

P 324 744 142

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED - NOT FOR INTERNATIONAL MAIL (See Reverse) *AC/CO/ON*

SENT TO		<i>Charles Jahne</i>	
STREET AND NO.		<i>86 E. South Temple</i>	
P.O., STATE AND ZIP CODE		<i>S.H.C., UT 84111</i>	
POSTAGE		\$	
CERTIFIED FEE		\$	
CONSULT POSTMASTER FOR FEES	SPECIAL DELIVERY	\$	
	RESTRICTED DELIVERY	\$	
	OPTIONAL SERVICES	\$	
	RETURN RECEIPT SERVICE	\$	
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			

PODM

PS Form 3800, Apr. 1976

HM 1007/011

PS Form 3811, Jan. 1979

● SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)

Show to whom and date delivered.....

Show to whom, date and address of delivery.....

RESTRICTED DELIVERY

Show to whom and date delivered.....

RESTRICTED DELIVERY.

Show to whom, date, and address of delivery \$.....

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO: *Charles J. Jahne - 86 E. South Temple S.H.C., UT 84111* *67B*

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	<i>744 142</i>	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE Addressee Authorized agent

Sam E. Matley - SSC

4. DATE OF DELIVERY *NOV 04 1982* POSTMARK *NOV 4 1982*

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

GPO : 1979-288-848

UNITED STATES POSTAL SERVICE OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, and 3 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, \$300

State of Utah
Natural Resources & Energy
Oil, Gas, & Mining
4241 State Office Building
Salt Lake City Utah 84114



(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

- STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (See front)
1. If you want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier. (no extra charge)
 2. If you do not want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article; date, detach and retain the receipt, and mail the article.
 3. If you want a return receipt, write the certified-mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article RETURN RECEIPT REQUESTED adjacent to the number.
 4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse RESTRICTED DELIVERY on the front of the article.
 5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in Item 1 of Form 3811.
 6. Save this receipt and present it if you make inquiry.

GPO : 1980 331-003



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

November 3, 1982

744 142

REGISTERED RETURN RECEIPT REQUESTED

Mr. Charles J. Jahne
Sharon Steel Corporation
University Club Building, 19th Floor
136 East South Temple
Salt Lake City, Utah 84111

RE: King VI Conveyor
U. S. Fuel Company
King VI Mine
ACT/007/011
Carbon County, Utah

Dear Mr. Jahne:

Enclosed please find a copy of the Division of Wildlife Resources' (DWR) recommendations for alleviation of the barrier situation created by construction of the King VI conveyor, as referred to in the Division's October 26, 1982 letter to you. The Division is in agreement with the three actions as outlined on page 2 of the DWR communication. You will note that recommended actions #2 and #3 differ somewhat from corresponding recommendations made in the aforementioned October 26 letter. The actions detailed by the DWR will supercede those outlined in the previous letter where different.

In summary, U. S. Fuel Company/Sharon Steel Corporation must: (1) raise the electrical conduits to a height at least greater than the bottom of the conveyor belt; (2) shorten idler supports a minimum of four inches (10 cm) thus "raising" the lower conveyor belt; and, (3) remove three 12-foot sections of the guardrail.

Mr. Charles J. Jahne
ACT/007/011
November 3, 1982
Page 2

U. S. Fuel Company/Sharon Steel Corporation should continue to coordinate with Sandy Pruitt of the Division regarding deadlines for commencement and completion of this work.

Your timely resolution of this matter will be most appreciated. Should you have any questions, please do not hesitate to contact the Division.

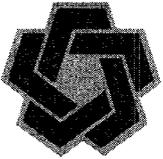
Sincerely,

Mary M. Boucek
MARY M. BOUCEK
RECLAMATION BIOLOGIST

MMB/btb

Enclosure

cc: Bob Eccli, U. S. Fuel Company
Larry Dalton, DWR
Wayne Hedberg, DOGM
Sandy Pruitt, DOGM



STATE OF UTAH
 NATURAL RESOURCES & ENERGY
 Wildlife Resources

Scott M. Matheson, Governor
 Temple A. Reynolds, Executive Director
 Douglas F. Day, Division Director

1596 West North Temple • Salt Lake City, UT 84116 • 801-533-9333

October 29, 1982

RECEIVED

NOV 03 1982

FILE
 ACT/1007/011
 Hiawatha
 MB

Mr. Cleon B. Feight, Director
 Division of Oil, Gas and Mining
 4241 State Office Building
 Salt Lake City, Utah 84114

DIVISION OF
 OIL, GAS & MINING

Attention: Mary Boucek

RE: U.S. Fuel Company's overland coal conveyor located in the South Fork of Miller Canyon (King #6 Mine).

Dear Jack:

On October 20, 1982 Larry Dalton, the Division's Southeastern Regional Resource Analyst, and Mary Boucek from your office inspected the recently constructed overland coal conveyor that serves U.S. Fuel Company's King #6 Mine (Table 1). As you know, prior to construction the Division expressed concern to your office, as well as the mine, that this conveyor be appropriately designed to allow passage of mule deer. Drawings, along with a letter submitted by Charles J. Jahne, U.S. Fuel Company, on August 11, 1981, to your office, demonstrated an intent by the mine to correctly construct the conveyor. It was designed to have at least 1 meter (100 cm) clearance along its entire length from the ground to the bottom of the structure. The Division's recommendation (July 30, 1981) was that a majority length of the conveyor be elevated to provide a minimum of one meter clearance beneath the structure. As you can see there appeared to be no problems forthcoming in relation to the conveyor and mule deer movement. However, construction resulted in a conveyor with a mean clearance determined from 184 measurements spaced approximately 3 meters apart of only 0.6 meters (60 cm).

There are two other features associated with the conveyor that were not previously identified in the company's drawings: (1) Two conduit tubes that house electrical service lie adjacent to each other and extend the entire length of the conveyor; and (2) A guard rail situated 1.2 meters south of the conveyor extends 0.24 kilometers along the structure. The conduit tubes measure approximately 10 cm wide and on the average the top of the tubing is situated 39 cm from the ground (Note, this mean was determined from 77 random measurements spaced along the length of the conveyor). The presence of the tubing reduces the "passage window" to only 21 cm between the belt and the top of the tubing and 29 cm between the ground and the bottom of the tubing. Mule deer cannot physically pass through these small windows; thus, the conveyor with the conduit situated in its present position is a barrier to mule deer movement.

Mr. Cleon B. Feight
October 29, 1982
Page Two

The guardrail, although needed to protect the conveyor from snow removal equipment, presents an additional barrier to deer passage.

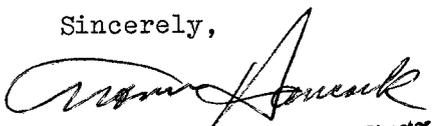
A hole (2-4 meters wide by 119 cm high) that was dug beneath the conveyor has been suggested by the mine as serving as a deer passage way. A cursory evaluation of this site indicated that deer do not normally cross at that point. The hole is poorly designed for use by deer and may or may not be utilized. It will become filled with snow and water, thus detracting from its proposed purpose. Proper placement of deer crossing structures can only result from intensive winter long studies.

Jack, it is recommended that the mine immediately modify the conveyor so that it is not a barrier to deer movement. Traditionally, mule deer begin migration to winter range about November 1 and return to summer range about May 15 each year. Due to the heavy snows on Gentry Mountain in late September, 1982, migration has already been initiated. Deer were observed in the vicinity of the conveyor on the October 20 inspection and tracks showed that most deer crossing the canyon had unsuccessfully attempted to cross beneath the conveyor. The following recommended actions should mitigate the now existing problem:

1. The two conduit tubes throughout the length of the conveyor must be raised to a height at least greater than the bottom of the lower conveyor belt. This will result in a "passage window" with an average of 60 cm clearance along 75 percent of the conveyor.
2. The idler supports that suspend the lower belt need to be shortened a minimum of 4 inches (10 cm) between transfer points No. 1 and No. 2. This will increase the clearance of an average "passage window" to 70 cm which equals the average clearance of "passage windows" known to be selected for use by mule deer.
3. The 790 foot guardrail needs three, 12-foot sections removed to facilitate deer passage beneath the adjacent conveyor. This will not detract from its purpose of protecting the conveyor. Selection for placement of these openings is somewhat arbitrary but, two should be located approximately 200 feet from either end of the guardrail and the third in the middle. Exact placement should correspond to "crossing windows" near the recommended sites that provide the greatest clearance.

Thanks for your consideration of the state's wildlife resource. The Division appreciates the cooperative and productive relationship that has developed in the coal-wildlife area.

Sincerely,



Douglas F. Day Acting Director
Director

Table 1. Measurements of U.S. Fuel Company's overland coal conveyor that serves the King #6 Mine, October 20, 1982. The 0.564 kilometer long conveyor, located in the South Fork of Miller Canyon (Sec. 32 and 33 T 15S, R 8 E, Carbon County, Utah), is situated on a south aspect near the canyon floor and within a shrubland habitat type. The primary use of the area by mule deer is transitional between summer and winter areas. It has been ranked as being of high-priority value to mule deer in winter. Limited numbers of mule deer are present within the area on a yearlong basis.¹

<u>Clearance Beneath Conveyor</u> ²		Number of Measurements	Percent of Measurements
Inch	Cm		
Measurements of conveyor segments with clearances too low to physically allow passage of mule deer.			
6	15	1	(1)
10	25	2	(1)
11	28	2	(1)
	Subtotal	5	3%
Measurements of conveyor segments with clearances that are so low that experience demonstrates deer will avoid attempting passage.			
12	30	6	(3)
13	33	10	(5)
14	36	1	(1)
15	38	5	(3)
16	41	4	(2)
17	43	6	(3)
18	46	8	(4)
19	48	6	(3)
	Subtotal	46	24%
Measurements of conveyor segments with clearances that experience has demonstrated deer will make passage.			
20	51	4	(2)
21	53	7	(4)
22	56	4	(2)
23	58	11	(6)
24	61	9	(5)
25	64	19	(10)
26	66	23	(13)
27	69	12	(7)
28	71	7	(4)
29	74	4	(2)
30	76	6	(3)
31	79	8	(4)
32	81	6	(3)
33	84	4	(2)
34	86	3	(2)
35	89	1	(1)
36	91	2	(2)

Table 1. Continued

<u>Clearance Beneath Conveyor</u>		Number of Measurements	Percent of Measurements
Inch	Cm		
40	102	1	(1)
43	109	1	(1)
49	124	1	(1)
	Subtotal	133	75%
	Grand Total	184	102%

¹ Mean of 60 cm within a range of 15-124 cm; n=184.

² Conveyor support struts are spaced 3.05 meters apart.

