mine, Campbell County
NPDES pond #2

ARCHITECT OR ENGINEER: Amax Coal Company, M. Douglas Scott
Manager Western Division
Environmental Studies

WATER QUALITY DIVISION REFERENCE NUMBER: 76-7

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

DATE OF REVIEW: February 3, 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: Sewage Disposal System for Doctor Glenn K. Rogers
in Section 27, T22N., R71W., Albany County, Wyoming

ARCHITECT OR ENGINEER: Albert B. Bartlett P.E. 406, 11th Street
Wheatland, Wyoming 82201

WATER QUALITY DIVISION REFERENCE NUMBER: 76-8

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

DATE OF REVIEW: February 3, 1976

ACTION: Authorized for Construction.

COMMENTS:

cc: Philip Hughes, District Sanitarian, 138 Railroad
Green River, Wyoming 82935

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: 12" encasement across Van Horn and U.S. 20 & 26
Mills, Wyoming

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

WATER QUALITY DIVISION REFERENCE NUMBER: 76-9

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

DATE OF REVIEW: February 6, 1976

ACTION: Construction is not authorized.

COMMENTS: This office does not have a copy of "Commercial Standards". Could you furnish a copy or state the equivalent ASTM or AWWA standards for ABS and PVC pipe used in your specifications.

1. Ensure seal or signature of designing engineer is on plans and specifications.
2. Under Disinfection "AWWA C601-54" should be changed to read "current edition of AWWA C601" as several upgrading editions have been published since 1954.
3. If the water specifications are to be used for future water projects, insert sewer-water vertical and horizontal separation as outlined in the siphon specifications. An addendum for the above items is sufficient.

cc: Nix Anderson

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: 12" encasement across Van Horn & U.S. 20 & 26, Mills, Wyoming

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

WATER QUALITY DIVISION REFERENCE NUMBER: 76-9RR

REVIEWING ENGINEER: Jake *Strohman*, William L. Garland, P.E. *wsj*

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: Sewer Line Extension, City of Sheridan
Sheridan, Wyoming

ARCHITECT OR ENGINEER: VTN - 330 North Main Street
Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 76-10

REVIEWING ENGINEER: Roy E. Prior, ^{R.E.P.} Paul Schweiger, P.E. *PS*

DATE OF REVIEW: January 29, 1976

ACTION: Construction Authorized

COMMENTS: No water crossings are shown. If any are encountered, they shall be made in accordance with Section 8.4. of the "Recommended Standards for Water Works" of the Great Lakes - Upper Mississippi River Board of State Sanitary Engineers (Ten State Standards.)

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Septic Tank Systems for Lots 8 and 9, Robitaille Sub-division
of Tracks 8,9,10 & 11 Sunnyside Addition, Cheyenne, Wyoming

ARCHITECT OR ENGINEER: Peter J. Hutchison, Wyoming Water, Inc.
600 New Boyd Building, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-11

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

DATE OF REVIEW: February 3, 1976

ACTION: Authorized for Construction.

COMMENTS:

Prior to drilling of new well for lot 9, plans of the proposed well shall be submitted for review. A side view drawing of the well showing all details such as depth of total casing, depth of perforated casing, pump and pump mounting well seal etc. shall be indicated on the drawing.

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

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Upland Industries Corporation
Green River, Wyoming

ARCHITECT OR ENGINEER: R.M. Michael Brenneman, P.E.
Suite 1000 - 110 North Fourteenth Street
Omaha, Nebraska 68102

WATER QUALITY DIVISION REFERENCE NUMBER: 76-13

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

DATE OF REVIEW: February 2, 1976

ACTION: Not Authorized for Construction

COMMENTS:

- 1) The tank must be accessible to cleaning. A manhole should be provided for cleaning and maintenance. The contact chamber need not be air tight. An open top contact chamber would be much easier to maintain.
- 2) Short circuiting can easily occur under the present design. The chlorine contact chamber should be designed so that 80 - 90% of the lagoon effluent is retained in the basin for the specified contact time. This can be achieved by providing plug flow using around the end baffles, over and under baffles, or a series of interconnected compartments. A rectangular contact chamber design would be easier to insert baffles.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Upland Industries Chlorination Facility
Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman, P.E.
Suite 1000 - 110 North Fourteenth Street, Omaha, Nebraska 68102

WATER QUALITY DIVISION REFERENCE NUMBER: 76-13R

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

DATE OF REVIEW: March 1, 1976

ACTION: Authorized for Construction

COMMENTS:

DEQ is authorizing construction for Upland Industries to install the chlorinator and chlorine contact chamber. However, our division feels the design as authorized will probably not meet the fecal coliform discharge standards according to the provisions of NPDES Permit # WY-0022497. The following comments are recommendations only.

- 1) The volume of the chlorine contact chamber in back of the influent pipe is not effectively used for contact time. The effective contact time is about 20 minutes for 100,000 gpd under the present design. The influent pipe to the chamber should enter at the end of the contact chamber. The chlorinator could be placed on a brace extending from the contact tank to a footing on the sidehill.
- 2) Short circuiting could still occur under the present design of using only two baffles. More baffles will reduce the possibility of short circuiting and thus also reduce the possibility of exceeding the fecal coliform provisions of the discharge permit.
- 3) The tablet chlorinator is an inefficient method of chlorination. A gas chlorinator is much more efficient.
- 4) The contact tank will have to be cleaned periodically of solids. Provisions for draining the contact tank for cleaning purposes should be included for every section separated by the "over" baffles.

