

#2 Act 10071005



Utah Fuel Company
A SUBSIDIARY OF THE COASTAL CORPORATION

The Energy People

October 15, 1990

0071

RECEIVED

Daron Haddock
Permit Supervisor
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

OCT 18 1990

DIVISION OF
OIL, GAS & MINING

Dear Daron Mr. Haddock:

In your May 17, 1990 letter to us giving us conditional approval to construct our new coal stacking tube and reclaim facility, there were listed some deficiencies that we have not yet answered. We feel this memo should satisfy all deficiencies except as-built drawings for this permit amendment.

DEFICIENCY - Obtain an approved modified air quality permit for the new stack tube and reclaim facility.

Response: Attached is the approved modified air quality permit for the new facility which we have just received.

DEFICIENCY - Construct the inlet area above the new Middle Fork inlet structure in agreement with the U.S.F.S. and the UDWR.

Response: As you are aware, the request of both the U.S.F.S. and the UDWR could not be accomplished. We held several on site meetings with the two agencies and finally agreed upon the following solution:

Level an area approximately 50 feet to 50 feet above the inlet structure. This area will slope about 1-2% toward the inlet structure and will be approximately 6" above the lip of the inlet structure. Down the middle of this area will be a channel which will handle the 2 year 24 hour storm event. The area on either side of the channel will be seeded (M&RP approved mixture) this fall and then have willow cutting planted on it next spring. The area will serve as a flood plain for storm events greater than the 2 year 24 hour storm. We have attached calculations for the channel for the 2 year 24 hour event.

If this plan is agreeable with the Division, we will make the necessary wording changes in the M&RP and submit them with the as-built drawing when the project is completed.

DOGM Letter
Page two

DEFICIENCY - The 48-inch diameter culvert under the coal pile can only support a coal pile approximately 110 feet high.

Response: During the excavation of the reclaim tunnel we found the Middle Fork 48-inch culvert to be approximately six feet higher in elevation than previously indicated. This increase in elevation located the pipe in the middle of our new reclaim tunnel. To solve this problem, it was decided to raise the location of the pipe and go over the reclaim tunnel. The Middle Fork 48-inch culvert has been replaced and now has a soil cover of 4-5 feet. At this new location the maximum coal height of 130 feet plus the 4-5 feet of soil cover corresponds to a total loading equivalent of no more than 70 feet of soil/overburden at 120 pounds per cubic feet. The acceptable loading for a 14 gauge culvert must not exceed 77 feet of soil/overburden at 120 pounds per cubic foot (see attached height of cover table).

This new 14 gauge culvert and location falls within the acceptable limits of a 14 gauge culvert; therefore, safely allowing us to stockpile coal up to our designed height of 130 feet. We will show the new location of this pipe on the as-built drawings when we submit them upon completion of the project.

If you need any other additional information please contact Keith Zobell.

Sincerely,


For Glen A. Zumwalt
Vice President/General Manager

GAZ:KZ:lm

Attachment



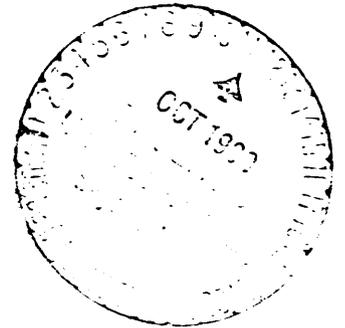
State of Utah
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

BAQE-620-90

Norman H. Bangertter
Governor
Suzanne Dandoy, M.D., M.P.H.
Executive Director
Kenneth L. Alkema
Director

Bureau of Air Quality
268 North 1460 West
P.O. Box 16890
Salt Lake City, Utah 84116-0690
(801) 538-6108

October 3, 1990



Glen A. Zumwalt
Vice President/General Manager
Coastal States Energy, Skyline
P.O. Box 719
Helper, Utah 84526

Dear Mr. Zuwalt:

Re: Approval Order for Modification of the Coal Storage Facility at Skyline
Coal Mine
Carbon County CDS A2