P 324 744 128

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse) *01/10/82*

DOG

PS Form 3811, Apr. 1979

SENT TO <i>Chuck Jahne</i>	
STREET AND NO. <i>136 E. South Temple</i>	
P.O., STATE AND ZIP CODE <i>S.L.C., UT 84111</i>	
POSTAGE	\$
CERTIFIED FEE	\$
SPECIAL DELIVERY	\$
RESTRICTED DELIVERY	\$
OPTIONAL SERVICES	\$
RETURN RECEIPT SERVICE	\$
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	\$
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	\$
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	\$
TOTAL POSTAGE AND FEES	\$
POSTMARK OR DATE	<i>20 1982</i>

PS Form 3811, Jan. 1979

● SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
 Show to whom and date delivered.....
 Show to whom, date and address of delivery.....
 RESTRICTED DELIVERY
 Show to whom and date delivered.....
 RESTRICTED DELIVERY.
 Show to whom, date, and address of delivery. \$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
*Chuck Jahne - Sharon Steel
136 E. South Temple
S.L.C. UT 84111* *BTB*

3. ARTICLE DESCRIPTION:
 REGISTERED NO. *744 128* | CERTIFIED NO. | INSURED NO.
 (Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE Addressee Authorized agent
John Plotnick

4. DATE OF DELIVERY *UT 27 1982* | POSTMARK *UT 27 1982*

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: | CLERK'S INITIALS

GPO : 1979-288-848

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, and 3 on the reverse.
- Attach to front of article if space permits.
- Otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

State of Utah
 Natural Resources & Energy
 Oil, Gas, & Mining
 4241 State Office Building
 Salt Lake City, Utah 84114

PENALTY FOR PRIVATE
 USE TO AVOID PAYMENT
 OF POSTAGE: \$300



(Name of Sender)

(Street or P.O. Box)

(City, State, and ZIP Code)

STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE,
 CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (see front)

1. If you want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article, leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier. (no extra charge)
2. If you do not want this receipt postmarked, stick the gummed stub on the left portion of the address side of the article; detach and retain the receipt, and mail the article.
3. If you want a return receipt, write the certified-mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article RETURN RECEIPT REQUESTED adjacent to the number.
4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse RESTRICTED DELIVERY on the front of the article.
5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in Item 1 of Form 3811.
6. Save this receipt and present it if you make inquiry.

GPO : 1980 331-003



October 26, 1982

749 128

REGISTERED RETURN RECEIPT REQUESTED

Mr. Charles J. Jahne
Sharon Steel Corporation
University Club Building, 19th Floor
136 East South Temple
Salt Lake City, Utah 84111

RE: King VI Conveyor
U. S. Fuel Company
King VI Mine
ACT/007/011
Carbon County, Utah

Dear Mr. Jahne:

Upon examination of the King VI conveyor in the Left Fork of Miller Creek by Larry Dalton, Division of Wildlife Resources (DWR), and myself, it has been found that this structure has not been built according to approved plans and presents a barrier to mule deer movements along a majority of its length, in violation of UMC 817.97(d)(2). The following actions must be implemented immediately in order to alleviate the situation and render the conveyor passable to deer:

1. The electrical conduit pipe(s) must be raised to a height at least greater than the bottom of the conveyor belt, throughout the length of the conveyor.
2. Sections of the lower conveyor belt must be raised to a height yet to be determined by the DWR and DOGM, after analysis of data collected at the conveyor October 20, 1982. When this remedial work commences, either Mr. Dalton or myself will plan to be on-site in order to delineate those areas where the conveyor will need to be raised.

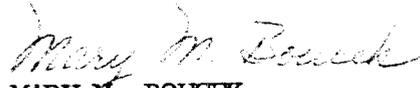
Mr. Charles J. Jahne
ACT/007/011
October 26, 1982
Page 2

3. Two 12-foot sections of the guardrail which closely parallels the western portion of the conveyor must be removed to facilitate deer passage. Though it is an arbitrary decision as to which exact sections should be removed, it is the opinion of Mr. Dalton and myself that if a section were removed, approximately one third of the way in from either end of the guardrail, this would alleviate the additional impediment presented by the guardrail.

With the implementation of the actions outlined above, there will be no need to keep or construct specific "deer crossing" structures in association with the conveyor. On-going research by the Division of Wildlife Resources indicates that, under circumstances such as those associated with the King VI conveyor, a conveyor which is of a certain critical height throughout the majority of its length will be fairly readily crossed under by deer, thus eliminating the need for "deer crossings."

U. S. Fuel Company/Sharon Steel Corporation should coordinate with Sandy Pruitt of the Division's Inspection and Enforcement Section regarding deadlines for the commencement and completion of this work. It is anticipated at the date of this writing that further specific information regarding exactly which sections of the conveyor will need elevating and to what heights will be forwarded to you shortly. Should you have any questions, please contact me.

Sincerely,


MARY M. BOUCEK
RECLAMATION BIOLOGIST

MMB/btb

cc: Bob Eccli, U. S. Fuel Company
Larry Dalton, DWR
Wayne Hedberg, DOGM
Sandy Pruitt, DOGM

ROUTING AND TRANSMITTAL SLIP

Date

10-21-82

TO: (Name, office symbol, room number, building, Agency/Post)		Initials	Date
1. D. WAYNE HEDBERG			
2.			
3.			
4.			
5.			

RECEIVED

OCT 25 1982

DIVISION OF
OIL, GAS & MINING

Action	File	Note and Return
Approval	For Clearance	<input checked="" type="checkbox"/> Per Conversation
<input checked="" type="checkbox"/> As Requested	For Correction	Prepare Reply
Circulate	<input checked="" type="checkbox"/> For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

REGARDING THE KING MINE COMPLEX, HERE ARE THE TWO REVIEWS (ACR). I DID NOT GET A RESPONSE FROM U.S. FOREST SERVICE ON THE ENVIRONMENTAL ASSESSMENT THAT WAS TO BE SUPPOSEDLY PREPARED THE LAST OF '81. HOWEVER AS SOON AS I HEAR FROM THE "SUPERVISOR" I WILL SUBMIT ~~THESE~~ A COPY OF THE E.A. IN THE INITIAL ACR, BLM DID NOT HAVE ANY COMMENTS (SEE OSM LETTER DATED 9-27-81). I WILL GET THEIR COMMENT PROBABLY BEFORE UDOGIM FINISHES THE TECHNICAL ANALYSIS.

PAT.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
RAYMOND BLAKE OSM, WESTERN TECHNICAL CENTER DENVER, COLORADO	Phone No. (303) 837-5656

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206



United States Department of the Interior

GEOLOGICAL SURVEY

Office of the District Mining Supervisor
 Conservation Division
 2040 Administration Building
 1745 West 1700 South
 Salt Lake City, Utah 84104

file
 ACT/007/011

May 18, 1981

Memorandum

To: Regional Director, OSM, Denver

From: District Mining Supervisor, USGS-CD,
 Salt Lake City

Subject: U.S. Fuel Company, King Mines, (Hiawatha)
 Carbon and Emery Counties, Utah, Application
 for a Mining Permit--Utah State

RECEIVED

OCT 25 1982

DIVISION OF
 OIL, GAS & MINING

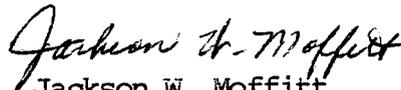
The subject four-volume submittal forwarded from your office was received on March 30, 1981. We have reviewed this mining and reclamation plan (permanent program submission) for completeness and technical adequacy pursuant to the cooperative agreement between our offices and for conformance with the Federal regulations 30 CFR 211.10(c), dated May 17, 1976, as amended August 22, 1978. The following are our comments:

1. The subject submittal material has been assembled for a Utah State permit application using the State's "General Guidelines for Organizational Format and Content" for the chapter headings and some of the subheadings. Items that are required by the 30 CFR 211.10(c) regulations are not specifically identified. We would like the submittee to provide a cross-reference index that designates the sections and pages or maps which contain the 30 CFR 211.10(c) requirements. The format of this cross-reference index should follow the guidelines sent sometime in April 1981 to the operating companies by John Hardaway of OSM.
2. A copy of the mining and reclamation plan submitted to the USGS-CD in compliance with 30 CFR 211 regulations dated May 17, 1976, has been included as a part of this submittal (Vol. IV, Ch. XIV, App. XIV-1). A statement should be included that this part of the submittal is not valid where it is changed by any other part of the subject plan.
3. Furnish the addresses of the surface owners of record as required by 30 CFR 211.10(c)(1).
4. The cleat, joint, and fracture patterns should be included in the narrative describing the structural features of the coal and overlying strata as required by 30 CFR 211.10(c)(2).

5. The sequence mining plan projections required by 30 CFR 211.10(c)(6)(ii) and portrayed on Exhibits III-7A, III-9, and III-10 show the mining of some Federal coal that is not presently under lease. One of the areas (estimated to be 75 acres) in sec.5, T. 16 S., R. 8 E., SIM, is contiguous to U.S. Fuel fee land on the north and Federal lease SL-025431 (U.S. Fuel) on the west and east sides. The south side is apparently to the minable limits (all reserve maps show this to be a want area). The submittee should make application to mine this Federal coal. The Government should see that this right is granted timely to prevent a bypass and complete loss of this resource. The other area (estimated to be 180 acres) in secs. 19 & 20, T. 16 S., R. 8 E., SIM, is contiguous to U.S. Fuel controlled land on three sides. The southerly side involves the outcrop. There is a potential this area could be mined from the outcrop, but probably not economically. The company should consider acquiring this land by modifying their existing coal lease or leases.
6. Federal regulation 30 CFR 211.10(c)(6)(vii) requires the method of operation and measures by which the operator plans to comply with 30 CFR 211.4 and 211.40 and any special terms and conditions of the lease permit or license. This can be by a narrative statement including only those items related to resource recovery.
7. The number of acres of land to be affected for each phase of the mining operation should be furnished as required by 30 CFR 211.10(c)(6)(viii).
8. Include in the narrative related to abandonment of coal mine operations as require by 30 CFR 211.10(c)(6)(xi) a statement that "Abandoning reserves on Federal leases for any reason must have a joint onsite review or inspection and a USGS-CD approval of the abandonment plan."
9. As required by 30 CFR 211.10(c)(6)(xii) furnish the USGS-CD complete logs of all exploration drill holes both surface and underground on Federal leases, that have not been submitted previously.
10. Federal regulations 211.10(c)(6)(xi) and (xv) requires justification for not recovering any coal that may be lost, etc. The sequence mining plan projections in the Upper Seam of the King 8 mine (Exhibit III-10) do not show all of the minable coal on the west side as being mined.
11. Additional geological information is required by 30 CFR 211.10(c)(7)(iii). In part, cross sections should show the nature of the strata beneath the coal to be mined for a vertical distance of at least 20 meters beneath the base of the coal seam;
12. The submittee has included the King 4, 5, and 6 approved (by MSHA) ventilation plans as appendices III-2, 3, and 4 in Volume I. Some of the prints are not legible and the mine map referred to in each plan is missing. Legible mine maps should be submitted as required by 30 CFR 211.10(c)(7)(v).
13. Include in the subsidence narrative a statement that a copy of all the subsidence data collected will be sent to the USGS-CD, Salt Lake City.

14. The State suggests to U.S. Fuel by letter (3rd page) included in appendix III-1 of Volume I that upon completion of the fan site the topsoil be redistributed and promptly seeded. Regulation 30 CFR 75.300-2(f) states, "The area surrounding all main fans should be kept free of flammable material for at least 100 feet in all directions. The company stated by letter dated August 1, 1980, that they will comply.

15. In volume I the plan exhibits III-6A, 6B, 7A, 7B, 8A, 9, and 10 have columnated the workings in most instances. There are some areas that have not and this will increase the potential for adverse interaction as mining progress. The USGS-CD is to be consulted and involved where the adverse interaction may affect Federal coal resources.


Jackson W. Moffitt

cc: Denver
U.S. Fuel Co., Salt Lake
McKean (2 copies)

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

Received 10/25/82
from OSM MB

UT0006

2820

July 23, 1981



John Nadolski
OSM - Reclamation & Enforcement
Brooks Towers - 1020 15th Street
Denver, Colorado 80202

Dear Mr. Nadolski:

The Forest Service has received and reviewed the application for a permit by U.S. Fuel Company for their King Mines. The comments are attached.

If there are any questions, please contact us.

Sincerely,

W. R. Balay

for
REED C. CHRISTENSEN
Forest Supervisor

Enclosure

U.S. FUELS

III - 15

"720 acres are held under Federal Consolidated lease No's. U-026583 and U-058261." The acreage should be 1,000 according to another section of the plan.