A gate valve should be provided on the discharge pipe from the lagoon to the contact chamber or a by pass system by passing the contact chamber should be provided. This will isolate the contact chamber and chlorinator for maintenance and repair.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Highland Estates
Campbell County, Gillette, Wyoming

ARCHITECT OR ENGINEER: R.H. Westerfield, Planning Services, Inc.
200 North American Road, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-14

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

DATE OF REVIEW: February 6, 1976

ACTION: Construction not authorized.

COMMENTS:

1. The Water Quality Division shall require that water and sewer flow calculations be submitted. This should include expected flows in the subdivision, including peak flows, and expected future flows from the surrounding undivided areas. Capability of the proposed facilities to handle these flows should be shown, as well as the adequacy of the city utilities to which they are being tapped.
2. Water and sewer lines shall be separated a vertical distance of 18 inches, rather than the 12 inches specified.
3. Sewage profiles from manhole A-2 to A-1 to the existing manhole shall be provided.
4. We feel that 25 gallons per day, per inch diameter of pipe is excessive for modern gasketed, cast iron pipe. Leakage from the water lines during the test should be essentially zero.
5. ASTM specification C200 has been replaced by C700.
6. According to your specifications, (City of Gillette Ordinance 565)
 - a) a hydrant should be located at the intersection of Foothills Boulevard and Hilltop Court.
 - b) a valve should be located along the water line from the end of Antelope Drive to the foot of Hilltop Court.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Highland Estates
Campbell County, Gillette, Wyoming

ARCHITECT OR ENGINEER: R.H. Westerfield, Planning Services, Inc.
200 North American Road, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-14R

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

DATE OF REVIEW: March 2, 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: Upland Industries, Sanitary Sewer Outfall for Section 35
Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman, P.E.
Suite 1000, 110 North Fourteenth Street
Omaha, Nebraska 68102

WATER QUALITY DIVISION REFERENCE NUMBER: 76-15

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

DATE OF REVIEW: February 10, 1976

ACTION: Not authorized for construction.

COMMENTS:

- 1) Supply copies of agreement whereby the City of Green River is allowing the Upland Industries Subdivision to use the Green River Wastewater Treatment Plant.
- 2) Specify who is to maintain the sewer outfall from Upland Industries (Town of Green River or Upland Industries personnel) submit copies of agreement if Green River is to maintain the trunk line. The maintenance man must possess a minimum "Class D" wastewater system certificate.
- 3) Submit the design calculations (i.e. - future design population, future maximum hourly sewage flow).
- 4) A complete set of specifications must be submitted for infiltration-exfiltration testing of the sewer line.
- 5) Specifications shall accompany construction drawings informing the builder in detail of the design requirements as to the quality of materials, workmanship, and fabrication of the manholes.
- 6) The detail drawing of the manhole section should be redrawn. As is, the manhole cover appears to be concreted in.
- 7) Coarse sand, crushed gravel or crushed stone will provide the best pipe bedding material. Fine sand is difficult to compact in a uniform manner and should be used with care for bedding. Recommendation only.
- 8) The shaped trench beneath the sand is impractical to construct and is not needed. A $\frac{1}{4}$ pipe diameter distance is needed from the bottom of the trench to the pipe for Class "B" bedding. Recommendation only.

- 9) The carefully compacted backfill around the pipe should be free of rocks or stones greater than $1\frac{1}{2}$ inch in any dimension.
- 10) Specifications should be submitted detailing the method of compaction and density testing and control of the backfilling operation.
- 11) The fill areas will probably wash out where the sewer line crosses a gully. (Sta. 1 + 00, 30 + 25, 34 + 85, 37 + 65 and there may be others). Specify details which will prevent the fill in these areas from eroding away.
- 12) The Green River Town Council has recently passed and approved a set of sewer specifications. Two copies of plans and specifications must be submitted to the Green River Sewer Department. The plans must be approved by the sewer inspector of Green River in addition to DEQ.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Upland Industries, Sanitary Sewer Outfall for Section 35
Green River, Wyoming

ARCHITECT OR ENGINEER: R. Michael Brenneman, P.E., Suite 1000, 110 North Fourteenth
Street, Omaha, Nebraska 68102

WATER QUALITY DIVISION REFERENCE NUMBER: 76-15R

REVIEWING ENGINEER: David W. Hill, William L. Garland, P.E. ^{Garland} 

DATE OF REVIEW: April 1, 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: Muddy Gap Junction - Store and Service Station
Carbon County, Wyoming

ARCHITECT OR ENGINEER: None; plan submitted by Frank E. Erickson
owner; Lander Route, Rawlins, Wyoming 82301

WATER QUALITY DIVISION REFERENCE NUMBER: 76-16

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

DATE OF REVIEW: February 4, 1976

ACTION: Authorized for Construction.

COMMENTS:

cc: John Wagner, Permit Section, Water Quality Division
DEQ Hathaway Building, Cheyenne, Wyoming

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Wyoming Industrial Park Sewer Extension
Natrona County, North Platte Water and Sewer District

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

WATER QUALITY DIVISION REFERENCE NUMBER: 76-17

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

DATE OF REVIEW: February 10, 1976

ACTION: Construction is not authorized.

COMMENTS: The following information requires upgrading or clarification:

1. Horizontal and vertical separation of water and sewer is required in specifications.
2. ASTM D-1784 specifies the type of plastic used in the PVC pipe. Does Commercial Standard 228 coincide with ASTM D-3033 or D-3034 for PVC pipe?
3. Section 2-A, Paragraph 1 states that manhole will be detailed on plans.(?) What is minimum diameter, steps, flow channels, etc.? Recommend a bituminous base seal to be used.
4. Section 2-B, Paragraph 3 states that the type of bedding will be specified on the plans. (?) The pipe specifications should also be considered when determining the type of bedding. Bedding should be hand tamped as mechanical compactors can crack or damage PVC.

cc: Nix Anderson

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Wyoming Industrial Park Sewer Extension (Foster Road along Circle Drive)
Natrona County, North Platte Water & Sewer District

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

WATER QUALITY DIVISION REFERENCE NUMBER: 76-17R

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

DATE OF REVIEW: March 12, 1976

ACTION: Construction 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: Albee & Williams Water Extension
Wardwell Water and Sewer District.

