ACT 007/022

BEAVER CREEK Coal Company
P. O. Box AU
Price, Utah 84501
Telephone 801 637-5050

0006

August 28, 1981

RECEIVED
AUG 31 1981
DIVISION OF
OIL, GAS & MINING

Ms. Sally Kefer
Reclamation Hydrologist
Utah Division of Oil, Gas & Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Beaver Creek Coal Company
C.V. Spur
Proposed Lab/Shop/Warehouse

Dear Ms. Kefer:

In reference to your letter of July 30, 1981, the following information and enclosures are submitted for your approval:

A. Evidence of a construction permit from Carbon County - The attached Exhibit "A", Specifications for Shop/Warehouse/Laboratory was the basis for the contractors' bids on this project. On Page 1, Item F, it is explained that the contractor is to furnish all necessary permits to design and construct the facility. The building permit will, therefore, be acquired by the contractor prior to any construction activities.

B. Evidence of approval of sanitary waste treatment facility: Exhibit "B" is the approved construction plan for the waste treatment facility.

C. Narrative on environmental protection during construction: Exhibit "C" is an environmental protection plan, including soil analyses, as per David Chenoweth, Environmental Coordinator, ARCO Coal Company.

D. Narrative on inclusion of area in final reclamation plan: Exhibit "D" is a narrative on the final reclamation of this area, including estimated reclamation bond costs.

It is our hope this additional information will meet with your approval.

If you have any questions or need any further information, please let me know.

Respectfully,

BEAVER CREEK COAL COMPANY

Dan W. Guy

Dan W. Guy, P.E.
Chief Engineer

DWG/daf

Enclosures

cc: Max A. Robb
Gene Holdaway
Dave Chenoweth - DLT 1130
File

ACT 007/002 EXHIBIT "A"



- SPECIFICATIONS -

SHOP/WAREHOUSE/LABORATORY

FOR

ARCO COAL COMPANY
C. V. SPUR PROJECT
PRICE, UTAH

April 30, 1981

TABLE OF CONTENTS

ARCO COAL COMPANY

- SPECIFICATIONS -

SHOP/WAREHOUSE FACILITY

I. SCOPE

A. The scope of work contemplated in this set of specifications is a complete "turnkey" job; i.e. a building completely finished and ready for Owner to install furniture and equipment. Work included is for one high bay (shop) 30 feet by 40 feet; one warehouse, 30 feet by 40 feet, and one office/laboratory area, 30 feet by 44 feet, all included in the main building, approximately 28 feet high or as necessary to provide 20 feet of clearance under the bridge crane in the shop and warehouse areas and 8 foot cielings in the office/laboratory area.

B. Contractor is to furnish a complete heating and air conditioning system for office/laboratory area; a ventilation system for all other areas; an exhaust system for all restrooms; all plumbing and drains as required, complete with cleanouts; lighting and power for the entire building; and water and utility and fire water distribution systems.

C. Owner will furnish all water and sewage lines to a designated location within five (5) feet of the building.

D. Contractor will furnish required electrical wiring to the secondary side of the distribution transformers supplied by Owner. Voltages available shall be 277/480 v. 3 and 120/240 v. single phase.

E. For purposes of this bid, Owner will prepare site and provide coordinates and bench markers for Contractor's use.

→ F. Contractor is to furnish insurance per the attached contract and is to obtain all the necessary permits to design and construct this facility and provide for all necessary inspections by local, state and federal agencies related to this facility.

The following description will give the general requirements for the shop/warehouse complex. Specifications for the various aspects of the work are covered under "General Specifications."

## II. FOUNDATION

A. The Contractor is to design, furnish and install a foundation per UBC and ACI specs using 3000 psi concrete. A minimum 5 mil. plastic vapor barrier is to be installed under the entire foundation. A minimum one (1) inch thickness of styrofoam insulation will be installed around the perimeter of the footer. Frost line is five (5) feet below grade.

B. The Contractor shall design all foundations such that the maximum soil bearing pressure is 3000 pounds per square foot. Contractor will be provided the results of any soils tests conducted after award of contract.

C. Concrete floors as follows to be treated with hardener:

1. Shop area floor and outside pad to be designed to support a maximum equipment load of 50 tons, and a maximum loading of 115 psi, and shall not be less than 12 inches thick with #4 rebar on 15 inch centers top and bottom.

4/4-6"?

2. Warehouse area floor and outside pad to be 6 inches thick concrete slab with 4 x 4-W4 x W4 at mid-depth of slab and isolated from warehouse slab.

D. Floor drains are to be installed per the attached drawing(s) and as specified under "Plumbing."

III. BUILDING

A. The building is to be a standard pre-engineered rigid frame metal building designed for 50 psf live load, 25 psf wind load and an additional 15 psf for suspended ceilings where required. Building dimensions are as specified on the attached drawings, and shall be designed to permit expansion either to the north or to the south.

B. Gutters and downspouts are to be installed on all downslopes.

C. The building is to have factory applied paint on all exterior surfaces of the walls and roof. Color is to be selected by Owner.

D. All exterior walls and roof are to have R-22 rated fiberglass insulation faced with UL approved vinyl.

E. All windows and door frames are to be hollow steel in construction, and all walk-through doors are to be hollow steel and mounted so as to open "out." All walk-through doors to be 6 feet-3inches x 3 feet-0 inches, and windows to be approximately 4 feet x 5 feet, double paned.

F. All large opening doors to be rollup, heavy duty electric operation and with manual backup. Sizes are two 16 feet x 16 feet.