IV - 5, IV - 6

"The affect of the mining operation on land use is expected to be negligible...." A detailed monitoring program will provide the information as to the effects of mining on present land use, and it will take an unspecified time.

VI - 3

"These faults have displacements of up to 250 feet, and mark the western limit of the past USF mining." What will be the anticipated effects to the present mining plan for the permit area?

VII - 4

".... quality data for 10 springs in and near the mine plan area." What parameters were used to determine which springs would be monitored? What are the geologic and hydrologic conditions of each spring? Are they all within the same hydrologic system? Are some perched aquifers, fault related, confined aquifer, etc.?

VII - 8

"Table VII - 3" - Alkalinity should be added to the sampling schedule.

XII - 4

"No surface structures occur within the permit area and, therefore, no methods are needed for mitigation of subsidence effects." Roads, fences, culverts, etc., are surface structures which need to be repaired irrespective of how they are damaged, including subsidence.

The plan does not address post-mining reclamation. This is a necessary portion of the plan.

The proposed hydrologic monitoring system for water quality appears adequate. The data and results needs to be sent to the Forest Service annually.

The plan should include a pre-mine disturbance map and an anticipated post-mining map that have contour intervals of 10'. A scale of 1" = 100' and a contour interval of 50' is too general.

October 22, 1982

Memo to Coal File:

RE: U. S. Fuel Company
Hiawatha Complex
King VI Conveyor Deer Crossing
ACT/007/011
Carbon County, Utah

On October 20, 1982, Mary Boucek and Pam Grubaugh-Littig of the Division met with Larry Dalton, UDWR, to discuss the potential barrier created by the King VI conveyor and the status of the "deer crossing" as it currently appears. After this meeting, the above people went to Hiawatha and met with Chuck Jahne and John Rice (BioWest, consultant to Sharon Steel). Larry Dalton and Mary Boucek made measurements of the ground to lowest conveyor belt distance along the entire length of the conveyor at about 160 points; they then measured the ground to electrical conduit pipe distance along the length of the conveyor at about 50 points. It tentatively appears that the conveyor has not been built according to the approved plan and Mr. Jahne was informed that a problem exists here, that being that the conveyor is a barrier to deer. Ground to lowest conveyor structure distance (vertical) appeared to average about 24" and the approved design stated it would average 3' 8 1/8". The electrical conduit pipe appeared to average about 12"-14" from ground to top of structure and this conduit does not appear on any of the approved drawings. Mule deer tracks were observed paralleling the conveyor and it appeared from several tracks that unsuccessful attempts to cross under the conveyor had occurred. At one point, two deer had crossed under the conveyor (and apparently over the conduit) but from their tracks, it appeared that they did so hesitantly. When Mr. Jahne was informed that the conveyor was not built according to the approved plan, he agreed. Mitigative action discussed on-site included:

1. Raising the conveyor at certain points.
2. Raising the electrical conduit pipe.
3. Removing small sections of a guardrail which closely parallels the west end of the conveyor for about 800-1,000 feet.

It is the opinion of Mr. Dalton and Ms. Boucek that the "deer crossing" as currently constructed is superfluous and that if the remedial actions outlined in 1, 2 and 3 above are undertaken, the barrier situation will probably be alleviated and will supercede the need for "deer crossings." No deer tracks were observed in the immediate vicinity of the "deer crossing," indicating it had not been recently used and may not be correctly placed to maximize deer-crossing use. Mr. Jahne was informed that U. S. Fuel Company should not specifically revegetate the "deer crossing" and that remedial actions as outlined above will need to be implemented.

MEMO TO COAL FILE
ACT/007/011
October 22, 1982
Page 2

Larry Dalton will analyze the measurement data collected and make recommendations to the Division in the very near future. In the meantime, Mary Boucek will discuss this situation with Sandy Pruitt and decide what approach the Division will take to correct the situation.

MARY M. BOUCEK
RECLAMATION BIOLOGIST

cc: Larry Dalton, DWR
Chuck Jahne, Sharon Steel
Bob Eccli, U. S. Fuel Company
Sandy Pruitt, DOGM
Wayne Hedberg, DOGM
Tom Portle, DOGM
Joe Lyons, DOGM
Doug Maier, DOGM

MMB/btb

Statistics:

Vehicle: #EX 45428--321 miles
Per Diem: 2 people @ \$43.71 each = \$87.42
Grant: A & E

Tom,

Sorry for the delay in getting these numbers to you.
I ran them two or three times - depending on the test,
and had to schedule them accordingly.

Thanks for your patience

Don

ACT 100764

RECEIVED

OCT 08 1982

DIVISION OF
OIL, GAS & MINING

September 16, 1982

State of Utah
Natural Resources & Energy
oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84144

RECEIVED
SEP 17 1982

attention: Thomas Munson, Reclamation Hydrologist
DIVISION OF
OIL, GAS & MINING

Dear Tom:

I am enclosing 3 copies of Sharon Stul Corp. drawing no. EFC-133-RB-3 for your review. This drawing illustrates the use of a 12" dia. primary discharge pipe with its accompanying oil skimmer - which can also act as a trash screen. At the inlet to the 12" dia. pipe is a 1/4" thick plate - 4" high to act as a root/breaker.

I have also increased the size of the spillway from that shown on No. 2 of the same drawing due to the following calculation:

Using notations from the data you sent me from the OSM Technical Manual, and based on the concept that there is a volumetric difference between the 25 yr. - 24 hr. event and the 10 yr. - 24 hr. event I determined the following:

$$\Delta Q_{(25-10)} = 1.62 - 1.31 = 0.31$$

$$Q_p(\text{spillway}) = 484 \times 0.004 \times 0.31 \div 0.017 = 35.3 \text{ FT}^3/\text{SEC.}$$
$$Q = C \times L \times H^{1.5} \quad \text{TABLE 6.9 } C = 3.08 \text{ (WIDE CRESTED WEIR)}$$
$$35.3 = 3.08 \times L \times 0.9^{1.5}$$

(2)

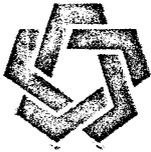
$$L = 35.3 \div 3.08 \times 0.9^{1.5} = 13.42 \text{ FT.}$$

Earlier in the week, I arrived at a width of 14'-0" using a flow velocity of 5.4 fps which is determined on my earlier calculation sheets.

I hope the above meets with your approval.

Very truly yours,

Charles J. John



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

September 13, 1982

Mr. Charles Jahne
Environmental Engineer
Sharon Steel Corporation
19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111

RE: King VI Sediment Pond
Modification
Hiawatha Complex
ACT/007/011
Carbon County, Utah

Dear Mr. Jahne:

As per our telephone conversation of September 13, 1982, I am sending you the following information on drop inlet spillways.

Wayne Hedberg and myself feel that a 12-inch riser would be adequate design for your sediment pond. I tried to choose what I felt would be some example designs. I hope this information will help you design your outlet structure and answer any questions you might have.

If you need any more assistance, please do not hesitate to give me a call.

Thanks for your patience in regards to this matter and hope things can now proceed smoothly.

Sincerely,

Thomas Munson

THOMAS MUNSON
RECLAMATION HYDROLOGIST

TM/btb

Enclosures



September 10, 1982

Memo to Coal File:

RE: U.S. Fuel
Hiawatha Complex Company
ACT/007/011
Carbon County

On August 30, 1982 Division representatives Mary Boucek, Wayne Hedberg, Tom Munson, and Tom Portle visited the above mentioned operation. They were accompanied by Bob Eccli, Chuck Jahne, and Jean Semborski of U.S Fuels. The purposes of the meeting were twofold: 1) to determine the depth of soil removal attendant to the lower King VI sediment pond (abatement work for NOV #82-2-5-1); 2) to view the possible portal locations associated with the proposed Mohrland mine.

Soil samples were taken from two loations in the region associated with the pond expansion (10 feet east of current embankment and about 45 feet east of embankment, north of the Douglas Fir Tree). Samples were taken at intervals to a depth of approximately 30 inches. Samples were submitted on September 1, 1982 for analysis of EC, pH, N, P, K and OM.

The Lambs trailer location was evaluated and determined to be a feasible location for the storage of topsoil generated in association with this development. The operator was encouraged to remove at least 3 feet and up to 5 feet of soil to offset the topsoil deficiency associated with the King VI Mine. He was favorable to this idea.

In addition, the potential soils borrow area north of Miller Creek was viewed by Division personnel.

With regard to the Mohrland site, it appeared that the lower portal location (the operators preferred location) was the more suitable site for the portal location.

Problems were discussed regarding the access road and stream crossing. These remain to be resolved.

MEMO TO COAL FILE
ACT/007/011
September 10, 1982
Page Two

Finally, a general tour of the operational pads of King 4, 5, and 6 was conducted to familiarize new division staff with the operation.

THOMAS L. PORTLE *TLP*
RECLAMATION SOILS SPECIALIST

cc: Mary Boucek, OGM
Wayne Hedberg, OGM
Chuck Jahne, Sharon Steel
Tom Munson, OGM
Tom Portle, OGM
Sandy Pruitt, OGM

TLP:sc

UNITED STATES FUEL COMPANY

SUBSIDIARY OF SHARON STEEL CORPORATION • AN **NVE** COMPANY
NINETEENTH FLOOR UNIVERSITY CLUB BUILDING
136 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

September 9, 1982

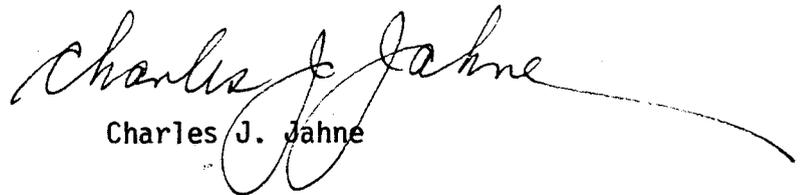
State of Utah
Natural Resources & Energy
Oil Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attention: Wayne Hedberg, Reclamation Hydrologist

Dear Wayne:

This letter transmits the revised design of the sedimentation pond for the King VI 42" Overland Conveyor Belt Project in the South Fork Canyon of Miller Creek. I believe the new calculations and the revised drawing accommodate the requirements imposed upon U. S. Fuel Company at the field visit on August 30, 1982 and stated in your letter of August 27, 1982. I believe they also address the many questions asked by Tom Munson in the past three weeks.

Very truly yours,


Charles J. Jahne

CJJ:ms
Encls.

RECEIVED
SEP 09 1982

DIVISION OF
OIL, GAS & MINING



PROPOSED
SPECIFICATIONS FOR REBUILDING OF
SEDIMENTATION POND

King VI Mine Overland Belt
South Fork Miller Creek Canyon
Hiawatha, Utah

GENERAL:

The present sedimentation pond for the King VI Overland Belt Project must be rebuilt due to the possibility of unstable side and end banks, incorrectly arranged primary overflow and secondary spillway and the possibility of continual sloughing of dirt from the south bank into the stream bed of the South Fork of Miller Creek. The South Fork of Miller Creek is an ephemeral stream which flows annually between the months of March to November. It receives water from the surrounding South Fork Canyon watershed.

It is the intention of this specification that (1) the banks of the rebuilt sedimentation pond be stable, (2) the sloughing problem be corrected and (3) the primary overflow be situated below the discharge level of the secondary spillway.