The above-referenced project has been evaluated and found to be consistent with the requirements of the Utah Air Conservation Regulations (UACR) and the Utah Air Conservation Act. A 30-day public comment period was held and all comments received were evaluated. The conditions of this approval order reflect any changes to the proposed conditions which resulted from the evaluation of the comments received. This air quality approval order authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order:

1. Utah Fuel Company, located at Eccles Canyon in Carbon County, shall install, modify, and operate the coal storage facility according to the information submitted in the notice of intent dated October 26, 1989.
2. The approval installation shall consist of the following:
 - A. Covered Conveyors (2);
 - B. Tube stacker chute (1);
 - C. Under-pile reclaim system;
 - D. Dozer.
3. This approval order shall supersede the approval order dated August 19, 1985, for the stockpile storage increase using front-end loader and haul trucks.
4. Visible emissions from the following emission points shall not exceed the following values:

- A. All conveyor transfer points - 10% opacity;
- B. Conveyor drop points and stacking tube - 20% opacity;
- C. Dozer operation - 20% opacity;
- D. All other points - 20% opacity.

Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.

- 5. The following stockpile activity limits shall not be exceeded without prior approval in accordance with Section 3.1, UACR:
 - A. 5,400,000 tons per year total coal production;
 - B. 1,250,000 tons storage pile throughput per 12-month period;
 - C. 400,000 tons capacity in main storage pile;
 - D. 37,000 tons capacity in the emergency storage pile.

Compliance with the limitation shall be determined on a rolling monthly total. On the first day of each month a new 12-month total shall be calculated using the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Records of production shall be made available to the Executive Secretary or his representative upon request, and shall include a period of two years ending with the date of the request. Production shall be determined by plant operating records. The records shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

- 6. All unpaved roads and other unpaved operational areas shall be water sprayed and/or chemically treated as dry conditions warrant or as determined necessary by the Executive Secretary to the extent necessary to prevent, as far as practicable, the generation of fugitive dusts. Records of treatment shall be made available to the Executive Secretary or his representative upon request and shall include a period of two years prior to the date of request. If chemical application is to be used, the plan must be approved by the Executive Secretary. Any section of paved road under the owner/operator's jurisdiction shall be periodically swept or sprayed clean as dry conditions warrant or as determined necessary by the Executive Secretary. Records of cleaning of paved road shall be made available to the Executive Secretary or his representative upon request and shall include a period of two years prior to the date of request. All records shall include the following items:

Glen A. Zumwalt
October 3, 1990
Page 3

- A. Date;
 - B. Number and type of treatments made;
 - C. Rainfall received, if any, and approximate amount;
 - D. Time of day treatments were made.
7. All conveyors for the new system shall be equipped with covers.
 9. Eighteen months from the date of this approval order the Executive Secretary shall be notified in writing of the status of construction of this project unless the construction is complete and operation has commenced.
 10. A copy of this approval order shall be maintained on-site and available to the operators.
 11. All installations and facilities authorized by this approval order shall be adequately and properly maintained.
 12. The Executive Secretary shall be notified in writing upon start-up of the installation, as an initial compliance inspection is required.

Any future modifications to the equipment approved by this order must also be approved in accordance with Section 3.1.1, UACR.

"Allowable emissions" as defined in Section 1.12, UACR, for sources identified in Condition #2 (for the coal, the Skyline Mine) are currently calculated at 18.71 tons/yr for particulate, and 0.02 tons/yr for PM₁₀. These calculations are for the purposes of determining the applicability of PSD and non-attainment area major source requirements of the UACR. They are not to be used for purposes of determining compliance.

This approval order in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including the Utah Air Conservation Regulations.