G. All exterior walk-through doors are to be steel and heavy duty, contain heavy duty locksets and double paned safety glass lights. Dust seal doors as indicated on attached drawings.

H. All other walk-through doors are to be standard weight steel doors with heavy duty locksets and safety glass lights.

I. All offices to have concrete block walls and/or 2 x 4 stud walls with 5/8 inch sheetrock. All base molding is to be vinyl and color coordinated with the flooring.

Why ribbed metal?

J. The shop and warehouse walls are to be covered inside with ribbed metal sheeting for a height of ten (10) feet.

K. All offices, laboratory and restrooms to have suspended ceilings of insulated fireproof panels, white finish.

III. BUILDING - Continued

L. All offices to have floor covered with 1/8 inch vinyl asbestos floor tile, color approved by Owner.

M. All other floors are to be concrete. Exposed concrete floors, stairways and walkways to have rough finish to minimize possibility of slips and falls. Exposed concrete floors to have a positive pitch to floor drains so there will be no standing water. All exposed concrete floors are to be treated with a sealer to resist petroleum product spills.

Tile ? — N. All walls in the restrooms are to have ceramic tile from floor to ceiling. Ceiling panels in the restrooms to be waterproof.

O. All other interior walls not specified above to be constructed of 4 inch by 8 inch by 16 inch concrete block and painted with high quality moisture proof paint, color to be selected by Owner.

P. Standard laboratory cabinets with acid resistant counter tops are to be provided as indicated on drawings.

## IV. PLUMBING AND PIPING

A. A complete first class plumbing job is required with proper pitch on drain lines, proper back vents, cleanouts and sizes. All drain lines below concrete floor to be heavy duty plastic. All drain lines to be a minimum of 6 inch diameter with large throat inlets. Contractor to provide all necessary potable water valves and piping. Small hot water heaters (electric) shall be installed in restrooms. All water supply lines are to be hard copper and are to be carried overhead and dropped down to point where needed. Cold water lines to be insulated to prevent sweating. Contractor is to supply wall mounted lavatories, wall mounted urinals, wall mounted commodes and flush tanks, and spigots as well as matching soap dishes, paper towel holders and waste receptacles. Contractor to furnish a 19 inch by 24 inch mirror at each lavatory and a holder for roll type paper at each commode. Laboratory to have double stainless steel sink.

What's this?

B. Owner shall furnish a steam jenny to be installed by Contractor. Contractor shall supply concrete pad, LPG gas and water to the jenny, and steam piping from the jenny to the shop.

C. Contractor shall install a manifold system in the lab for propane, air, and vacuum with valving stations as shown, and a pad outside the building for a propane tank.

D. The shop and sample prep room will be provided with washdown water piping.

V. ELECTRICAL

A. A complete first class electrical job is required, meeting all requirements of National Electrical Code. All light fixtures to be equipped with proper lamps. All electrical wiring to be in rigid conduit. Entire building to be properly grounded and wired.

B. All lighting in the suspended ceiling areas is to be 2 feet by 4 feet, four-light recessed troffer. All other interior lighting is to be 277 volt, high pressure sodium lamps in shop and warehouse areas. Lighting in all areas shall meet NEC minimum candlepower ratings. Skylighting is to be provided in the shop and warehouse areas.

C. Exterior lighting shall consist of wall mounted 227 volt high pressure sodium vapor floodlights spaced to provide the required lighting intensity, with wall mounted incandescent lamps over each door.

## VI. HEATING-COOLING

A. Office area, laboratory and restrooms are to be heated and cooled by a central system, with sheet metal ducts insulated as required. Cooling by a two piece unit: fan-evaporator indoors and compressor-fan-condenser outdoors. Heating to provide 75°F indoors when -20°F outdoors. Cooling to provide 80°F inside when 100°F outside, with a maximum of 12 persons in the air conditioned areas at any one time. Intake 15% fresh air at all times with duct heater to temper intake air.

B. All other areas to be heated only. Heat is to be provided by means of electric unit heaters (65°F). The balance room is to have radiant heat only.

C. Manually operated louvers and ridge vents to be provided in roof to properly ventilate shop and warehouse areas.

D. Each restroom to have ceiling exhaust fan vented to outside. Where possible, combine exhaust vents to reduce number of roof penetrations.

E. The shop will be provided with two welding exhaust fans.

F. A separate exhaust fan is to be supplied for each of the three laboratory hoods.

VII. TELEPHONES

A. No telephone work is required of the Contractor; however, the Contractor shall negotiate with the telephone company to install telephone wiring at the appropriate time. Contractor shall run any conduit required for such wire and supply wall boxes.

VIII. PAINTING

A. All exposed structural steel, doors and door frames are to be shop primed and shall receive one field coat of a high grade enamel. See "General Specs," Section 09400.

IX. FIRE PROTECTION

A. Fire protection water will be supplied by Owner with five feet of building. Contractor shall provide a sprinkler system in the warehouse and office/laboratory areas; and fire hoses in the shop area as noted on the drawing.

X. EQUIPMENT BY CONTRACTOR

5 ton truck downcenter ?

A. Contractor shall furnish and install one 15-ton bridge crane on rails designed to accommodate two such cranes. Crane to have pendant control, 30 foot span, 40 foot travel, and 20 foot lift.

B. Owner shall supply an air compressor to be installed by Contractor. Contractor shall also provide power and piping of compressed air into the shop and laboratory.