SCOPE OF WORK:

1. The present sedimentation pond is to be extended in an eastward direction some 200 feet (from the top of the present east bank to the toe of the new east bank). Approximate grade elevation at this point is 7708 A.S.L. The new pond will parallel the South Fork Canyon Road and the outslopes of the new south bank are to be about 3'-0" back from the edge of the existing fall to the creek bed. NOTE: All new banks, either installed or as a result of re-construction of existing banks are to be installed with upstream and downstream slopes of 1v:3h.
2. Remove the vegetation that is in existence between the present east bank and the location for the new pond east bank. The resulting trash is to be burned at the site of the work.
3. Remove 60" of topsoil from the vegetation-cleaned area and store it atop the existing topsoil pile located at W-5700, S-1700 shown on Drawing EFC-133-R3. This area is noted as "Lamb's Trailer Area."
4. Construct a run-off ditch around the new topsoil pile resulting from (3) above. For further information see Amendment No. 1.
5. Compact perimeters of area resulting from (1) and (3) above where the new east and south banks for the sedimentation pond will stand.

6. Using fill dirt stored at the junction of the South Fork Canyon and Middle Fork Canyon roads begin construction of the new pond east bank.

NOTE:

An estimated quantity of 1416 cu. yd. of dirt will be required for the pond expansion. About 450 cu. yd. is stored at the junction noted above.

7. Pump out the existing sedimentation pond so as to allow the east and south banks to dry out as much as possible. Allow 10 days for the banks to dry out. (Deliver the water generated by the pumping to slurry pond No. 1 north and east of the tipple.) See Ammendment No. 2.

8. Excavate area resulting from (1) and (3) above so as to provide a bottom of pond elevation of 7710 A.S.L. Apply excavated dirt to east and south sides of new pond area as banks.

9. Remove existing pond east bank and use dirt in the construction of the pond extension.

NOTE:

An estimated quantity of 400 cu. yd. of dirt constitutes the existing east bank.

10. Excavate as necessary to provide a bottom of pond profile as shown on Drawing EFC-133-R8-1.

11. Reconstruct the entire existing south bank of the present sedimentation pond. The following is to be accomplished:

- A. Retrieve all of the excavated and loose dirt that is on the outslope of the existing south bank.
- B. Retrieve all of the excavated and loose dirt on the top of the existing south bank.

NOTE:

It is difficult to determine the quantity of excavated dirt that has been placed on the present south bank outslope. It is estimated at between 25 and 40 cu. yd. Retrieval to original or natural grade is the goal of (A) and (B) above. (Dirt retrieved from the outslopes and top of the existing south bank may be used in the construction of the pond extension.)

- C. Remove the 4" diameter primary overflow pipe, re-constitute the excavated bank and relocate the pipe at the elevation and location shown on Drawing EFC-133-R8-2.

- D. Rebuild the existing south bank of the sedimentation pond to correspond to the shape and depth of the pond shown on Drawing EFC-133-R8-2.

12. Reconstruct the existing west bank of the existing sedimentation pond. The following to be accomplished:

- A. Retrieve all excavated and loose dirt that is on the out-slope of the existing west bank.
- B. Retrieve all of the excavated and loose dirt on the top of the existing west bank.
- C. Use dirt accumulated from (A) and (B) above as fill dirt at the west end of the new pond.

NOTE:

No estimate of the excavated or loose dirt on the west bank has been made, since it is intended to be used as fill for the west end of the new pond.

13. Rip-rap the area of the pond under the 24" diameter corrugated galvanized steel pipe, as well as the inlet and discharge of the secondary spillway at the east end of the pond and the 4" diameter pipe discharge.

14. Compact the new banks and the re-constructed existing banks to a 90% proctor as the banks are developed.

AMMENDMENTS TO PROPOSED SPECIFICATIONS

- 1. In addition to the run-off ditch, the resulting, topsoil pile is to be seeded in keeping with the Interim Soils Control Plan.
- 2. The Contractor must be aware that there may be a need to pump out water and possibly to sand bag dike or to construct emergency dikes in any gaps in the pond banks during construction. This may be necessary in order to prevent excessive solids from entering the adjacent stream.

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR SEDIMENTATION POND

PLANT HIAWATHA SHEET NO. 1 OF 5

JOB KING VI 42" OVERHEAD BELT R-1

COMPUTED BY JARNE DATE 9/8/32

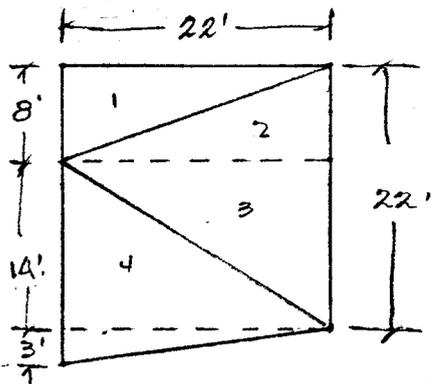
REF. DWG. EPC-133-R8

VOLUME AVAILABLE:

VOLUME NEEDED: $0.6 \times 43,260 = 26,136 \text{ FT}^3$

ASSUME:

VOLUME AT EAST BANK: TOP OF WATER = $7718'-0"$ DEPTH = $8'-0"$



$$V_1 = 0.25 \times 8 \times 22 \times 8 = 352 \text{ FT}^3$$

$$V_2 = 0.25 \times 8 \times 22 \times 8 = 352 \text{ FT}^3$$

$$V_3 = 0.25 \times 14 \times 22 \times 8 = 616 \text{ FT}^3$$

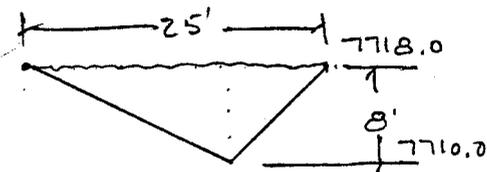
$$V_4 = 0.25 \times 14 \times 22 \times 8 = 616 \text{ FT}^3$$

$$V_5 = 0.25 \times 3 \times 22 \times 1 = 16 \text{ FT}^3$$

$$\underline{1952 \text{ FT}^3}$$

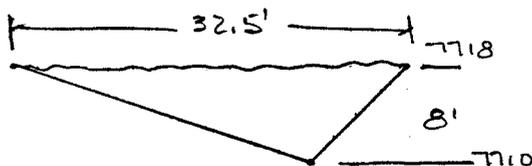
1952 FT³

SECT. (1-2)



$$A_{(1-2)} = 0.5 \times 8 \times 25 = 100 \text{ FT}^2$$

SECT. (2)



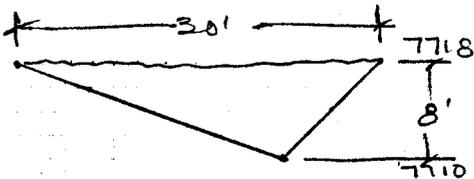
$$A_2 = 0.5 \times 8 \times 32.5 = 130 \text{ FT}^2$$

$$A_{(1-2)-(2)} = (100 + 130) \div 2 = 115 \text{ FT}^2$$

$$V_{(1-2)-(2)} = 115 \times 8 = 920 \text{ FT}^3$$

920 FT³

SECT. (3)



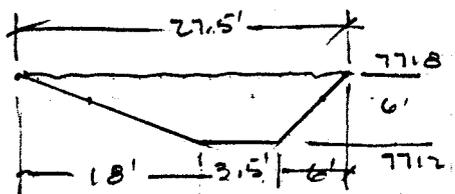
$$A_3 = 0.5 \times 8 \times 30 = 120 \text{ FT}^2$$

$$A_{2-3} = (130 + 120) \div 2 = 125 \text{ FT}^2$$

$$VOL_{2-3} = 125 \times 40 = 5000 \text{ FT}^3$$

5000 FT³

SECT. (4)



$$A_4 = 2.5 \times 6 + 0.5 \times 6 \times 24 = 93 \text{ FT}^2$$

$$A_{(3)-(4)} = (120 + 93) \div 2 = 106.5 \text{ FT}^2$$

$$VOL_{(3)-(4)} = 106.5 \times 40 = 4260 \text{ FT}^3$$

4260 FT³

12832 FT³

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR SEDIMENTATION POND

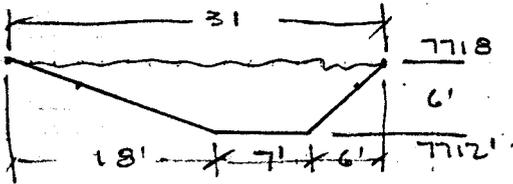
PLANT HIRWATHA SHEET NO. 2 OF 5

JOB KING II 42" OVERLAP, PLOT 121

COMPUTED BY JANNE DATE 9/8/82

REF. DWG. ERC-133 12-8

SECT 5:



$$A_5 = 7 \times 6 + 0.5 \times 6 \times 24 = 114 \text{ FT}^2$$

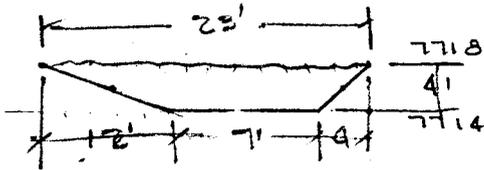
$$A_{4-5} = (114 + 93) \div 2 = 103 \text{ FT}^2$$

$$V_{4-5} = 103 \times 40 = 4140 \text{ FT}^3$$

12,852 FT³

4,140 FT³

SECT 6:



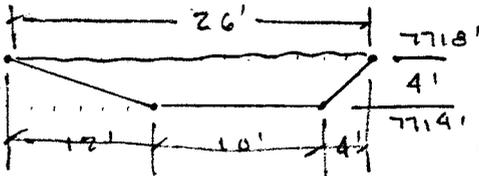
$$A_6 = 7 \times 6 + 0.5 \times 6 \times 16 = 90 \text{ FT}^2$$

$$A_{5-6} = (114 + 90) \div 2 = 102 \text{ FT}^2$$

$$V_{5-6} = 102 \times 50 =$$

5,100 FT³

SECT 7:



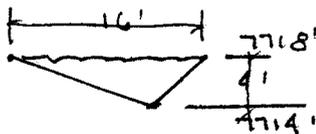
$$A_7 = 10 \times 4 + 0.5 \times 16 \times 4 = 72 \text{ FT}^2$$

$$A_{6-7} = (90 + 72) \div 2 = 81 \text{ FT}^2$$

$$V_{6-7} = 81 \times 60 = 4860 \text{ FT}^3$$

4,860 FT³

SECT. (7-8):