Sincerely,


F. Burnell Cordner, Executive Secretary
Utah Air Conservation Committee

FBC:LCB:jiw

cc: EPA Region VIII, Mike Owens
Southeastern District Health Department

SEDIMENT TRAP
AND STREAM CHANNEL DESIGN

G. TAYLOR
10-15-90

1. ASSUMPTIONS

- a. POND WIDTH 50 FT
- b. DESIGN FLOW - 25 YR - 24HR - 63.91 cfs - SECTION 2, VOLUME 5
- c. TRAP WILL FUNCTION FOR TEMPERATURE DOWN TO 40°F
- d. RETAIN 25% OF SEDIMENT HAVING A PARTICLE DIAMETER OF .0029 IN OR LARGER

2. DIMENSIONS OF THE POND

$$\frac{LW}{Q} = F$$

PAGE 563 BARFIELD, B.J., R.C. WARNER, C.T. HAAN
APPLIED HYDROLOGY AND SEDIMENTOLOGY FOR
DISTURBED AREAS, OKLAHOMA TECHNICAL PRESS

$$F = 40$$

FIGURE 7.36 PAGE 564

$$LW/Q = 40$$

$$L(50)/63.91 = 40$$

$$L = (40)(63.91)/50$$

$$L = 2536.4/50$$

$$L = 50 \text{ FT.}$$

REMOVAL EFFICIENCY OF VARIOUS PARTICLE SIZES IS SHOWN BELOW

PARTICLE SIZE (IN)	TRAP EFFICIENCY (%)
.0002	.11
.0003	.50
.0006	2.0
.0012	8.0
.0024	25.0
.0049	69.0
.0098	96.0

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



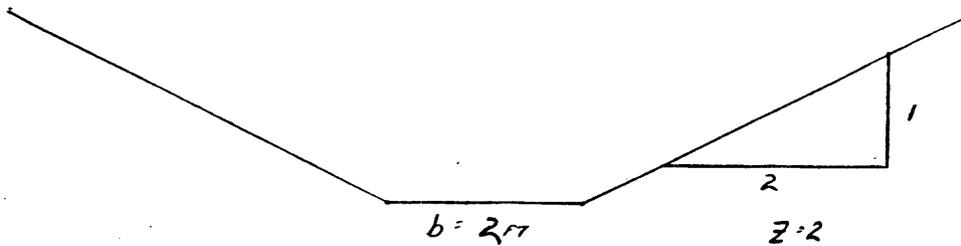
3 STREAM CHANNEL DESIGN

ANNUAL FLOW - 1.9 cfs SCS UNIT HYDROGRAPH METHOD
2 yr - 24 hr

A. ANNUAL FLOW DESIGN - TRAPEZOID CHANNEL

$$Q = A \times 1.486/n \times R^{4/3} \times S^{1/2}$$

S = .01
n = .033 DENSE WEEDS OR
AQUATIC PLANTS



$$A = bd + Zd^2$$

$$R = (bd + Zd^2) / (b + 2d\sqrt{Z^2+1})$$

$$Q = 1.9 \text{ cfs}$$

$$Q = bd + Zd^2 \times 1.486/n \times (bd + Zd^2 / (b + 2d\sqrt{Z^2+1}))^{4/3} \times S^{1/2}$$

$$Q = 2d + 2d^2 \times 1.486/.033 \times (2d + 2d^2/2 + 2d\sqrt{2^2+1})^{4/3} \times (.01)^{1/2}$$