XI. LAWS

A. Contractor shall comply with and abide by all provisions of MSHA, OSHA and all other applicable federal or state health, safety and mining laws, and local rules and regulations.

XII. DRAWINGS PROVIDED

A. Owner is to provide only the following drawing(s):

1. Plan view including floor drain locations.

2. Electrical drawing.

All other drawings necessary for proper execution of the work to be provided by Contractor and submitted to Owner for approval.

## XIII. DATA SHEETS

The bidder shall provide the following information so as to adequately describe the equipment and material he proposes for this contract:

A. Construction Schedule.

B. Specifications and manufacturer of HVAC unit and space heaters.

C. Specifications and manufacturer of the bridge crane.

D. Specifications of the bridge crane rails, including method of support.

E. Plumbing fixture specifications.

F. Fire water sprinkler subcontractor.

G. Manufacturer and guage thicknesses of pre-engineered steel building.

H. Color choices available from building manufacturer.

I. Window and door specifications.

J. Ceiling specifications and manufacturer.

K. Light fixture specs and manufacturer's model number.

L. Hot water heater specifications.

M. Specifications and manufacturer of cabinets.

N. Insurance certificates.

O. Exceptions to sample contract.

EXHIBIT "B"

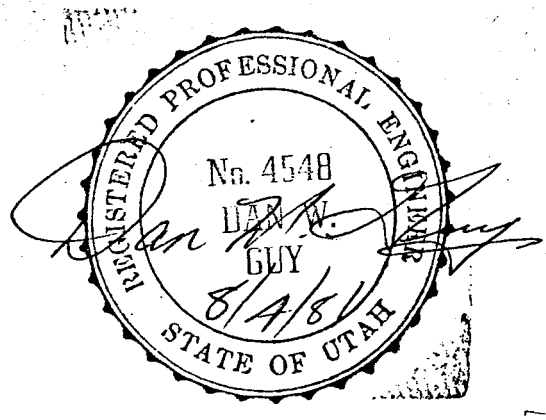


# BEAVER CREEK COAL COMPANY

## WASTE WATER DISPOSAL SYSTEM

## C.V. SPUR SHOP/LAB/WAREHOUSE





# WASTE WATER DISPOSAL SYSTEM
# PLAN FOR CONSTRUCTION AND MAINTENANCE

## GENERAL DESCRIPTION

Beaver Creek Coal Company is expanding its facilities at C.V. Spur to include a shop/lab/warehouse building. C.V. Spur is located in the Miller Creek area (Section 11, Township 15 South, Range 10 East) in Carbon County, approximately ten (10) miles southeast of Price, Utah.

This submittal covers the complete design of a waste water disposal system for the shop/lab/warehouse addition.

# WASTE WATER DISPOSAL SYSTEM
# SPECIFICATIONS

## DESIGN PARAMETERS

1) Shop/lab/warehouse facilities will include toilets, sinks, drinking fountains, and one shower.

2) Facilities designed for a maximum of 12 persons.

3) Disposal system designed for 35 gallons per person per day. (Based on Table V-2, Part V of Code of Waste Disposal Systems.)

4) Percolation rate of 50 minutes per inch.

5) Design is based to comply with Utah State Division of Health, Code of Waste Disposal Regulations, Part V, Small Underground Waste Water Disposal Systems.

6) Design is certified by a Registered Professional Engineer, State of Utah.

## DESIGN

The system proposed is a septic tank/drainfield type, using proven and approved materials and techniques. It will consist of a waste water discharge line, septic tank, and absorption field.

## LOCATION AND INSTALLATION

Location and installation of the system will be such that with reasonable maintenance it will function in a sanitary manner and will not create a nuisance, health hazard, or endanger the quality of any waters in the State. The location of the entire system is shown on the attached map.

## CONSTRUCTION MATERIALS

All materials used in the construction of the system shall be durable, sound, and not unduly subject to corrosion. Pipe, pipe fittings, and similar materials shall comply with the Utah Plumbing Code.

## WASTE WATER DRAINAGE LINE

This line will convey waste water from the shop/lab/warehouse

facilities to the septic tank. The following criteria shall be followed for installation of this line:

1) It shall be of suitable, approved material and have water-tight and root-proof joints.

2) It will have an inside diameter of four (4) inches and be laid on a minimum grade of 15 inches per 100 feet.

3) Clean-outs will be installed every 50 feet and at every change of direction, and will be constructed of two (2) 45° bends with clean-out.

4) Lines will not be closer than ten (10) feet horizontally to any water service pipes.



## WASTE WATER QUANTITY ESTIMATES

Estimates have been based on Table V-2 "Estimated Quantity of Domestic Waste Water" Part V, Small Underground Waste Water Disposal Systems. The value from the table used is 35 gallons per person per day for workers. The shop/lab/warehouse is designed for a maximum of 12 people. Total daily waste water at maximum would be:

12 persons x 35 gallons per person per day = 420 gallons per day

## SEPTIC TANK

The septic tank shall be constructed of durable materials which will resist both physical forces and corrosive reactions, and designed so that it will provide settling of solids, accumulation of sludge and scum, and proper access for cleaning.

The septic tank proposed here is of a standard approved concrete type, sold commercially under the name "Dura-Crete". The tank will meet all requirements of Sections V-13 through V-21 of Part V, Small Underground Waste Water Disposal Systems. A detailed drawing of the proposed tank is included.

The tank sizing is based on the requirements of Section V-15 b, for waste waters flowing between 500 gallons per day and 1,500 gallons per day.