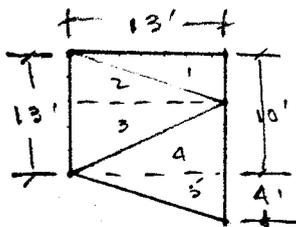
$$A_{7-8} = 0.5 \times 16 \times 4 = 32 \text{ FT}^2$$

$$A_{(7)} (7-8) = (72 + 32) \div 2 = 52 \text{ FT}^2$$

$$V_{(7)} (7-8) = 52 \times 37 = 1924 \text{ FT}^3$$

1,924 FT³

WEST BANK:



$$V_1 = 0.25 \times 13 \times 4 \times 4 = 52 \text{ FT}^3$$

$$V_2 = 0.25 \times 13 \times 4 \times 4 = 52 \text{ FT}^3$$

$$V_3 = 0.25 \times 13 \times 6 \times 4 = 78 \text{ FT}^3$$

$$V_4 = 0.25 \times 13 \times 6 \times 4 = 78 \text{ FT}^3$$

$$V_5 = 0.25 \times 4 \times 13 \times 1 = 13 \text{ FT}^3$$

266 FT³

Total Available = 29,142 FT³

Volume Used = 26,136

EXCESS = 3006 FT³

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR SEDIMENTATION PONDPLANT ALUMINA SHEET NO. 3 OF 5JOB KING T 42" OVERLAND BELT R1COMPUTED BY JANIE DATE 9/8/82REF. DWG. ERC-133-168DETERMINE SURFACE AREA:

$$A_{ENT BK} = 22 \times 22 + 0.5 \times 3 \times 22 = 517 \text{ FT}^2$$

$$A_{(1-2)-(2)} = 25 \times 18 + 0.5 \times 7.5 \times 18 = 517 \text{ FT}^2$$

$$A_{2-3} = 30 \times 40 + 0.5 \times 2.5 \times 40 = 1250 \text{ FT}^2$$

$$A_{3-4} = 27.5 \times 40 + 0.5 \times 2.5 \times 40 = 1150 \text{ FT}^2$$

$$A_{4-5} = 27.5 \times 40 + 0.5 \times 3.5 \times 40 = 1170 \text{ FT}^2$$

$$A_{5-6} = 23 \times 40 + 0.5 \times 8 \times 40 = 1080 \text{ FT}^2$$

$$A_{6-7} = 23 \times 40 + 0.5 \times 3 \times 40 = 980 \text{ FT}^2$$

$$A_{7-(1-8)} = 16 \times 37 + 0.5 \times 10 \times 37 = 777 \text{ FT}^2$$

$$A_{LEFT BK} = 10 \times 13 + 0.5 \times 4 \times 13 = 152 \text{ FT}^2$$

$$\text{Area Available} = 7597 \text{ FT}^2$$

$$\text{Area Req'd} = 2036$$

$$\text{EXCESS} = 5561$$

DETERMINE ELEV. OF SPILLWAY:

$$\text{ASSUME MEAN LENGTH} = 340 \text{ FT}$$

$$\text{MEAN WIDTH} = 7597 \div 340 = 22.34 \text{ FT.}$$

$$\text{EXCESS WATER STORAGE} = 3006 \text{ FT}^3$$

$$\text{MEAN DEPTH TO LOWER SPILLWAY} =$$

$$H = 3006 \div 340 \times 22.34 = 0.395 \text{ FT.} = 4\frac{3}{4}''$$

$$\text{SPILLWAY ELEVATION} = 7718.0 - 0.395 = 7717.6 \text{ FT.}$$

$$\begin{array}{r} 7719.5 \\ - 7717.6 \\ \hline 1.9 \text{ FT.} \\ - 1.0 \\ \hline 0.9 \text{ FT.} \end{array}$$

DETERMINE SPILLWAY SIZE:

$$P(257R) = 2.60'' \quad P(104R) = 2.25'' \quad P_{\text{SPILLWAY}} = 0.55''$$

$$A = 125,000 \text{ FT}^2 \quad CN = 90 \quad L = 250 \quad S = 26.39$$

$$S = (1000 \div CN) - 10 = (1000 \div 90) - 10 = 1.11''$$

$$Q = (P - 0.25)^2 \div (P + 0.85) = (0.55 - 0.25 \times 1.11)^2 \div (0.55 + 0.85 \times 1.11) = 0.075''$$

$$L = [(L)^{0.8} + (S+1)^{0.7}] \div 1900 \sqrt{S} \cdot [(250)^{0.8} \times (1.11+1)^{0.7}] \div 1900 \sqrt{26.39} = 0.014 \text{ HRS.}$$

$$T_p = 1.17 L = 1.17 \times 0.014 = 0.017 \text{ HRS.}$$

$$A_H = 125,000 \div 43,560 \times 640 = 0.004 \text{ SQ. MI.}$$

$$Q_p = 484 \times A_H \times Q \div T_p = 484 \times 0.004 \times 0.075 \div 0.017 = 8.54 \text{ FT}^3/\text{SEC.}$$

$$\text{TOP OF DIKE} = 7719.5' \quad \text{FREEBOARD} = 1'-0'' \quad \text{TOP OF SPILLWAY FLOW} = 7718.5'$$

$$\text{BOTTOM OF SPILLWAY} = 7717.6 \quad \text{SPILLWAY DEPTH} = 0.9 \text{ FT.}$$

$$\text{ALLOW 50\% FOR VELOCITY HEAD} = 0.5 \times 0.9 = 0.45 \text{ FT.}$$

$$V = \sqrt{2 \times 64.4 \times 0.45} = 5.38 \text{ FT/SEC.}$$

$$\text{SPILLWAY AREA} = 8.54 \div 5.38 = 1.59 \text{ FT}^2 \quad \text{Dim} = 42'' \times 5\frac{1}{2}''$$

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR SEDIMENTATION POND

PLANT HARWITKA SHEET NO. 4 OF 5

JOB KING VI 42" OVERLAND BELT

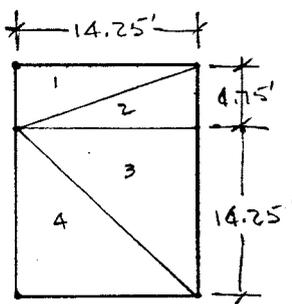
COMPUTED BY JAHNE DATE 9/8/82

REF. DWG. ERC-133-P8

SEDIMENTATION STORAGE VOLUME:

VOLUME NEEDED = $0.286 \times 43,520 \times 0.6 = 7476 \text{ FT.}^3$
 ASSUME DEPTH = 4.75' MAX = 7714.75' A.S.L.

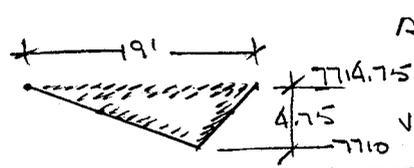
VOL. @ EAST BANK:



$V_1 = 0.25 \times 14.25 \times 4.75 = 80 \text{ FT.}^3$
 $V_2 = 0.25 \times 14.25 \times 4.75 = 80 \text{ FT.}^3$
 $V_3 = 0.25 \times 14.25^2 \times 4.75 = 241 \text{ FT.}^3$
 $V_4 = 0.25 \times 14.25^2 \times 4.75 = 241 \text{ FT.}^3$
642 FT.³

642 FT.³

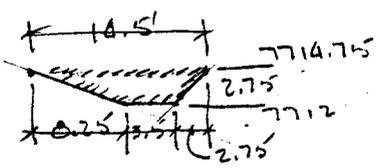
SECT. (1-2) = (2) = (3)



$A_{(1-2)} = 0.5 \times 4.75 \times 19 = 45 \text{ FT.}^2$
 $VOL (1-2) - (3) = 45 \times 58 = 2610 \text{ FT.}^3$

2610 FT.³

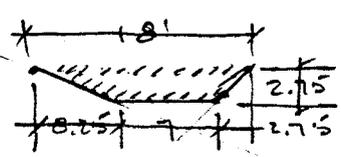
SECT (4) =



$A_4 = 3.5 \times 2.75 + 0.5 \times 11 \times 2.75 = 25 \text{ FT.}^2$
 $VOL_{3-4} = 45 \times 40 = 1800 \text{ FT.}^3$

1800 FT.³

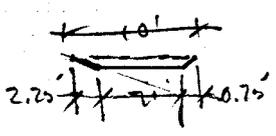
SECT. (5) =



$A_5 = 7 \times 2.75 + 0.5 \times 11 \times 2.75 = 34 \text{ FT.}^2$
 $A_{4-5} = (34 + 25) \div 2 = 30 \text{ FT.}^2$
 $VOL_{4-5} = 30 \times 40 = 1180 \text{ FT.}^3$

1180 FT.³

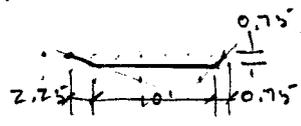
SECT. (6) =



$A_6 = 7 \times 0.75 + 0.5 \times 3 \times 0.75 = 6 \text{ FT.}^2$
 $A_{5-6} = (34 + 6) \div 2 = 20 \text{ FT.}^2$
 $VOL_{5-6} = 20 \times 50 = 1000 \text{ FT.}^3$

1000 FT.³

SECT. (7) =



$A_7 = 10 \times 0.75 + 0.5 \times 3 \times 0.75 = 9 \text{ FT.}^2$
 $A_{6-7} = (6 + 9) \div 2 = 7 \text{ FT.}^2$
 $VOL_{6-7} = 7 \times 60 = 450 \text{ FT.}^3$

450 FT.³
7682 FT.³

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR SEDIMENTATION POND

PLANT HARWYNA SHEET NO. 5 OF 5

JOB KING 11 62" CIRCUMF. BELT R1

COMPUTED BY JANNE DATE 9/8/82

REF. DWG. EPC-133-128

SED. STAGE VOL. (CONT'D.):

176827

SECT (1-8)

$A = 0.5 \times 3 \times 0.75 = 1 \text{ FT}^2$

$A(1-8) = (9+1) \div 2 = 5 \text{ FT}^2$

$\text{VOL}(1-8) \times 11 = 5 \times 37 = 185 \text{ FT}^3$

185 FT³

TOTAL SED VOL. = 7867 FT³

DETERMINE QUANTITY OF TOPSOIL STORED:

ASSUMPTIONS:

ESTIMATE MEAN ELEV. - SECTIONS (5) → (1-2) AT GRADE =

(5) - EL. 7717.0

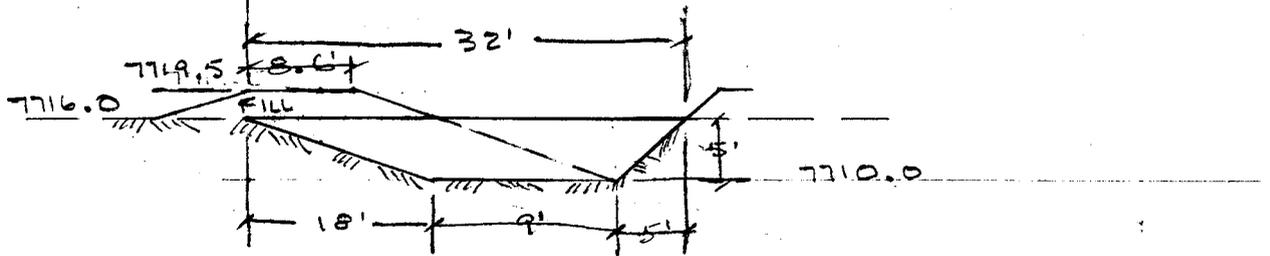
(4) - EL. 7716.5

(3) - EL. 7716.0

(2) - EL. 7715.0

(1-2) EL. 7714.0

MEAN = $(5.7 \times 31.6) = 7716.0$



ESTIMATE MEAN WIDTH @ 7716.0 A.L.S. BY MEASUREMENT:

(5) - 44' (4) - 36' (3) - 38' (2) - 40' (1-2) - 0 MEAN = $31.6 \times 32'$

ESTIMATE MEAN LENGTH - USE 165' SEC (5) → SEC (1).

ESTIMATED VOLUME =

$(9 \times 5 + 0.5 \times 23 \times 5 \times 165) \div 27 = 626 \text{ CU. YD. TOPSOIL.}$

ESTIMATED PILE SIZE = $626 \times 27 \div 75 \times 30 \times H$

$H = 7' - 6" \pm$



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

August 27, 1982

Mr. Charles Jahne
Environmental Engineer
Sharon Steel Corporation
19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111

RE: King VI Sediment Pond
Modification
Hiawatha Complex
ACT/007/011
Carbon County, Utah

Dear Mr. Jahne:

The revised plan for reconstruction of the King VI loadout sedimentation pond has been reviewed by the Division's staff. The majority of the items outlined in our June 21 letter have been addressed. However, the revised plan cannot be approved until the following items of noncompliance are corrected. Each item will be listed according to the numbered sequence as referred to in our June 21 letter.