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

WATER QUALITY DIVISION REFERENCE NUMBER: 76-18

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

DATE OF REVIEW: February 6, 1976

ACTION: Construction Authorized

COMMENTS:

Any lots set up for mobile home rent will require plans and specifications approved by this office.

cc: Nix Anderson
Bob Moore, Wardwell Water & Sewer District
Box 7100
Salt Creek Route
Casper, Wyoming 82601

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Sewage Disposal System for Pillsbury Company, Burns, Wyoming

ARCHITECT OR ENGINEER: Chester C. Smith, P.E. Empire Laboratories,
3151 Nationway Suite K 11, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-19

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

DATE OF REVIEW: February 10, 1976

ACTION: Authorized for Construction with comment.

COMMENTS:

This is one of the last few cases where a 750 gallon septic tank is accepted. As of February 12, 1976 the minimum size septic tank under all conditions will be a 1000 gallon septic tank. The filter bed of 12' X 32' is adequate for the anticipated average loading of 500 gallons per day of septic tank effluent.

cc: Don Pack, Sanitarian, City County Health Unit
Jerome Schincel, Pillsbury Company, Burns Company 82053.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Phase 2, Addition to Miller Trailer Park - Northeast corner of Midway Drive and Mynear Drive, North of Cheyenne, Wyoming

ARCHITECT OR ENGINEER: Donald M. Hopkins, P.E.
1709 Carey Avenue, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-20

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

DATE OF REVIEW: February 10, 1976

ACTION: Not authorized for construction until undermentioned information is submitted.

COMMENTS:

1. Water Lines
Where PVC pipes are used for water lines they shall be of a manufacture that bears the seal of approval of the National Sanitation Foundation for non-toxicity.
2. Water and Sewer Crossing
Where the water line and sewer crosses, the water line shall be located above the sewer with a minimum vertical separation of 18 inches between the two.

If this separation is not feasible, the sewer line shall be constructed of water mains standard with joints no closer than 10 feet on each side of the crossing.
3. Water and Sewer Risers
Submit detailed side view drawings of a typical water and sewer hook-up.

Note: Stop and waste valves are not permitted for the purpose of bleeding a water riser.
4. The plan indicates a well pit proposed to be constructed around existing well.

Well pits are prohibited unless the pump used is a submersible pump. Please clarify.
5. The proposed 1500 gallon septic tank with 548 lineal feet or 1096 square feet of drainfield trench bottom, is accepted under the existing state standards, for each 4 unit module.

cc: Don Pack, Sanitarian, City County Health Unit, 315 W. 20th, Cheyenne, Wyo.
Rick Mordahl, 130 South Greeley Highway, Cheyenne

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Miller Mobile Home Park - N.E. Corner of Midway Drive and Mynear Drive
North of Cheyenne, Septic Tank Systems

ARCHITECT OR ENGINEER: Donald M. Hopkins - Submitted by Rick Mordahl
130 South Greeley Highway, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-20R

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

Frank R. Harman

DATE OF REVIEW: April 26, 1976

ACTION: Authorized for Construction

COMMENTS:

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



Department of Environmental Quality
Water Quality Division

STATE OFFICE BUILDING WEST

CHEYENNE, WYOMING 82002

TELEPHONE 307 777-7781

February 17, 1976

Mr. T. Dwane Moore
Gertsch/Baker and Associates
203 Grand Avenue
Laramie, Wyoming 82070

RE: 76-21
Preliminary Plat
Ryan Park 2nd Addition,
Carbon County, Wyoming.

Dear Mr. Moore:

In regard to the above referred to subject and your letter of February 10, 1976, concerning this subject matter, I would like to offer the following comments:

1. It is evident from the results of the soils study undertaken, by the Soil Conservation Service, that the soil in the area is not conducive to use of soil absorption systems as a means of disposing septic tank effluent.

Therefore, if septic tanks are to be installed a surface filter bed or NODAK system should be used for effluent disposal by the evapo-transpiration method. The ARMON system is also considered to be an equally efficient system. Information is enclosed on the NODAK system and for information on the ARMON system the following may be contacted:

Industrial Rentals Inc.
Box 271
Glendive, Montana 59330

2. However, with due consideration being given to the soil type in the entire area, this Department strongly recommends the use of a community lagoon to be the preferred system. This way there will be less maintenance problems and headaches to the individual and it will eliminate the possibility of cross contamination of wells that individual septic tanks can cause.

If we can be of further assistance in this regard please let us know.

Yours truly,

Frank R. Harman
Frank R. Harman, P.E.
Environmental Engineer

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Hudson Street Sewer Extension by Highway No. 20-26
Brook Water & Sewer District
Casper, Wyoming

ARCHITECT OR ENGINEER: Vincent J. Gronski, P.E.

G & S Engineering Co., Inc.
136 South Wolcott Street
Room 301
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-22

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

DATE OF REVIEW: February 13, 1976

ACTION: Construction not authorized.

COMMENTS: There were no specifications furnished with the plans. If the 1963 specifications for Brooks water and sewer district are to be used, a note to that effect should be placed on the drawing. These specifications were prepared in 1963 and require upgrading. Listed are some items which need upgrading.