$$Q = 2d + 2d^2 \times 45.03 (2d + 2d^2/2 + 4.47d)^{4/3} \times .10$$

$$1.9 = 2d + 2d^2 \times 4.50 \times (2d + 2d^2/2 + 4.47d)^{4/3}$$

$$.42 = 2d + 2d^2 \times (2d + 2d^2/2 + 4.47d)^{4/3}$$

TRIAL d

d (ft)	Q (cfs)
.3	.29
.4	.50
.38	.45
.36	.41
.37	.43

d = .43

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



$$V = 1.49 \frac{R^{2.48}}{n} \times S^{.48}$$

$$R = \frac{2d + 2d^2 / (2 + 2d\sqrt{2})}{2} = \frac{1.01}{3.65} = .28$$

$$S = .01$$

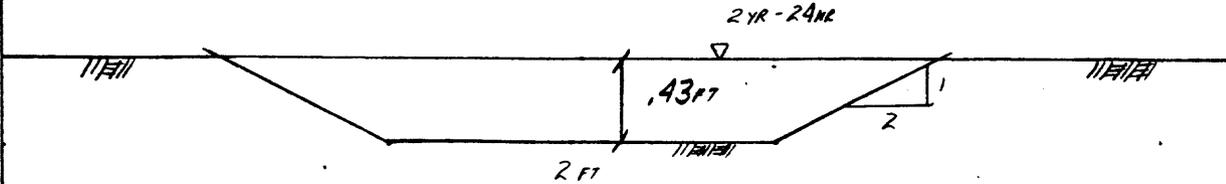
$$n = .033$$

$$= 1.49 / .033 \times (.28)^{2.48} \times (.01)^{.48}$$

$$= 45.03 \times .57 \times .10$$

$$= 2.55 \text{ FPS}$$

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



STREAM CHANNEL WEST OF
COAL STORAGE

Earth Backfill Design

The following typical height-of-cover limits tables are based on the preceding design method. They are based on the following soil and steel parameters:

- Unit weight of soil—120 lb per cu ft
- Relative density of backfill—Minimum 85%
- Standard AASHTO
- Yield point of steel—33,000 lb per sq in.

These tables were computed, using the same design theory as used in the "Handbook of Steel Drainage and Highway Construction Products," by American Iron and Steel Institute.

For large, important projects or when soil and steel parameters need to be increased, the design procedure described on pages 16-20 should be followed.

Performance of a flexible conduit in retaining its shape and structural integrity under heavy dead or live loads depends greatly on the selection, placement and compaction of the earth surrounding the structure. Requirements for backfill are similar to those for good roadway embankment.

For data on installation procedures, see pages 41-44 of this manual, and the NCSA Installation Manual.

TABLE 16. HEIGHT-OF-COVER LIMITS FOR CORRUGATED STEEL PIPE
2 2/3" x 1/2" Corrugations

Diameter or Span in Inches	H 20 Live Load Min. Cover*	Maximum Cover in Feet H 20 or E 80						E 80 Live Load Min. Cover*	Diameter or Span in Inches
		Specified Thickness							
		18 Ga.** 0.052 In.	16 Ga.** 0.064 In.	14 Ga.** 0.079 In.	12 Ga.** 0.109 In.	10 Ga.** 0.138 In.	8 Ga.** 0.168 In.		
12	12 inches	199	248	310				12 inches	12
15		159	199	248					15
18		132	166	207					18
21		113	142	178	249				21
24		99	124	155	218				24
27			111	138	193				27
30			99	124	174				30
36			83	103	145	186			36
42			71	89	124	160	195		42
48			62	77	109	140	171		48
54				66	93	120	147		54
60					79	102	125		60
66					68	87	107		66
72						73	89		72
78							74		78
84							61		84
90							50		90
96							41		96

* from top of pipe to top of subgrade.

TABLE 17. HEIGHT-OF-COVER LIMITS FOR CORRUGATED STEEL PIPE
3" x 1" Corrugations

Diameter or Span in Inches	H 20 Live Load Min. Cover*	Maximum Cover in Feet H 20 or E 80						E 80 Live Load Min. Cover*	Diameter or Span in Inches	
		Specified Thickness								
		18 Ga.** 0.052 In.	16 Ga.** 0.064 In.	14 Ga.** 0.079 In.	12 Ga.** 0.109 In.	10 Ga.** 0.138 In.	8 Ga.** 0.168 In.			
36	12 inches	76	95	121	167	214	263	12 in.	36	
42		65	81	102	143	185	225		42	
48		57	71	91	125	161	197		48	
54			63	80	111	143	175		54	
60			57	72	100	129	156		60	
66			52	66	91	117	143		66	
72			47	60	83	107	131		72	
78			44	55	76	99	121		78	
84			40	53	71	92	112		84	
90			38	48	66	85	105		90	
96			35	45	62	80	98		96	
102		18 in.							24 in.	102
108		18 in.							24 in.	108
114		16 in.							30 in.	114
120		18 in.							30 in.	120

* from top of pipe to top of subgrade.
** shown for information purposes only.