- (1)* The applicant states that approximately 18 inches of material may be available and suitable as plant growth medium. No reference is made as to how this depth determination was made. The calculations presented on page 2 of 8 of the applicant's July 9 letter are correct as applicable to the 18 inch depth. However, there is still some question as to just what depth of suitable material is available.

The Division has scheduled an August 30 meeting on-site to clarify discrepancies in assessment of a suitable strippable depth.

- (2)* The applicant has committed to protecting the topsoil stockpile "in keeping with the Interim Soil Control Plan." The applicant also plans to stockpile the stripped soil material at the existing stockpile at Lamb's Trailer area. There may be some minor problems with this proposal. These can hopefully be solved at the on-site meeting August 30.

- (3)* Applicant proposes to remove the stored 450 yd³ of fill dirt recovered from the previous excavation activities at coal stockpile and truck loadout area, and utilize it in the embankment construction. This proposal will probably be acceptable, however, the Division wishes to discuss and assess the potential for acquiring additional fill material from the disturbed "borrow area" on-site with the operator on August 30th.
- (4)* There is a contradiction in the applicant's proposal which concerns the amount of topsoil/suitable growth supporting medium to be salvaged from the area of proposed pond expansion.

On page No. 1, item 3 and page 2 of 8 of the calculations of the "Proposed Specifications for Rebuilding of Sedimentation Pond," the applicant proposes to remove 18 inches of topsoil from the vegetation-cleaned area.

On page 3 of the volume requirement calculations, the applicant designates only six inches of fill material to be removed and stored in the topsoil stockpile area. This discrepancy will require clarification. This item may be resolved at the on-site meeting as well.

- (5)* Applicant has proposed an amendment to the original plan of pumping the existing pond water out and transmitting it to the #1 slurry pond. This new amendment appears to eliminate the proposal for pumping of the pond and routing via slurry pond #1.

The amended proposal on page 3, #2 which outlines possible pumping of pond water to the adjacent stream channel, if dry, is not entirely acceptable. This proposal may be approved if the operator can demonstrate that any discharge to the downstream receiving waters will be in compliance with the applicable State and/or Federal effluent standards.

- (6) The applicant's calculations demonstrate that the pond will be both of adequate size and have sufficient storage volume to handle the volume of sediment and runoff excepted from the design storm (10-year, 24-hour). The calculations are somewhat conservative in this regard. Sediment storage is 0.286 acre-feet and runoff storage is 0.313 acre-feet which is approximately 26,136 ft³. Since the applicant used conservative calculations, the pond should meet effluent limitations if these plans are adhered to during construction.

- (7) The applicant did not respond to how removal of sediment would occur, but after conversing with Charles Jahne, he stated that the information could be found in their December 5, 1980 report. This report states that, once sediment has accumulated to the bottom of the four inch pipe, it will be hauled to an existing slurry pond located at the Hiawatha, Utah, site. All existing sedimentation ponds at the Hiawatha site are emptied of sediment in this fashion. Each has its own discharge monitoring system and water drainage arrangement. Each of these systems and arrangements is included in NPDES discharge permit UT-0023094 and it is one of the intentions of this report that this new sedimentation pond be added to the coverage provided in the above permit.

A stake will be used to mark the maximum sediment storage level on the east pond bank. This will indicate when the sediment should be cleaned from the pond.

- (8) The applicant's design changes have relocated the discharge point for the primary overflow pipe which should result in increased detention time and avert any short-circuiting problems.
- (9) Based on the calculations, the applicant has presented, the pipe should adequately pass the 10-year, 24-hour event without having any discharge from the emergency spillway. However, see item #10 following.
- (10)* The applicant has not addressed the design deficiency previously noted in the June 21 letter concerning UMC 817.46(i). This regulation requires a minimum of one foot between the primary and emergency discharge points.

The applicant's designs depict an approximately two inch difference in elevation between these two discharge points (7718.5 ft-primary vs. 7718.66 ft-emergency). The designs must be modified to demonstrate compliance with UMC 817.46(i).

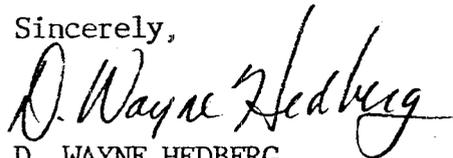
- (11) The new design clears up the problem of inadequate freeboard design. The applicant's calculations show a 4.1 inch depth of water passing through the emergency spillway during the 25-year, 24-hour event. This leaves approximately 1.0 foot of freeboard on the dike which meets with regulations UMC 817.46(j) requirements.
- (12) The applicant's latest design drawing and cross-section of the principal discharge pipe delineates two anti-seepage, cutoff collars as recommended.

Mr. Charles Jahne
ACT/007/011
August 27, 1982
Page 4

- (13) The applicant's June 28, 1982 submission of Interim and Final Revegetation Plans for the South Fork Canyon, includes the contemporaneous revegetation plans of the disturbed areas and pond embankments created during construction activities.

The 90-day abatement deadline for the resultant NOV #1 (N82-2-5-1) is September 3, 1982. The items identified with an asterix must be corrected by this date. If you have any questions pertaining to these requirements, please contact myself or Sandy Pruitt of the Division staff. Thank you for your cooperation in this matter.

Sincerely,



D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

DWH/btb

cc: Shirley Lindsay, OSM
Jim Smith, DOGM
Sandy Pruitt, DOGM

FILE ACT 007/011

SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

August 23, 1982

RECEIVED
AUG 25 1982

**DIVISION OF
OIL, GAS & MINING**

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attention: Mr. Tom Munson, Hydrologist

Gentlemen:

I just wish to run through my thinking relative to the method used to arrive at a cross-sectional area for the spillway at the King VI Mine 42-inch Overland Belt Sedimentation Pond.

First, I arrived at a flow rate of 8.54 cu. ft./sec. as shown on page 8 of 8 of my calculations done on 7-7-82.

Next, I wanted to determine some area, and assumed a flow velocity of 10 fps.

Referring to a book entitled "Elements of Hydraulics" by S. E. Slocum, published in 1915, page 104 of which I have copied and attached, I chose a half square open channel as the type of opening for the spillway. I was attempting to find an area for the spillway. From page 42, I developed the following:

$$A = 2R^2$$
$$w.p. = 4R \text{ (Wetted Perimeter)}$$
$$r = R \div 2 \text{ or } R = 2r$$

$$\text{then: } A = 2 (2r)^2 = 2 (4r^2) = 8r^2$$
$$\text{hence: } qp = 8 Vr^2 = 8.54 = 8 \times 10 \times r^2$$

and the answer: $r = 0.33$ (I used "R" in my calculations).

Looking at this whole conglomeration, on Friday afternoon, I realized that I "engineered the hell out of the job", and could have just as easily said:

$$qp = A \times V - \text{letting } V = 10 \text{ then } qp = 10 A \text{ then}$$
$$8.54 = 10 A \text{ and } A = 0.854 \text{ sq. ft. and}$$
$$A = 0.854 \times 144 = 123 \text{ sq. in.}$$

Then, I decided to determine the velocity head to move the water at 10 fps:

$$v^2 = 2gh$$
$$\text{then } h = 10^2 \div 2 \times 32.2 = 1.55 \text{ ft.} = 18 \frac{5}{8} \text{ in.}$$

That answer indicated that I would overflow the pond banks before the spillway would take away the water, so, I decided to use the velocity head as the method for determining the spillway area. According to the regulations, I have 12 inches of velocity head space. In that case:

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
Attention: Mr. Tom Munson, Hydrologist
August 23, 1982
Page -2-

$$v = \sqrt{2 \times 32.2 \times 1} = 8 \text{ fps. MAX.}$$

using $5 \text{ fps} = 5^2 = 2 \times 32.2 \text{ h}$ and $h = 0.39 \text{ ft.} = 4 \frac{5}{8}''$

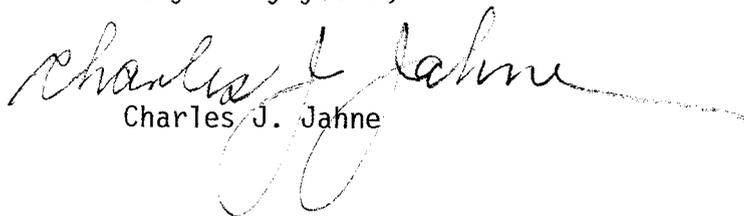
In that case: $q_p = A \times 5$ and $A = 8.54 \div 5 = 1.7 \text{ sq. ft.} = 249 \text{ sq. in.}$

and the dimensions became $4'' \times 62 \frac{1}{4}''$.

If you agree with all of this, I can change the drawing numbered ERC-133 R8 to reflect the above dimensions. Also, if I use a flow velocity of 5 fps, it is no longer necessary to rip-rap the spillway. John Nadolski, of the OSM in Denver, has told me that flow velocity of 5 fps or less doesn't create an erosion hazard.

Have a nice week!

Very truly yours,



Charles J. Jahne

CJJ:jrs

Enclosure

SHARONSTEEL • Mining Division

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

File 407/007/04
Folder #3, 15 maps
AN **NVF** COMPANY

August 4, 1982

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attention: Wayne Hedberg, Reclamation Hydrologist

Gentlemen:

This letter transmits three (3) copies of the Topsoil Plan proposed for the King VI area and revised prints of Drawings ERC-133-R5 and R6 as well as prints of Drawings ERC-133-R9 and R10. The drawings indicate the intended grades and slopes for reclamation of the South Fork Canyon Access Road.

A copy of a letter from BIO/West, Inc. to Sharon Steel responding to questions in your July 9, 1982 letter regarding drill seed rates, seedlings, etc. is also included.

Have a nice day.

Very truly yours,

Charles J. Jahne
Charles J. Jahne

CJJ:jrs

Enclosures

RECEIVED
AUG 05 1982

DIVISION OF
OIL, GAS & MINING



BIO/WEST, Inc.

P.O. Box 3226
Logan, Utah 84321
(801) 752-4202

July 16, 1982

Mr. Charles J. Jahne
Sharon Steel Corporation
19th Floor, University Club Building
136 East South Temple
Salt Lake City, UT 84111

Dear Mr. Jahne:

This letter is in response to the July 9, 1982, letter from Wayne Hedberg of DOGM regarding Stipulation 7-81-2.

1. The drill seeding rate for slopes less than 25% in the final revegetation plan will be the same as the hydroseeding rate--22 lbs/acre of pure live seed.
2. Restoration of natural riparian vegetation will be carried out regardless of Phase I success. This will be accomplished by the transplant of trees and shrubs during Phase II.
3. In the final revegetation plan, tree and shrub transplant stocking rate will depend upon the success of Phase I seeding. To meet the criteria for revegetation success, woody plant density must be about 1500 plants/acre in pinyon-juniper areas. Assuming that Phase I seeding will meet only half of that requirement, an additional 750 woody plants (shrubs and trees) per acre would have to be transplanted. Following the same line of reasoning, about 1000 woody plants per acre would need to be transplanted in riparian areas.

I will incorporate the Division's recommendations regarding the seeding rates into this fall's revegetation plans.

Please contact me if you have any questions or need any additional information.

Sincerely,

John Rice
Vegetation/Soils Section Manager

RECEIVED

JR/nh

AUG 6 5 1982

DIVISION OF
OIL, GAS & MINING



**TOPSOIL PLAN FOR THE
KING VI MINE**

PR-69-2

Prepared by

**John A. Rice
and
William R. Glenn**

**BIO/WEST, Inc.
P. O. Box 3226
Logan, Utah 84321**

Prepared for

**U.S. Fuel Company
136 East South Temple
Salt Lake City, Utah 84111**

U.S. Fuel Purchase Order No. H-16597

July 16, 1982

July 16, 1982

Stipulation 7-81-2

Topsoil Plan

Sediment Pond, Coal Pile, Truck Turnout, and Conveyor Areas

During construction activities at the King VI Mine, topsoil and subsoil were mixed during excavation and backfill activities at the coal pile, truck turnout, and overland conveyor belt areas. During construction of the sedimentation pond, topsoil was re-established on the side walls of the pond. In addition, some topsoil has been stockpiled immediately north of the intersection of the South Fork and Middle Fork roads in the location known as "Lambs Trailer." Chemical and physical analyses of the soils in these areas can be found in Attachment 1.