1. Allowable infiltration rate is now 200 gallons per inch of pipe diameter per mile per day.
2. An alignment specification should be included, such as lamping.
3. Horizontal and vertical separation of water and sewer lines is required. The water line cross over on the plan sheet does not appear to have the required vertical separation.
4. Recommend a bituminous base seal to be applied to prefab manhole joints in place of mortar.
5. Material specifications should be upgraded to allow heavy wall PVC pipe meeting ASTM D-3034 specifications.
6. Show a detail of the type of manhole to be used.
7. More specific bedding and backfill specifications concerning material and compaction should be furnished.

I would suggest that you contact Brooks Sewer and Water District concerning upgrading their sewer and water specifications so that a complete set of specifications is not required for each sewer or water extension submitted to this department.

cc: Nix Anderson
Enclosure

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Hudson Street, Mountain View Suburb Sewer Extension, Brooks Water & Sewer District
Casper, Wyoming

ARCHITECT OR ENGINEER: G & S Engineering Company, Inc., 136 South Wolcott Street, Rm. 301
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-22R

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

DATE OF REVIEW: March 8, 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: Gunter Sub-division, Wheatland, Platte County, Wyoming

ARCHITECT OR ENGINEER: Lyman Gunter, Gunter Construction Company
929 38th Avenue Ct., Greeley, Colorado 80631

WATER QUALITY DIVISION REFERENCE NUMBER: 76-23

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

DATE OF REVIEW: March 11, 1976

ACTION: Authorized for Construction conditionally

COMMENTS:

Water and Sewer Lines Crossings

Where sewers must cross water lines, the sewer shall be laid at such an elevation that the top of the sewer is at least 18 inches below the bottom of the water main. Where this is not feasible the sewer line shall be of water main standards and joints shall be 10 feet on each side of the crossing.

cc: Malcolm Crawford District Sanitarian, Gillette

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Sanitary Facilities Contract - 76
Wyoming Recreation Commission

Malcolm D. Martin
State Park Division
Wyoming Recreation
Commission
604 East 25th Street
Cheyenne, Wyoming
82002

ARCHITECT OR ENGINEER: Robert J. Drobish
Wyoming Recreation Commission

WATER QUALITY DIVISION REFERENCE NUMBER: 76-25

REVIEWING ENGINEER: ^{DWH} David W. Hill, William L. Garland, P.E., ^{WJG} Frank R. Harman, P.E.

DATE OF REVIEW: February 20, 1976

ACTION: Authorized for construction contingent upon compliance with the following items.

COMMENTS:

- 1) The two 8" cast iron sewer pipe risers shall be protected by concrete at ground surface a minimum of 4 inches thick and 12 inches in diameter. The riser pipe shall terminate a minimum of 4 inches above natural ground, standing water, or surface water runoff, whichever elevation is higher. The vault sewer risers shall be capped or plugged with a non-breakable water tight cap or plug.
- 2) Floor drainage will not be allowed to go outside. It should drain into the vault.
- 3) Provide detailed specifications on backfilling of the vault. Special care should be taken to provide a suitable backfill under and around the vault. The precast vault should be provided with a 4 inch minimum sand base underneath. The backfill should be made in thin layers and thoroughly tamped in a manner that will not cause damage to the vault walls.
- 4) The location of these sanitary facilities should be at least 50 ft. from waterways, 50 ft. from water wells, 25 ft. from water lines, and 50 ft. from negative pressure water lines. - General Information.
- 5) The proximity of the vaults to water supplies or groundwater subject to contamination should be critically evaluated to avoid creation of health hazards, should the vaults crack. - Recommendation only.

cc: Malcolm Crawford, District Sanitarian, Gillette, Wyoming 82716

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Trails West Subdivision Water Transmission Main
for Herz - Spencer, 140 North Center, Casper, Wyoming
Brooks Water & Sewer District

ARCHITECT OR ENGINEER: R.L. Streeter II, P.E.

Segima Engineering
Suite 411
First National Bank Building
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-26

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

DATE OF REVIEW: February 17, 1976

ACTION: Construction Authorized

COMMENTS: Put seal or signature of designing engineer on future plans and specifications.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Ideal Aerosmith Inc., Industrial Wastewater Pond (Evaporative),
Cheyenne, Wyoming

ARCHITECT OR ENGINEER: Jack K. Woolrich, Ideal Aerosmith Inc.
1505 East Fox Farm Road, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-27

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

Frank R. Harman

DATE OF REVIEW: March 11, 1976

ACTION: Authorized for Construction

COMMENTS:

cc: John Wagner, Permits Section, Department of Environmental Quality
Water Quality Division

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Reno Junction Sewage Lift Station, Campbell County, Reno Junction, Wyoming

ARCHITECT OR ENGINEER: Gingery Associates, 2840 South Vallejo Street
Englewood, Colorado 80110

WATER QUALITY DIVISION REFERENCE NUMBER: 76-28

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

DATE OF REVIEW: March 17, 1976

ACTION: Construction Authorized. See Comments.

COMMENTS:

The State of Wyoming does not allow sewage treatment bypasses. For this reason the overflow shown on the plans shall be removed or plugged. Emergency operation, if required, must be by secondary power source or portable auxiliary pump.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: South Pass City Sewer System
South Pass, Wyoming

ARCHITECT OR ENGINEER: Jim Gores, Nelson, Haley, Patterson, and Quirk, Inc.
625 East Madison, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-29

REVIEWING ENGINEER: ^{DWH}David W. Hill, William L. Garland, P.E. *WJG*

DATE OF REVIEW: February 23, 1976

ACTION: Not authorized for construction

COMMENTS:

Please state reasons for the elaborate wastewater treatment arrangement. Why not go directly to a full retention lagoon or use a septic tank with a leach field. This would greatly reduce maintenance cost as well as initial cost. The rest of the plans and specifications will not be reviewed until satisfactory evidence is presented to us explaining the reasons for the elaborate system.