$V = 1.5\ Q$
Where "Q" is 420 gpd
$V = (1.5)(420) = 630$ gallons

A 1,750-gallon septic tank is proposed for this installation.

DISCHARGE LINES

The effluent from the septic tank will be conducted to the absorption field through a water-tight line meeting the requirements for house sewers.

Tank outlet inverts will be at least one (1) inch below the inlet invert.

ABSORPTION FIELD

1) Soil Exploration: The attached drawing shows a seven (7)-foot deep soil exploration test. This test shows at least four (4) feet of soil between the base of the proposed drainfield and bedrock.

2) Installation: The field is to be placed level with all trenches interconnected.

3) Sizing: The percolation rate in the proposed area is 50 minutes per inch (a copy of the percolation test report is included). Based on this rate, and using Table V-1, Part V, an allowance rate of application to the field will be 0.7 gallons per square foot per day, requiring a minimum of 600 square feet of absorption field area for the expected waste water discharge of 420 gallons per day. The proposed field will consist of five (5) trenches, three (3) feet in width and sixty (60) feet in length, separated by a minimum of 7.5 feet of undisturbed soil, wall-to-wall. This will provide an absorption area, including side trenches, of 1,080 square feet, approximately two (2) times more than that required.

4) Criteria: The absorption field will consist of gravel-filled trenches provided with perforated pipes to distribute septic tank effluent over the absorption field, from which it will percolate through the trench walls and bottom into the surrounding subsurface soil.

   a) The portion of trenches below distribution lines shall be in natural or acceptably stabilized soil.

   b) The proposed system shall be level with all trench bottoms constructed at the same elevations. All distribution lines and trenches will be level and interconnected.

   c) Effluent distribution lines will be four (4) inches in diameter, perforated pipe or suitable material.

   d) Gravel fill in the trench bottoms will be ½-inch by 2½-inch drainrock and will completely encase the perforated distribution lines. The gravel will be covered with untreated building paper or straw prior to backfilling.

   e) Heavy equipment will not be driven over the trenches during backfilling, or after completion of the absorption field.

WASTE WATER DISPOSAL SYSTEM
PERCOLATION TEST
(C.V. SPUR SHOP/LAB/WAREHOUSE)

The following percolation tests were run at two (2) points within the proposed drainfield site for Beaver Creek Coal Company, C.V. Spur Shop/ Lab/Warehouse complete on July 31, 1981. The tests were conducted by Bert Jeanselme, under the direction of Dan W. Guy, a Registered Professional Engineer, State of Utah.

The tests were performed as follows:

1) Two (2) holes were dug in the area of the proposed drainfield area. Each hole was 12 inches in diameter with vertical sides, and dug to a depth of the bottom of the drainfield. Hole locations are shown on the location map.

2) The sides and bottom of the holes were roughened and all loose material was removed. Two (2) inches of fine gravel was placed in each hole to prevent scouring.

3) The holes were filled with water to a level greater than 12 inches above the gravel and each hole was kept filled for more than 4 hours.

4) The water level was adjusted to six (6) inches over the gravel. Since the water remained in the hole after the saturation period the test was conducted over a 30-minute period as outlined in Section V-29 e, Part V. The water drop was measured from a fixed reference point.

5) The following is a tabulation of the measurements:

| | Measurement No. | Time (Start 1:30 pm) | Water Level Drop |
|---|---|---|---|
| West Hole | 1 | 1:45 pm | .03 ft |
| | 2 | 2:00 pm | .02 ft |
| | 3 | 2:30 pm | .05 ft |
| East Hole | | (Start 1:40 pm) | |
| | 1 | 1:50 pm | .03 ft |
| | 2 | 2:10 pm | .03 ft |
| | 3 | 2:40 pm | .04 ft |

The preceding table of readings shows a percolation rate of 0.10 feet per 60-minute period, or equivalent to 50.0 minutes per inch. Using the table on page 12 (Fig V-1) of Part V, the allowable rate of application is 0.7 gallon/foot$^2$ per day.

The percolation test was run under the direction of a Registered Professional Engineer and is hereby certified to be true and an accurate representation of the percolation capability of the sites herein described.

# BEAVER CREEK COAL COMPANY
## C.V. SPUR-FACILITIES
## LOCATION MAP
SCALE 1"=100'

8" PIPE

10" CMP

D-1

TRUCK SCALE

TRUCK DUMP

RAW COAL BIN

FAN HOUSE & ESCAPE TUNNEL

14' DIA. PIPE TUNNEL

SUMP

PREP. PLANT

TRL.

WATER TANK

M.H. #6 S

2-10" CMP

18" CMP

FAN HOUSE & ESCAPE TUNNEL

1" X 0 WASHED COAL PILE

2" X 0 RAW COAL

NEW TRUCK DUMP

24" CMP

BRAIN FIELD

WEST PERC.

EAST PERC.