The quantities and locations of soil materials stored and the quantities estimated to be used for final reclamation have been submitted to Mr. Wayne Hedberg (April 12, 1982). Based on these estimates, final grading will result in a uniform, stable, thickness of about 6-8 inches of topsoil. Topsoil will be redistributed over a scarified surface to reduce slippage at the topsoil/subsoil interface and to promote root penetration. Due to the limited availability of topsoil, it will be necessary to maintain as much of the present physical condition as possible. By working the topsoil at optimum moisture (well below field capacity), compaction and puddling will be minimized. To further reduce the probability of physical deterioration of soil structure and amount of topsoil loss through moving, topsoil will be moved only once, from the stockpile to its final re-topsoiled position. Wooden lathes, or other appropriate markers, will be placed into the subsoil on 100-200'

centers or other appropriate pattern suited for effective monitoring and equipment operation. Markers will be painted to the height at which topsoil is to be replaced. While the topsoil is being replaced, it will be probed to confirm the depth of replacement. Soil samples will be randomly taken during topsoil probing and analyzed to determine nutrient levels in the replaced topsoil. Nutrients and amendments shown to be required by soil analyses will be applied to the redistributed soils during revegetation (see Revegetation Plan). All retopsoiled areas will be seeded the same year topsoil is replaced to achieve rapid vegetative stabilization.

Topsoil stockpiles have been protected from runoff by construction of berms and diversions. During the fall of 1982, stockpiles will be seeded with the mix, rate, and method of application described in the Interim Revegetation Plan. Two thousand pounds per acre of straw mulch will be overlaid with nylon netting to protect the stockpiles from wind and water erosion.

South Fork Road

The South Fork road (surface and bed) will be dismantled and removed. Since no topsoil is available, U.S. Fuel Company proposes to substitute the soil under the road for topsoil. Assuming that soil under the road is similar to that already tested (Attachment 1), the soil should provide a suitable growth medium for plants. The results of Interim Revegetation should demonstrate the feasibility of this substitution. The former road area will be ripped to a depth of about 16 inches, fertilized based upon recommendations of soil tests and revegetated according to the Final Revegetation Plan.

Soil Monitoring Plan

The locations of soil sample sites have been marked with wooden stakes. These sample sites will be monitored at five-year intervals, providing an indication of change in soil parameters over time. In addition, during the first, third, and fifth years, following Interim Revegetation and Final Revegetation, soils will be sampled and analyzed for fertility (N-P-K). This information will be used to formulate fertilizer recommendations to enhance revegetation.

ATTACHMENT 1

**Report on Soils Investigations with Implications
for Revegetation and Reclamation**

by

**William R. Glenn
Certified Professional Soil Scientist**

1.0 Introduction

The U.S. Fuels, King VI mine is located a few miles west of Hiawatha, Utah, in a small canyon. The mine and associated conveyor belt, coal pile area, and truck turnaround at the loadout facility are on the toe of the south-facing slope in the canyon. Native vegetation is a pinyon-juniper community. The soils are formed in colluvium from calcareous sandstone. The toeslope colluvium consists of unsorted water and gravity transported sandy loam material intermixed with sandstone fragments that range from small gravel size to large boulders. No investigations were made on undisturbed soils in the area. An existing soil survey provides that information. All investigations contained in this report pertain to disturbed soil material.

2.0 Objectives and Methods

The objectives of this study are to determine the physical and chemical properties and site characteristics of disturbed soils on cuts, fills, and topsoil stockpiles in order to predict their revegetation potential, the need for soil amendments such as fertilizer to enhance revegetation, and to assist in selecting revegetation and site stabilization methods such as mulching and species selection.

Soil and site features observed in the field consisted of the following:

1. Steepness, length, and shape of slopes
2. Aspect

3. Soil stability
4. Soil structure
5. Soil permeability
6. Soil compaction
7. Coarse fragments
8. Field texture estimates
9. Surface and subsurface drainage characteristics
10. Whether the disturbed soil material was from surface or substratum soil zones.

Samples were collected for laboratory analysis. Characteristics that were analyzed by the Utah State University Soils Laboratory consist of the following:

1. Percent sand, silt, and clay to determine texture
2. Percent calcium carbonate
3. Water soluble sodium and calcium plus magnesium
4. Sodium absorption ratio (SAR)
5. Percent larger than 2 mm
6. pH
7. Electrical conductivity
8. Phosphorus, potassium, and nitrogen
9. Percent organic matter

Note on Laboratory Results

Due to the small sample size (several quarts), and method of sampling for some samples (bucket auger), a good representation of

coarse fragments in the soil was not obtained. The larger size coarse fragments in particular were not included in the samples. Therefore, the interpretation of the laboratory results in this report has generally increased the percentage of coarse fragments to reflect observations made in the field.

The results of the field observations and laboratory analysis have been interpreted for revegetation and erosion control implications through the use of appropriate references and guidelines.

3.0 Site Characteristics and Management Recommendations

3.1 Conveyor Belt - (Lab identification #1 and #2)

What is essentially a road cut and fill has been constructed for the conveyor belt that runs from the mine to the coal pile area. The conveyor belt is located on the inside of the flattened surface and a narrow service road parallels the conveyor belt on the outside edge of the cut and fill.

The cutslope above the conveyor belt is much too steep for revegetation. Slopes are 100 percent to vertical.

The fill slopes along the conveyor will be revegetated. The site and soil characteristics with a discussion of implications are as follows:

1. Steepness of slopes - Slopes are 60 to 75 percent on the few hundred feet of fill that will require the most revegetation effort. The slopes are much too steep to work with equipment. Treatment will have to be by hand or hydroseeding and mulching. The steepness relates to surface erosion and stability discussed below.

2. Length and shape of slopes - The slopes are up to 30 feet in length on the higher fills and range down to a few feet in length on low fills. The slopes are smooth and straight.

3. Aspect - The south aspect is warm and droughty.

4. Surface stability - Some small sloughs and settlement of the fresh fill occurred this spring when the fill was wet. Additional small sloughs and settlement may continue for a few years until the fill stabilizes. Also due to the steepness of the fill, the dry surface tends to "run" when disturbed by any kind of foot or wildlife trampling.

The unstable surface will result in seedlings being torn out or covered and is particularly a problem in the initial seedling establishment years. The surface can be stabilized by anchoring mulch in place.

5. Erosion potential, bare surface - The erosion potential of the higher sections of fill is high with 40 to 60 tons per acre per year of potential soil loss. The potential decreases to a few tons per acre per year on the low fills. The erosion potential can be handled with mulch that is anchored in place.

6. Source of surface soil - The surface soil on the fills is mostly substratum material and perhaps a small amount of topsoil from the natural soils as evidenced by the low organic matter and nutrient levels. The natural soils along the conveyor belt have thin topsoil layers that are seldom more than 6 inches thick.

7. Soil texture - The fill material has sandy loam texture which is favorable for revegetation.

8. Coarse fragments - Sandstone fragments make up about 35 to 50 percent by volume of the fill material. Average fragment content is 25

percent less than 3 inches, 10 percent 3 to 10 inches, and 5 percent larger than 10 inches. The coarse fragments tend to reduce the erosion hazard but also reduce the available water capacity in proportion to their volume.

9. Available water capacity - The available water capacity per foot of soil is about 0.8 to 1.0 inch. In qualitative terms, the soil has a fair water supplying capacity for revegetation.

10. pH and calcium carbonate - The pH is 8.2 to 8.4 and the calcium carbonate percentage is 20.7 to 21.7 percent. The qualitative rating for this level of calcium carbonate is fair for a vegetation growth medium. An effect of the lime and pH is to reduce phosphorus availability.

11. EC and SAR - These measures of salt and sodium are low and indicate no problems.

12. Soil structure - The structure is fine granular or crumb and is favorable for root development.

13. Soil compaction - There is no evidence of compaction in the loose fill material.

14. Soil drainage and permeability - The soils are well drained and have moderately rapid permeability for water. No restrictive layers for water or roots were noted.

15. Soil nutrients - Nitrogen and phosphorus levels are extremely low. Potassium levels are moderate. Fertilizer will definitely need to be added to the soils.

Summary and Management Recommendations - Conveyor Belt

The primary limiting factors for revegetation are steep slopes, erosion hazard on the longer fills, infertility, and moderate water holding capacity.

The soil surface can be stabilized and protected from rapid drying during seedling establishment by mulching. The mulch should consist of 1.5 to 2.0 tons per acre of hay, straw, or hydromulch. A hay or straw mulch would need to be held in place with netting that is stapled into the soil. The netting would need to be cut out to fit around stones and maintain contact with the hay or straw. A considerable amount of labor would be required for proper installation. Hydromulch should be held in place with a tackifier.

Fertilizer will need to be applied to overcome infertility. The initial fertilization at seeding should be 40 to 50 pounds of available nitrogen, 80 to 100 pounds of phosphate, and 40 to 50 pounds of potash per acre. Annual fertilization will be needed for several years during vegetation establishment. The annual refertilization should consist of 30 to 40 pounds of nitrogen and phosphate and about 20 pounds of potash per acre.

3.2 Coal Pile Fill (Lab Identification 3-1 to 3-7 and 4-1 to 4-4)

The largest fill in the project area is on the outside edge of the flat bench that was cut out for the coal pile. Two holes were hand augered into the outside edge of the fill to determine its characteristics with depth. Augering was very difficult due to sandstone

fragments. At hole 3, buried topsoil was reached at the bottom of the hole. At hole 4, augering was stopped by sandstone fragments at 72 inches.

1. Steepness of slopes - Slopes are about 75 percent on most of the coal pile fill, but are undercut to about 100 percent on the south and east sides by the truck turnaround and the access road to the coal pile. These steeper cuts are actually in natural or undisturbed soil with the coal pile fill resting on the top edge of these cuts.

2. Length and shape of slopes - The slopes are about 20 to 30 feet long and are smooth and straight.

3. Aspect - The south and southeast aspect is warm and droughty.

4. Surface stability - Due to the steep slopes, the granular surface soil "runs" when dry, particularly when disturbed by any kind of foot or wildlife trampling. Surface sloughing could also occur if the fill material becomes water saturated.

The unstable surface will result in seedlings being torn out or covered and is particularly a problem in the initial seedling establishment years. The surface can be stabilized somewhat by anchoring mulch in place.

5. Erosion potential, bare surface - The erosion potential on the coal pile fill is high with about 40 to 60 tons per acre per year of potential soil loss. The erosion potential can be reduced by mulch that is anchored in place.

6. Source of surface and subsurface soil in the fill - At hole 3, the upper 72 inches of the fill is dominantly substratum material from the original soils. From 72 to 90 inches, the fill is a mixture of

substratum and surface soil material. From 90 to 108 inches, the fill is dominately surface soil with dark color, and between 108 and 126 inches, original topsoil was encountered. The original soil in this part of the fill is essentially turned upside down.

At hole 4, the upper 18 inches of the fill is a mixture of substratum and surface soil. Below 18 inches and until augering was stopped by rock fragments, the fill material is substratum material from the original soils.