cc: Mr. Thomas A. Shaffer, State Parks and Historic Sites Planner
Wyoming Recreation Commission, 604 East 25th Street, Cheyenne, Wyoming 82002

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: South Pass City Sewer System
South Pass, Wyoming

ARCHITECT OR ENGINEER: Jim Gores, Nelson, Haley, Patterson, and Quirk, Inc.
625 East Madison, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-29R

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

DATE OF REVIEW: March 1, 1976

ACTION: Not authorized for Construction

COMMENTS:

- 1) The leakage outward or inward (exfiltration or infiltration) shall not exceed 200 gallons per inch of pipe diameter per mile per day for any section of the system.
- 2) A minimum covered opening of 20 inches least dimension is required over inlets and outlets of each compartment of septic tanks. Another opening will be required over the first compartment of the septic tank. (One over the inlet line and one over the outlet line).
- 3) The PVC "L" baffles should protrude to a depth of 40% of the liquid depth (i.e. - Inlet "L").
- 4) When a pipe "L" is used as the inlet baffle, a one (1) inch vent hole will be provided at the top.
- 5) A concrete apron or riprap is needed at the end of the discharge line to the lagoon to prevent erosion.
- 6) Our calculations indicate an undersized evaporation lagoon. Assuming no wastewater infiltrates to the groundwater through the sand filter, the lagoon would have only a 2 day retention time at a design average flow of 3600 gpd. The evaporation lagoon also has an overflow pipe, therefore a discharge permit will be required even if no discharge is anticipated.

The following are recommendations only.

- 7) Sewage pumping stations and their operators should be supplied with a complete set of operational instructions, including emergency procedures, maintenance schedules, tools, and such spare parts as may be necessary.

South Pass City Sewer System
South Pass, Wyoming
76-29R

- 8) Subsurface sand filters can easily clog and fail. Therefore, maintenance of the septic tank is critical, solids must not be allowed to travel out the effluent from the septic tank. The subsurface sand filter must not be allowed to turn anaerobic - (i.e. - by overloading).
- 9) The operator of the system must possess a minimum "Class D" certification.

cc: Mr. Thomas A. Shaffer, State Parks and Historic Sites Planner
Wyoming Recreation Commission, 604 East 25th Street, Cheyenne, Wyoming 82002

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: South Pass City Sewer System
South Pass, Wyoming

ARCHITECT OR ENGINEER: Jim Gores, Nelson, Haley, Patterson, and Quirk, Inc.
625 East Madison, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-29RR

REVIEWING ENGINEER: David ^{DWB}W. Hill, William L. Garland, P.E. *WJG*

DATE OF REVIEW: March 15, 1976

ACTION: Authorization for Construction Contingent Upon Compliance with the following item.

COMMENTS:

- 1) A "Tee" should be connected on the inlet pipe in the septic tank above the liquid surface. This will help prevent deposition on the roof of the septic tank.

cc: Mr. Thomas A. Shaffer, State Parks and Historic Sites Planner,
Wyoming Recreation Commission, 604 East 25th Street, Cheyenne, Wyoming 82002

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Green Mountain Mine
Utah International, Inc.

ARCHITECT OR ENGINEER: Non Indicated: D.C. Anderson, Manager, Utah International Inc.
408 East Main, P.O. Box 1802
Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-30

REVIEWING ENGINEER: David W. Hill, ^{DWH} William L. Garland, P.E. *WLF*

DATE OF REVIEW: March 5, 1976

ACTION: Not authorized for Construction

COMMENTS:

The submitted plans and specifications for the mine water treatment system are incomplete and will not be accepted for review. Detailed plans and complete technical specifications for the construction of the mine water treatment system are needed. The plans and specifications submitted shall carry the seal or signature of the designing engineer, who is a registered engineer in the State of Wyoming.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Green Mountain Mine, Mine Water Treatment System, Fremont County,
Riverton, Wyoming

ARCHITECT OR ENGINEER: Bradley R. Mortensen, P.E., P.O. Box 1802, Riverton,
Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-30R

REVIEWING ENGINEER: ^{Dr. H.} David W. Hill, William L. Garland, P.E. *W.L.G.*

DATE OF REVIEW: July 6, 1976

ACTION: Not Authorized for Construction.

COMMENTS:

- 1) Details of the settling pond are needed for review (i.e., - dike cross sectional view, compaction specifications, amount of percolation allowed etc.)
- 2) Please fill out and submit "Application for a Permit to Construct," for the Mine Water Treatment System and the full containment ponds.
- 3) We must emphasize that this review covers the mine water treatment system only. A "Permit to Construct" is also needed for the total containment ponds. Again detailed plans of the ponds (diking details, size, compaction specifications, amount of percolation allowed etc.) must be submitted for our review.

Enclosures: 6-Applications for a permit to construct.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Green Mountain Mine, Mine Water Treatment System, Fremont County

ARCHITECT OR ENGINEER: Bradley R. Mortensen, P.E., Utah International,
Inc., P.O. Box 1802, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-30RR

REVIEWING ENGINEER: ^{DEW} David W. Hill, William L. Garland, P.E. ^{WLG}

DATE OF REVIEW: September 15, 1976

ACTION: Not Authorized for Construction.

COMMENTS: (SEE ENCLOSED LETTER)

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Green Mountain Mine, Mine Water Treatment System and Runoff System,
Fremont County

ARCHITECT OR ENGINEER: Bradley R. Mortensen, P.E., Utah International, Inc.,
P.O. Box 1802, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-30 RRR

REVIEWING ENGINEER: ~~David~~ *Frank R. Haman* for
David W. Hill, William L. Garland, P.E.