SEPTIC TANK

SOIL TEST

SAMP

LAB

WATER HOUSE

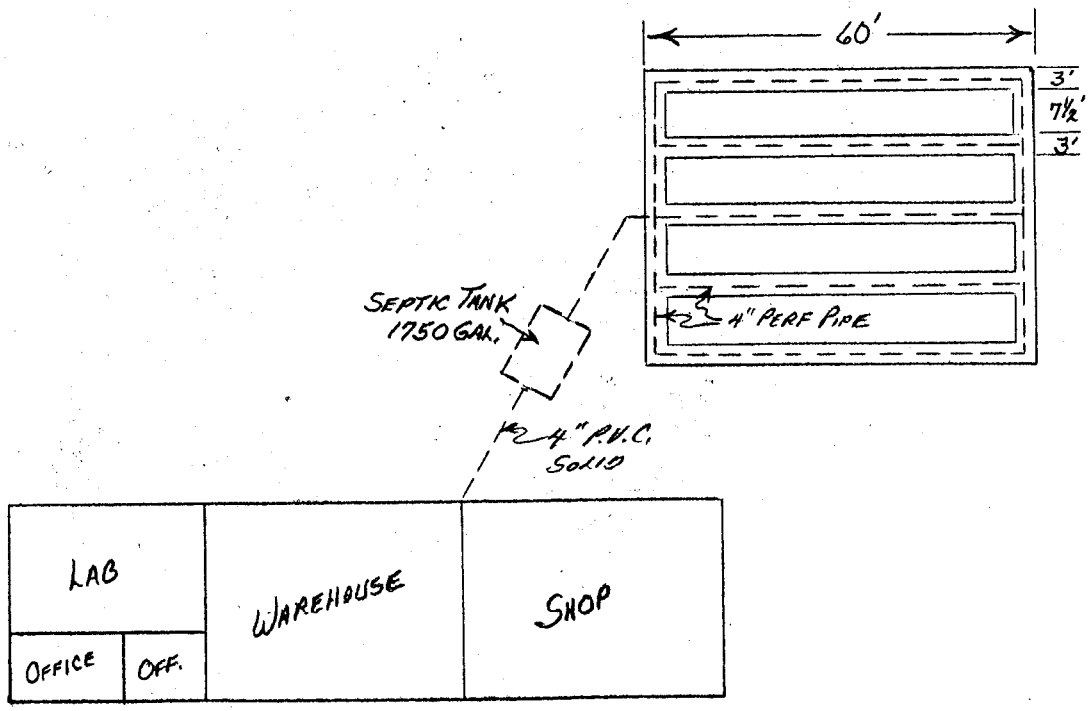
OFF SCALE

UP

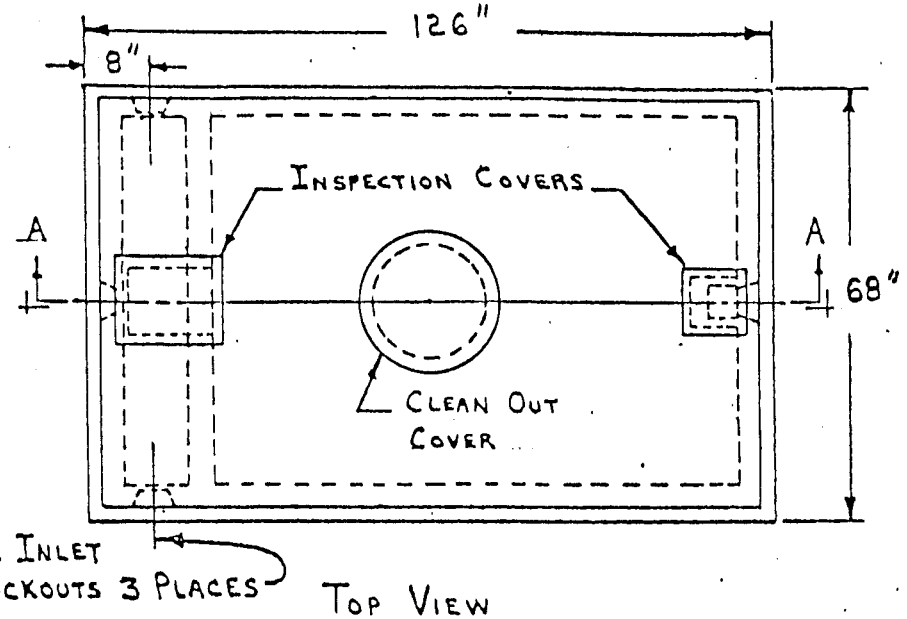
CULVERT

# BEAVER CREEK COAL COMPANY
## C. V. SPUR - SHOP/LAB/WAREHOUSE

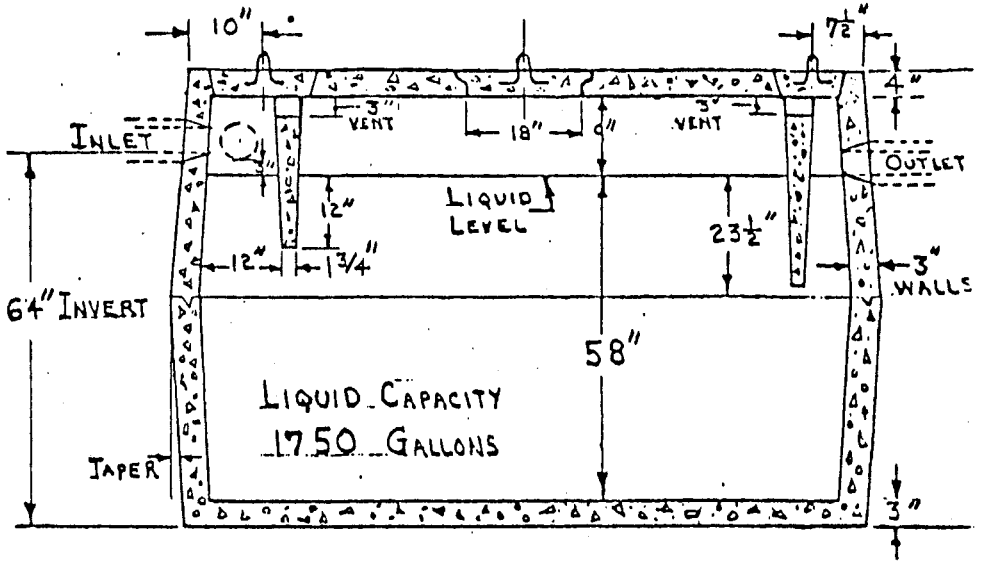
Plan APPROVED Only
NOT FINAL APPROVAL
A FINAL ON SITE INSPECTION IS REQUIRED
BEFORE SYSTEM IS COVERED
DATE Aug 4, 1981 BY Gerald Story



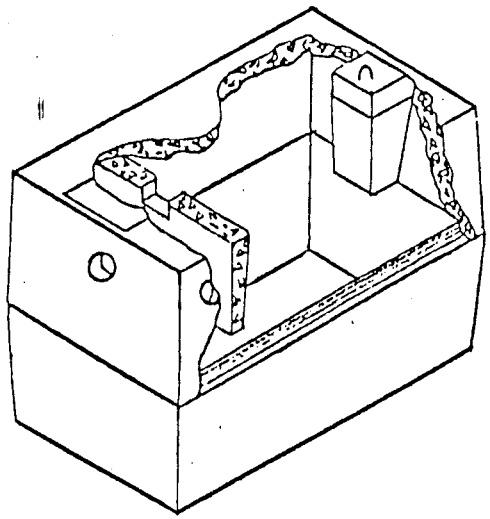

DRAIN FIELD
1080 FT²




TOP VIEW




SECTION A-A



CUTAWAY ISOMETRIC

NOTE:

CAPACITY - 1750 GALLONS
WEIGHT - 12000 POUNDS
EXCAVATION DIMENSIONS - 8'X12'
FLOW LINE - 5'-4"

SEALED WITH ASPHALT ROPE AND REINFORCED WITH 6X6 - 6X6 WELDED FABRIC

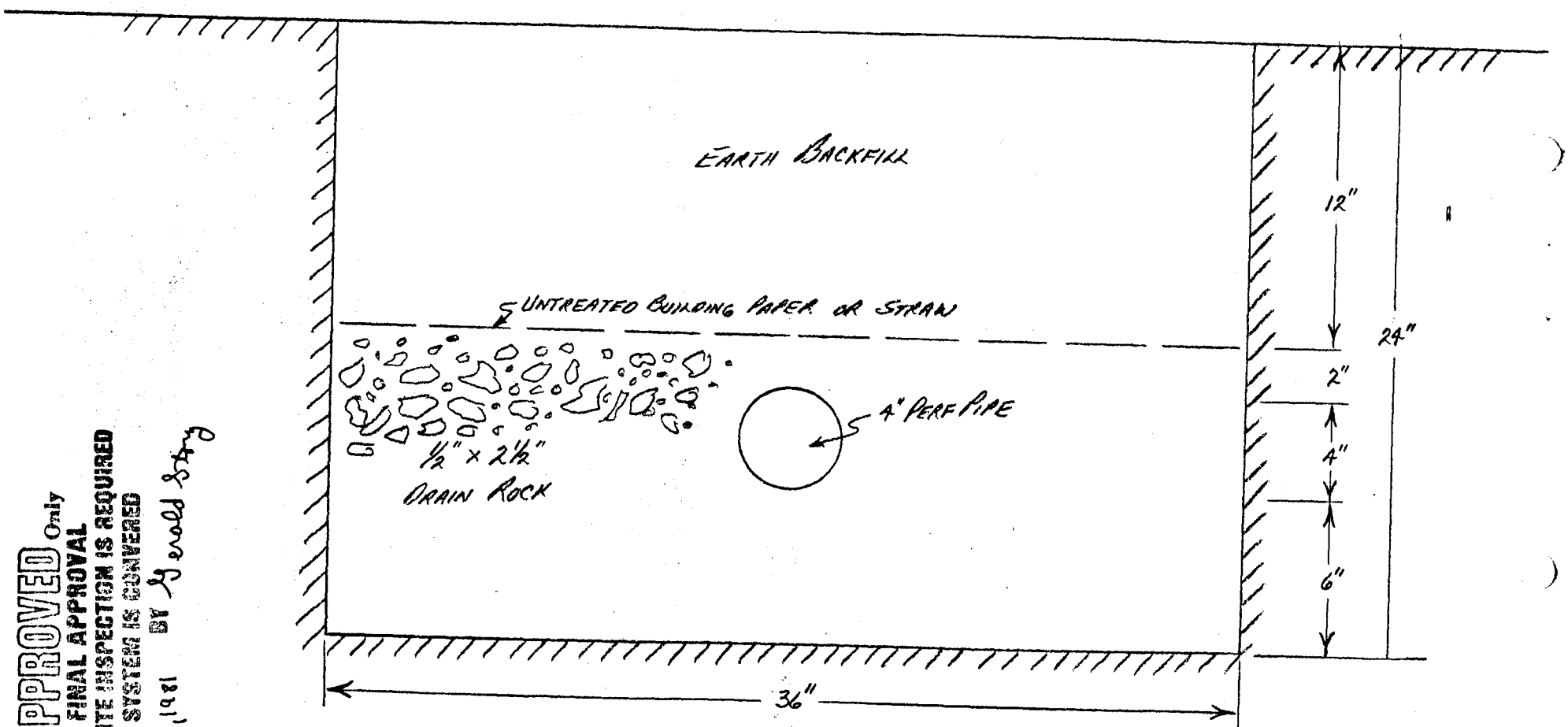
# 1750 GALLON - TWO PEICE SEPTIC TANK

| | | |
|---|---|---|
| SCALE: NONE | APPROVED BY: | DRAWN BY |
| DATE: 4-29-74 | | REVISED |

DURA - CRETE, INC.
1676 W. 3500 S. SALT LAKE CITY, UT
PHONE NO. 262-1740

DRAWING NUMBER

BEAVER CREEK COAL COMPANY