DATE OF REVIEW: October 13, 1976

ACTION: AUTHORIZED FOR CONSTRUCTION

COMMENTS: As discussed between Mr. Don Armstrong of DEQ and Mr. Don Snow of Utah International, Inc., two observation wells shall be utilized. One shallow observation well shall be constructed in addition to the present deep observation well. Information shall be submitted to our Department showing the location of the monitoring wells, logging of the wells, and depth of the wells.

These wells shall be monitored quarterly for Radium 226, suspended solids, and chlorides. We would like at least two analysis from each well before the mining operation begins.

PERMIT TO CONSTRUCT

- New
- Renewal
- Modified

Permit No. 76-3ORRR

Green Mountain Mine, Mine Water Treatment System and Runoff System
(Name of Facility)

This permit hereby authorizes the applicant:

Utah International
(Last) (First) (Middle)
P.O. Box 1802
(Street or P.O. Box)
Riverton Fremont Wyoming 82501
(City) (County) (State)

to construct, install, or modify a Mine Water Treatment System and Runoff System
facility located in Section 2, and 11, T27N, R92W
(Legal Description)

in the County of Fremont, 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:

Frank R. Hamner P.E.
for Director
Wyoming Dept. of Environmental Quality

October 13, 1976
Date of Issuance

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Southeast Riverton Sanitary Sewer Trunk Line 1976
Fremont County, Riverton, Wyoming

ARCHITECT OR ENGINEER: William P. Williams
City Engineer, Box 1700, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-31

REVIEWING ENGINEER: ^{DwA} David W. Hill, William L. Garland, P.E. *WLG*

DATE OF REVIEW: February 24, 1976

ACTION: Not Authorized For Construction

COMMENTS:

- 1) The allowable leakage (infiltration or exfiltration) shall not exceed 200 gallons per inch of pipe diameter per mile per day for any section of the system.
- 2) Another manhole will be required between Sta. 14 + 75.78 and Sta. 27 + 35.09. The "Ten State Standards" allow a maximum distance of 400 feet between manholes. This maximum allowable distance is especially critical where a minimum slope is being used.
- 3) The "Ten State Standards" allow a minimum slope of 0.22% for 12 inch diameter pipe. Whenever decreased slopes are selected, the design engineer must furnish with his report his computations of the depths of flow in such pipes at minimum, average, and daily or hourly rates of flow. We realize that slopes of 0.22% are impossible to achieve for all sections of the Southeast Riverton Sewer Line. Crude calculations indicate that a slope of 0.20% is possible throughout the sewer line system except for the first 814.05 feet. The branch line from Sta. 8 + 14.05 to Sta. 5 + 42.9 south could also be laid at a 0.20% slope. A 0.20% slope for the system would be acceptable under the circumstances.
- 4) Details of highway crossing must be provided. Type and size of casing must be specified. The procedures for the installation of the pipe through the casing should be provided.

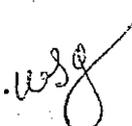
REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Southeast Riverton Sanitary Sewer Trunk line 1976
Fremont County, Riverton, Wyoming

ARCHITECT OR ENGINEER: William P. Williams
City Engineer, Box 1700, Riverton, Wyoming 82501

WATER QUALITY DIVISION REFERENCE NUMBER: 76-31R

REVIEWING ENGINEER: David W. Hill, ^{DWH} William L. Garland, P.E. 

DATE OF REVIEW: March 2, 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: Rancho Mobile Home Park, Demsey Acres Subdivision, Casper, Wyoming

ARCHITECT OR ENGINEER: Ken Wolz, P.O. Box 322, Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-32R

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

DATE OF REVIEW: April 8, 1976

ACTION: Construction Authorized (See Comments)

COMMENTS:

1. A well output of more than 6 gpm is required, as peak load of approximately 65 gpm would drain storage in about one hour. After the storage has been drained, six gpm would not meet a demand of 10 gpm. The well output shall be increased.
2. The size of the larger field should be increased to about 45 feet wide which would coincide with a percolation rate of 1 inch per 10 minutes. A header pipe should be used on this field. The pipe should have structural support to prevent settling.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Atlantic Richfield Development, Reno Junction, Wyoming
Campbell County

ARCHITECT OR ENGINEER: Gingery Associates, Inc.
2840 South Vallejo Street
Englewood, Colorado 80110

John Shallcross
Synthetic Crude
and Minerals Division
1500 Security Life Building
Denver, Colorado 80202

WATER QUALITY DIVISION REFERENCE NUMBER: 76-33
(Refer to S74-196)

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

DATE OF REVIEW: March 26, 1976

ACTION: Construction Authorized.

COMMENTS:

RE: Gingery and Associates, Inc. Letter of March 18, 1976.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Water and Sewer Additions, Walter Green Subdivision
City of Sheridan, Sheridan County, Wyoming

ARCHITECT OR ENGINEER: Walter J. Pilch and Associates, P.O. Box 6498,
Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 76-34R

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

DATE OF REVIEW: March 18, 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: Dorset Court Sewer & Water Extension, Eastgate Subdivision
Casper, Wyoming

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: 76-36

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

DATE OF REVIEW: March 8, 1976

ACTION: Construction not Authorized

COMMENTS:

A fire hydrant, Blowoff valve or flushing hydrant is required at the end of the dead end water main.

A note should be put on plans stating that installation shall conform to City of Casper specifications.

JS/js

Enclosures

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Dorset Court, Water and Sewer Extensions, Eastgate Addition,
Casper, Wyoming

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: 76-36R

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

DATE OF REVIEW: March 16, 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: Cheyenne Autumn Apartments - 6 buildings with 8 apartments each,
South Cheyenne

ARCHITECT OR ENGINEER: Donald G. Hopkins - M & B Drilling Company, 130 South Greeley
Highway, Cheyenne, Wyoming 82001

WATER QUALITY DIVISION REFERENCE NUMBER: 76-38

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

DATE OF REVIEW: March 11, 1976

ACTION: Authorized for Construction

COMMENTS:

cc: Don Pack, Director Environmental Health Unit, City County Health,
315 West 20th, Cheyenne, Wyoming 82001

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Kerr-McGee, Jacobs Ranch Mine, Guard Trailer Sewage System, Drawer 1500,
Gillette, Wyoming 82716, Campbell County

ARCHITECT OR ENGINEER: Luther M. Krupp

WATER QUALITY DIVISION REFERENCE NUMBER: 76-39

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

DATE OF REVIEW: March 15, 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: Town of Kemmerer, 1.5 Million Gallon Storage Tank, 0.5 Million Gallon Storage Tank, High level Pump Station

ARCHITECT OR ENGINEER: Dale Crank, Johnson-Fermelia & Crank, Inc.
P.O. Box 631, Kemmerer, Wyoming 83101

WATER QUALITY DIVISION REFERENCE NUMBER: 76-40

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

DATE OF REVIEW: March 17, 1976

ACTION: Not Authorized for Construction

COMMENTS:

Storage Tanks

- 1) Connection from the perforated drains under the 1-5 million gallon tank to the sanitary sewer will not be allowed. It is impossible to tell from plan view (sheet 2) whether the under-drains are connected to sewer. Please clarify for us.
- 2) Manholes on scuttles shall be fitted with a solid watertight cover which overlaps the framed opening and extends down around the frame at least two inches,

High Level Pump Station

- 3) Pump stations shall be provided with crane-ways, hoist beams, eyebolts, or other adequate facilities for servicing or removal of pumps, motors, or other heavy equipment.
- 4) An opening in the roof or wherever else needed for removal of heavy or bulky equipment (i.e. - pumps, motors, etc.).
- 5) Forced venelation will be required in the pump station.
- 6) The floor of the pump station shall slope at least 3 inches in every 10 feet to the point of drainage - (Information only).

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Town of Kemmerer, 1.5 Million Gallon Storage Tank, 0.5 Million Gallon
Storage Tank, High Level Pump Station

ARCHITECT OR ENGINEER: Dale Crank Johnson-Fermelia and Crank, Inc.
P.O. Box 631 Kemmerer, Wyoming 83101

WATER QUALITY DIVISION REFERENCE NUMBER: 76-40R

REVIEWING ENGINEER: ^{DWA}David W. Hill, William L. Garland, P.E. 

DATE OF REVIEW: April 19, 1976

ACTION: Authorized for Construction

COMMENTS:

- 1) It is advisable to write into the specifications that bacteriological samples should be taken after disinfecting the storage tanks. Two or more successive sets of samples should be taken at 24-hour intervals.

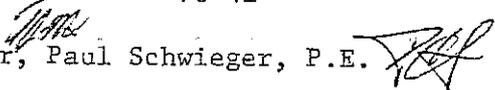
REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Sewer Main Extension to Sheridan County Airport, Sheridan, Wyoming
Sheridan County

ARCHITECT OR ENGINEER: W.J. Pilch and Associates, Box 6498, Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 76-41

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

DATE OF REVIEW: March 16, 1976

ACTION: Construction not Authorized

COMMENTS: The following items are required.

1. Pipe sizes
2. Manhole details
3. Specifications for water line crossings.

Items 2 and 3 can be covered by a statement to the effect that City of Sheridan standards will be followed for all construction. These standards have been approved by this office.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Sewer Main Extension to Sheridan County Airport, Sheridan, Wyoming
Sheridan, County

ARCHITECT OR ENGINEER: W.J. Pilch and Associates, Box 6498, Sheridan, Wyoming 82801

WATER QUALITY DIVISION REFERENCE NUMBER: 76-41R

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

DATE OF REVIEW: March 26, 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: Green Valley Mobile Home Park, Water & Sewer (does not include sewage treatment plant), River West Estates, Sewer lots 1 through 377

ARCHITECT OR ENGINEER: Jerry D. Fuller, P.E., T. W. Pittman
P.O. Box 1352
Casper, Wyoming 82601

WATER QUALITY DIVISION REFERENCE NUMBER: 76-45

REVIEWING ENGINEER: Jake Strohman, William L. Garland, P.E. *llg*

DATE OF REVIEW: July 15, 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: Shipley Mobile Home Park
Campbell County, Gillette, Wyoming 82716

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

WATER QUALITY DIVISION REFERENCE NUMBER: 76-46

REVIEWING ENGINEER: Tom Mueller, Paul Schwieger, P.E. *TS* *PS*

DATE OF REVIEW: March 17, 1976

ACTION: Construction not Authorized.

COMMENTS:

- (1) Six inch sewer main is required in all mobile home parks.
- (2) A profile drawing of the sewer system shall be required.
- (3) All water-sewer line crossings shall be constructed to Ten State Standards. (See Chapter 3 Regulations).
- (4) A detail of individual sewer taps into the sewer main shall be required.
- (5) Concrete foundations around individual sewer stand-pipes shall be required.
- (6) Manholes shall be required at changes in sewer grade and direction, and at the upstream end of the sewer line.
- (7) The septic tank access dimension shall be at least 20 inches.
- (8) Seepage pits are not allowed. A leachfield, or evapotranspiration bed shall be required.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Kelly-Gate Addition Sewer & Water Extension
City of Casper

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: 76-47

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

DATE OF REVIEW: March 11, 1976

ACTION: Construction Authorized (see compliance items)

COMMENTS:

The cul-de-sac at the East end of 14th requires a fire hydrant, blowoff valve or flushing hydrant at the end of the water main. Send details if installation is other than fire hydrant.