C.V. SPUR. SHOP/LAB/WAREHOUSE




TRENCH DETAIL
8-3-81

Plan APPROVED Only
NOT FINAL APPROVAL
A FINAL ON SITE INSPECTION IS REQUIRED
BEFORE SYSTEM IS COVERED
DATE Aug 4, 1981 BY Harold Stagg

BEAVER CREEK COAL COMPANY

C.V. SPUR SHOP/LAB/WAREHOUSE

# SOIL TEST

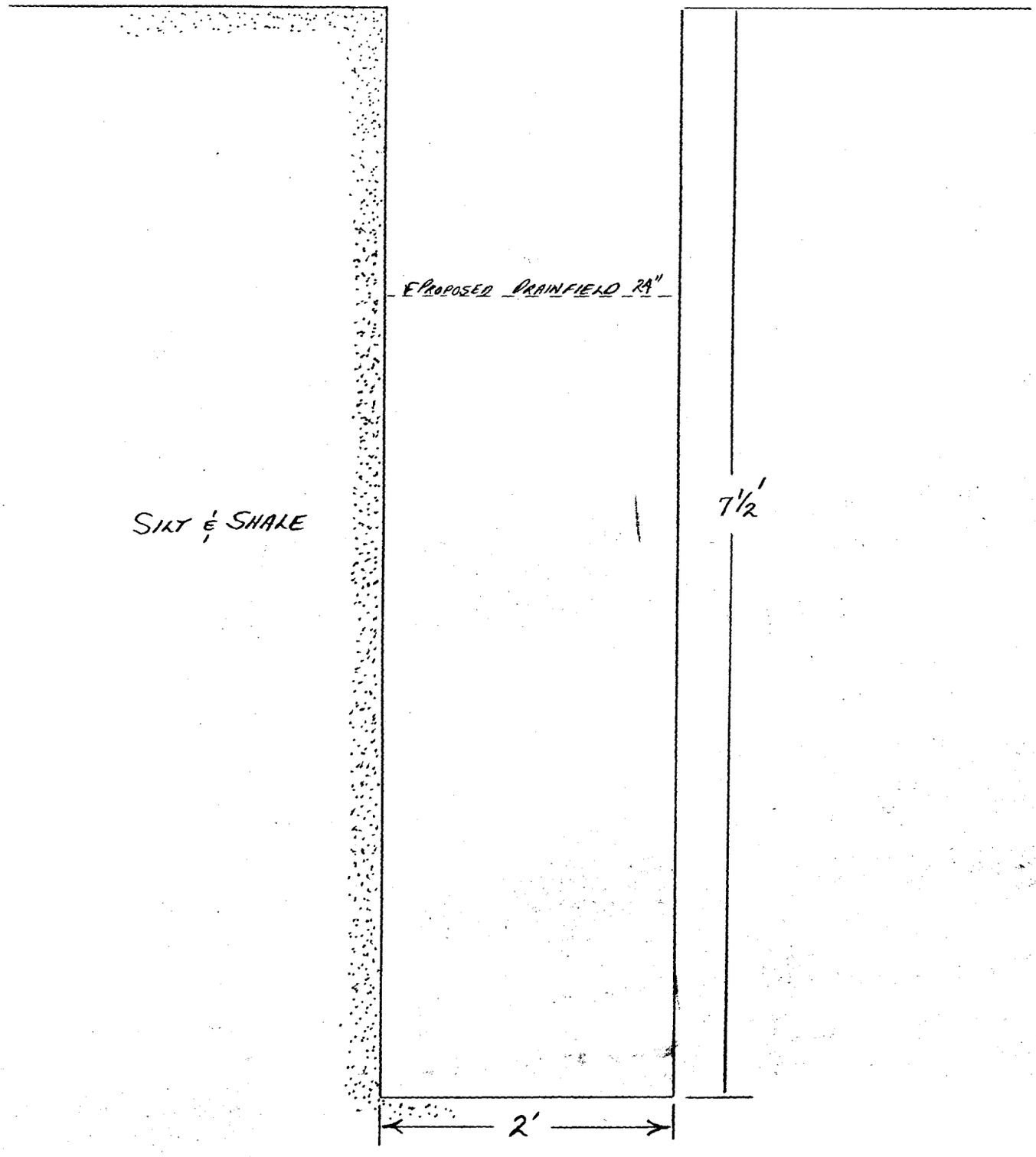


EXHIBIT "C"

CV SPUR
Shop/Warehouse/Lab
Environmental Protection Plan

The total amount of disturbance projected for the Shop/Warehouse/Lab construction site is .60 acres. Two soil pits were dug within this area in order to take soil samples and describe the soils within the area of disturbance.