The installation is to meet specifications of existing City of Casper specifications on file at this office. A note should be put on the drawings stating this.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Mine Water Treatment Facilities
Sheep Mountain, Crooks Gap Area, Wyoming

ARCHITECT OR ENGINEER: Continental Engineers, Division of Meurer Serafini Meurer, Inc.
9625 West Colfax Avenue, Denver, Colorado 80215

WATER QUALITY DIVISION REFERENCE NUMBER: 76-48

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

DATE OF REVIEW: March 31, 1976

ACTION: Not Authorized for Construction

COMMENTS:

The submitted plans and specifications for the mine water treatment system are incomplete and will not be accepted for review. Detailed plans and complete technical specifications for the construction of the mine water treatment system are needed. The plans and specifications submitted shall carry the seal or signature of the designing engineer who shall be a registered engineer in the State of Wyoming. Enclosed is a copy of the Wyoming Water Quality Rules and Regulations, Chapter III and applications for a permit to construct.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Raymond Ford Building
Cody, Wyoming

ARCHITECT OR ENGINEER: None listed

WATER QUALITY DIVISION REFERENCE NUMBER: 76-49

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

DATE OF REVIEW: March 12, 1976

ACTION: Construction not Authorized

COMMENTS: The following items require change or additional information.

1. Minimum size for a septic tank 1000 gal.
2. Need plans and specifications for sump pit waste disposal from building. Material specifications for holding tank. Show access to holding tank for sand and grit removal. State an approved sanitary landfill where wastes from holding tank are to be disposed.

Our recommendation would be to install a sand and grease trap and dispose of effluent in a leach bed.
3. Tie the ends of leach pipes together with perforated pipe.
4. What is the slope on the 4" line to the septic tank?
5. What are the septic tank specifications?
6. Install 3 ft. of material under the leach pipe with a percolation rate of 5 to 10 minutes per inch. This may be accomplished in a bed type in lieu of trenches. The perimeter of the bed should have a clay or bentonite seal to ensure the percolation goes downward instead of taking the path of least resistance and bypassing the percolation media.

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Raymond Ford Building
Cody, Wyoming

ARCHITECT OR ENGINEER: None listed Engineering Associates
Box 1539, Cody, Wyoming 82414

WATER QUALITY DIVISION REFERENCE NUMBER: 76-49R

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

DATE OF REVIEW: March 23, 1976

ACTION: Construction is not authorized.

COMMENTS:

Designing engineer to sign or seal plans. In addition to first plan review.

1. Septic tank shall be tested to ensure water tightness prior to burial.
2. Show the location of the waste oil tank and the sand grease trap and leaching tank on the plan sheet.
3. Show the design calculations for size of sand and grease trap and leaching tank.
4. Who is the commercial sanitation servicer and find out where he dumps sewer wastes and oil, sand and grease wastes?
5. Where is the inlet on the sand and grease trap?

Enclosed are copies of the material furnished by Bill Carter of Julien Construction Company.

cc: Julien Construction Company, P.O. Box 810, Cody, Wyoming 82414

REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Raymond Ford Building
Cody, Wyoming

ARCHITECT OR ENGINEER: Don Livingston, P.E.
P.O. Box 1539, Cody, Wyoming 82414

WATER QUALITY DIVISION REFERENCE NUMBER: 76-49RR

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

DATE OF REVIEW: May 19, 1976

ACTION: Construction Authorized

COMMENTS: Tie ends of leach field together.

SOUTHRIDGE HOMES, INC.
P.O. Box 1606
Gillette, Wyoming
82716
(307 682-5861

March 18, 1976

Wyoming Department of Environmental Quality
Water Quality Division
Cheyenne, Wyoming 82002
Attn: Mr. Roy Prior &
Mr. Tom Mueller

RE: Specification Revisions
Sewer & Water Extensions
Saunders Subdivision
First Extension
Gillette, Wyoming

Gentlemen:

Pursuant to our telephone conversation this date, please be advised it is our intention to comply with the following specification changes requested by your office. The revisions are as follows:

1. Water main extensions--Thrust blocks will be installed at all Tee's, dead-ends and bends greater than 22 1/2° in accordance with details set forth on P. 5 of 5 of the design drawings.
2. Water main extensions--All fire hydrants to include 6" gate valve in stub out line at main in accordance with valve specification Section 10.33.
3. Sewer line extensions--All sewer taps will be installed using wye ("Y") branches of material with the same specifications governing the sewer main pipe.

These specification revisions are submitted at your request to finalize conditions noted in your review of the design package submitted 3/9/76. The "Special Provisions" section of the specifications will be amended to reflect these items.

Thank you for your prompt review and response to the subject designs. Please be advised, your office will be kept up to date regarding progress of the subject improvements.

Respectfully,


E.J. Collins, P.E.

EJC:clk



REVIEW OF PLANS AND SPECIFICATIONS

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

PROJECT: Saunder's Subdivision, First Extension, Campbell County, Gillette, Wyoming

ARCHITECT OR ENGINEER: E.J. Collins, Southridge Homes, Inc., P.O. Box 1606,
Gillette, Wyoming 82716

WATER QUALITY DIVISION REFERENCE NUMBER: 76-50

REVIEWING ENGINEER: Tom Mueller, ^{TMM} Paul Schwieger, P.E. 

DATE OF REVIEW: March 18, 1976

ACTION: Construction Authorized. See Comments

COMMENTS:

1. Anchorages specified in Section 10.312B shall be placed at at tees, dead ends and bends of greater than $22\frac{1}{2}^{\circ}$.
2. Sewer taps as specified in Section 10.390A shall be made with "Y" branches only. Saddles shall not be used.