Two soil types were found to exist within the construction area. They are the Chipeta Silty Clay and the Billings Silty Clay. Both soils were sampled from the surface layer down to parent material (Mancos Shale). The samples were then air dried and sent to a commercial lab for analyses. Topsoil stripping depths were established by comparing the soil analyses to Wyoming DEQ Guideline No. 3: Parameters for Determining Soil Suitability and Soils Suitability Ratings from the National Soils Handbook, USDA.

The Chipeta Soil Series was found to have chemical properties unsuitable for topsoil material. These include high sodium salt content, high electrical conductivity, high Sodium Absorption Ratio, and high pH (see Table 1). Therefore, the Chipeta Series will not be salvaged for topsoil material.

The Billings Soil Series is also characterized by poor to unsuitable chemical properties. However, the surface six (6) inches has a number of good to fair chemical properties that balance with the poor chemical properties. Thus, Beaver Creek Coal Company proposes to strip the surface six inches of the Billings Soil Series.

The Billings Soil Series occupies .10 acres of the proposed Shop/Warehouse/Lab site. Based on a six inch stripping depth, approximately 80 cubic yards of topsoil from the Billings Soil will be stripped and stockpiled. The topsoil will be taken to the north end of the existing topsoil stockpile and properly placed for storage.

The disturbed area that is not occupied by the Shop/Warehouse/Lab structure will for the most part consist of gravel for the driveway and employee parking area. The remaining disturbed area will be seeded with the temporary seed mixture following completion of construction activities.

A diversion will be cut around the disturbed area to convey disturbed flow into existing diversions and on to the sedimentation ponds. Existing drainage patterns, diversion cross sections, and location of sedimentation ponds may be found in the appropriate exhibits in the C.V. Spur Permit Application.

TABLE 1

C.V. SPUR
Construction Site
Soil Analyses

| Soil | Sample Depth | Sat. (%) | E.C. mmho/cm | pH | Soluble Cations meq/l Ca | Mg | Na | SAR | ESP | Lime est. | $HCO_3$ P ppm | Exch. K ppm | Texture % Sand | Silt | Clay |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chipeta Soil | 0-6" | 61.6 | 17.5 | 8.73 | 24.8 | 26.7 | 249 | 49.1 | 41.6 | ST | 0.62 | 96 | 12.5 | 78.4 | 9.1 |
| | 7" -- Shale | | | | | | | | | | | | | | |
| Billings Soil | 0-6" | 42.3 | 8.4 | 7.91 | 24.9 | 10.1 | 84.5 | 20.2 | 22.2 | ST | 0.16 | 70 | 17.0 | 72.6 | 10.4 |
| | 7-12" | 48.2 | 12.5 | 8.35 | 26.6 | 11.2 | 167 | 38.4 | 35.6 | ST | 0.36 | 84 | 12.5 | 74.6 | 12.9 |
| | 13-18" | 54.5 | 18.5 | 8.83 | 27.8 | 52.6 | 264 | 41.6 | 37.6 | ST | 0.66 | 116 | 8.5 | 73.6 | 17.9 |
| | 19" -- Shale | | | | | | | | | | | | | | |

# PROPOSED RECLAMATION

## C.V. SPUR LAB/SHOP/WAREHOUSE AREA

With the termination of C.V. Spur, and/or Lab/Shop/Warehouse operations, all surface facilities will be removed, the surface area graded, topsoiled and revegetated. After revegetation is accomplished, all drainage structures and diversions will be removed and those areas reclaimed.

While a detailed timetable for reclamation of this area cannot be presented due to the indefinite life of C.V. Spur, the following approximate schedule will be followed for final reclamation. This procedure will begin within 180 days of termination of operations.

| Procedure | Time Frame | Acc. Time |
|---|---|---|
| Remove Structures | 2 Weeks | 2 Weeks |
| Reclaim Areas | .5 Weeks | 2.5 Weeks |
| Topsoil and Soil Placement | .2 Weeks | 2.7 Weeks |
| Reseeding | .2 Weeks | 2.9 Weeks |
| Mulching | .1 Week | 3.0 Weeks |

## COST ESTIMATE FOR LAB/SHOP/WAREHOUSE AREA RECLAMATION

| Procedure | Cost |
|---|---|
| 1. Remove Structures | |
| a. Lab/Shop/Warehouse<br>3 men - 10 days + equipment | $ 6,000 |
| b. Sewage/Water System<br>3 men - 3 days + equipment | $ 2,000 |
| 2. Grading and Ripping | |
| a. Lab/Shop/Warehouse Area<br>1 cat - 1 operator - 1 day | $ 1,000 |
| 3. Revegetation Activity | |
| a. Topsoil & Soil Placement<br>1 loader - 1 operator - 1 day | $ 1,000 |
| b. Seedbed Preparation (.6 ac.)<br>Estimate $30/ac. | $ 18 |
| c. Seeding, Mulching, Fertilizing (.6 ac.)<br>Estimate $500/ac. | $ 300 |

PROPOSED RECLAMATION
C.V. SPUR LAB/SHOP/WAREHOUSE AREA
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| | |
|---|---|
| d. Maintenance and Monitoring<br>5 Years @ $200/Yr. | $ 1,000 |
| SUB-TOTAL---------- | $11,318 |
| + 10% CONTINGENCY---------- | 1,132 |
| *BOND ESTIMATE TOTAL-------- | $12,550 |

NOTE: ALL FIGURES BASED ON 1981 DOLLARS
DAYS ARE ACTUAL WORK DAYS

* The performance bond will be posted as a Surety Bond. The requirements of 30 CFR 806.12 (e) will be met.