7. Soil texture - The fill material has sandy loam texture which is favorable for revegetation.

8. Coarse fragments - Sandstone fragments make up about 30 to 40 percent of the volume of the fill material. The fragments are mostly less than 3 inches in diameter with lesser amounts of large pieces. The fragments tend to reduce the erosion hazard but also reduce the available water capacity in proportion to their volume.

9. Available water capacity - The available water capacity per foot of soil is about 1.0 to 1.2 inches. In qualitative terms, the soil has a fair water supplying capacity for vegetation.

10. pH and calcium carbonate - The pH is 8.3 to 8.5 and the calcium carbonate percentage is 9.9 to 15.5. The calcium carbonate may limit phosphorus availability.

11. EC and SAR - These measures of salt and sodium are low and indicate no problems.

12. Soil structure - The structure is fine granular or crumb and is favorable for root development.

13. Soil compaction - There is no evidence of compaction in the loose fill material.

14. Soil drainage and permeability - The soils are well drained and have moderately rapid permeability for water. No restrictive layers for water or roots were noted.

15. Soil nutrients - Nitrogen and phosphorus levels at the surface of the fill material is extremely low. Potassium levels are moderate. Fertilizer will definitely have to be added to the soils.

Summary and Management Recommendations - Coal Pile Fill

The primary limiting factors for revegetation are steep, unstable soil surface, erosion hazard, infertility, and moderate water holding capacity. Very little revegetation can be expected on the very steep slopes on the lower edges of the fill.

Stability of the surface soil can be improved and it can be protected from rapid drying during seedling establishment by mulching. The mulch should consist of 1.5 to 2.0 tons per acre of hay, straw, or hydromulch. A hay or straw mulch would need to be held in place with netting that is stapled into the soil. The netting would need to be cut out to fit around stones and maintain contact with the hay or straw. A considerable amount of labor would be required for proper installation. Hydromulch should be held in place with a tackifier. The mulch will have to be firmly anchored to have a chance of stabilizing this slope.

Fertilizer will have to be applied to overcome infertility. The initial fertilization with the seeding should be 40 to 50 pounds of

nitrogen, 80 to 100 pounds of phosphate, and 40 to 50 pounds of potash per acre. Annual fertilization will be needed for several years during vegetation establishment. The annual refertilization should consist of 30 to 40 pounds of nitrogen and phosphate and about 20 pounds of potash per acre.

3.3 Cutslope above loadout and truck turnaround (Lab identification 5-1 and 2 and 6-1 and 2)

The cutslope above the loadout and truck turnaround has been topdressed for revegetation. Samples were taken from two holes to get information on characteristics of the topdressing material and the upper part of the "in place" soil on the cut.

1. Steepness of slopes - Slopes are about 60 percent on the west part of the cut and 45 percent on the east side of cut, but are undercut to about 75 to 100 percent on the lower edge where the truck turnaround was evidently enlarged.

2. Length and shape of slopes - The slopes are about 30 to 50 feet in length and are generally smooth and straight except for concave depression on the east side of the cut.

3. Aspect - The south aspect is warm and droughty.

4. Surface stability - The surface of the soil is generally stable over most of this cut. The exception is on the oversteepened cut on the lower edge where the surface soil will "run" when dry. Very little or no topdressing is on this lower cut and it will be very difficult to get soil to stay on it.

5. Erosion potential - bare soil - The erosion potential is high with about 30 to 60 tons per acre per year of potential soil loss. The erosion potential can be handled with mulch that is anchored in place.

6. Nature of surface and subsurface soil on the cut - The topdressing on the cut appears to be original surface soil as evidenced by roots and twigs in it, and slightly higher organic matter content and lower coarse fragment content compared to the "in place" soil on the cut. However, the nutrient level in this material is still low. The topdressing on the cut averages about 12 inches thick except on the lower steep break where little or no topdressing exists.

The soil material below 12 inches is "in place" substratum material.

The natural soils in this area have very little development and significant amounts of good quality topsoil were not available.

7. Soil texture - The topdressing and underlying soil have sandy loam texture which is favorable for revegetation.

8. Coarse fragments - Sandstone fragments make up about 30 to 40 percent of the topdressing volume and 50 to 60 percent of the volume of the underlying soil. The fragments are mostly less than 3 inches in diameter with lesser amounts of fragments larger than 3 inches. The fragments tend to reduce the erosion hazard but also reduce the available water capacity in proportion to their volume.

9. Available water capacity - The available water capacity for the one-foot of topdressing is about 1.0 to 1.2 inches. The available water capacity for the soil material below 12 inches is about 0.7 to 0.8 inch per foot. In qualitative terms, the soil has a fair water supplying capacity for vegetation.

10. pH and calcium carbonate - The pH is 8.2 to 8.5 and the calcium carbonate percentage is 16.3 to 19.7. The qualitative rating for this level of calcium carbonate is fair for a vegetation growth medium. An effect of the lime and pH is to reduce phosphorus availability.

11. EC and SAR - These measures of salt and sodium are low and indicate no problems.

12. Soil structure - The structure is fine granular or crumb and is favorable for root development.

13. Soil compaction - There is no evidence of compaction on this slope.

14. Soil drainage and permeability - The soils are well drained and have moderately rapid permeability for water. No restrictive layers for water or roots were noted.

15. Soil nutrients - Nitrogen and phosphorus levels are extremely low. Potassium levels are also low. Fertilizer will definitely have to be added to the soils.

Summary and Management Recommendations - Cut Above Loadout

The primary limiting factors for revegetation are steep slopes, erosion hazard, infertility and moderate water holding capacity. Very little revegetation can be expected on the very steep slopes on the lower edge of the cut.

The erosion hazard can be reduced and the surface soil protected from rapid drying during seedling establishment by mulching. The mulch should consist of 1.5 to 2.0 tons per acre of hay, straw or hydromulch.

A hay or straw mulch would need to be held in place with netting that is stapled into the soil. The netting would need to be cut out to fit around stones and maintain contact with the hay or straw. A considerable amount of labor would be required for proper installation. Hydromulch should be held in place with a tackifier.

Fertilizer will have to be applied to overcome infertility. The initial fertilization with the seeding should be 40 to 50 pounds of nitrogen, 80 to 100 pounds of phosphate, and 40 to 50 pounds of potash per acre. Annual fertilization will be needed for several years during vegetation establishment. The annual refertilization should consist of 30 to 40 pounds of nitrogen and phosphate and about 20 pounds of potash per year.

3.4 Fill at Loadout (Lab Identification 7-1 to 3)

The moderately sloping fill below the loadout was sampled to determine the characteristics of the material at the surface and with depth. Because of rock fragments, sampling with shovel and hand auger was stopped at 48 inches.

1. Steepness of slopes - Slopes are about 20 percent across most of the fill. The outside edge of the top of the fill that may be revegetated is relatively flat.
2. Length and shape of slopes - The slope is about 30 to 40 feet in length and is generally smooth and straight.
3. Aspect - The south aspect is warm and droughty.
4. Surface stability - The surface of the fill is stable.

5. Erosion potential, bare soil - The erosion potential is moderate with about 7 to 10 tons per acre per year of potential soil loss. The erosion potential can be handled with mulch.

6. Source of surface and subsurface soil in the fill - The soil in the fill is dominantly substratum material from the original soils. The natural soils in this area have very little topsoil or soil development.

7. Soil texture - The texture of the fill is sandy loam which is favorable for revegetation.

8. Coarse fragments - Sandstone fragments make up about 35 to 50 percent of the soil volume. The fragments are mostly less than 3 inches in diameter with lesser amounts of fragments larger than 3 inches. The fragments tend to reduce the erosion hazard but also reduce the available water capacity in proportion to their volume.

9. Available Water Capacity - The available water capacity is about 0.8 to 1.0 inches per foot of soil. In qualitative terms, the soil has a fair water supplying capacity for vegetation.

10. pH and calcium carbonate - The pH is 8.5 to 9.0. The pH of 9.0 in the 36 to 48 inch depth seems unusually high. This high pH can indicate a high level of sodium, but the laboratory data for sodium and SAR do not show any increase in comparison to the other samples.

The calcium carbonate percentage is 18.1 to 18.9. The qualitative rating for this level of calcium carbonate is fair for a vegetative growth medium. An effect of the lime and pH is to reduce phosphorus availability.

11. EC and SAR - These measures of salt and sodium are low and indicate no problems.

12. Soil structure - The flat outer edge on the top of the fill that may be vegetated has massive cloddy structure in the upper 18 inches with granular or crumb structure below 18 inches. The massive surface layer is restrictive to root development.

The sloping sides of the fill have a hard, dry surface crust and granular crumb structure through the rest of the fill. The surface crust needs to be scarified and broken up to help get better seed contact with the soil.

13. Soil compaction - The surface 18 inches of the flat top of the fill is compacted due to vehicle traffic as evidenced by the massive, cloddy structure and firm, moist consistence.

14. Soil drainage and permeability - The soils are well drained and have moderately rapid permeability for water. The compacted surface on the flat top of the fill has restricted water intake and permeability in the surface 18 inches. No other restrictive layers were noted.

15. Soil nutrients - Nitrogen and phosphorus levels are extremely low. Potassium levels are also low. Fertilizer will definitely have to be added to the soils.

Summary and Management Recommendations, Fill at Loadout

The primary limiting factors for revegetation are infertility, compaction on the flat top of the fill, moderate erosion, and moderate water holding capacity.

The flat area on the top of the fill that is to be revegetated should be ripped to 18 inches. Light scarification of the surface crust over the remainder of the fill would aid in seedling establishment.

The erosion hazard can be reduced and the surface protected from rapid drying during seedling establishment by mulching. The mulch should consist of hay, straw or hydromulch. A hay or straw mulch would need to be fastened in place to prevent blowing.

Fertilizer will have to be applied to overcome infertility. The initial fertilizer with the seeding should be 40 to 50 pounds of nitrogen, 80 to 100 pounds of phosphate, and 40 to 50 pounds of potash per acre. Annual fertilizer will be needed for several years during vegetation establishment. The annual refertilization should consist of 30 to 40 pounds of nitrogen and phosphate and about 20 pounds of potash per year.

3.5 Lower Sediment Pond (Lab Identification 9-1 to 4)

The backslope of the embankment of the existing sediment pond is sloughing into the adjacent creek. Plans are to reconstruct the sediment pond and vegetate the embankments. The existing embankment was sampled from the surface to "in place" buried topsoil.

1. Steepness of slopes - The existing sediment pond has very steep backslopes that are sloughing. Slopes on the reconstructed pond are not known but will probably have 2:1 or 3:1 slopes on the embankments.
2. Length and shape of slopes - The length of slopes on the reconstructed sediment pond will probably be about 20 feet and smooth and straight.
3. Aspect - Parts of the semi-circle embankment will be facing all aspects.

4. Surface stability - The present embankment is very steep and unstable on the backslope. Slopes of 2:1 (50%) should be stable.

5. Erosion potential, bare soil - The erosion potential is moderately high with about 15 to 30 tons per acre per year of potential soil loss. The erosion potential can be handled with mulch.

6. Source of soil in the fill - The soil in the fill is a mixture of topsoil and subsoil from soils at the site. The soils in this area are on a gently-sloping alluvial fan where they are more fertile and have few coarse fragments in comparison to the colluvial toeslopes where the other facilities are located.

The fill at the site that was sampled is 63 inches deep with "in place" buried topsoil at 63 inches.

7. Soil texture - The soil in the fill has sandy loam texture and the underlying topsoil has loam texture which is favorable for vegetation establishment.

8. Coarse fragments - The fill material contains about 15 percent gravel by volume.

9. Available water capacity - The available water capacity is about 1.3 to 1.5 inches per foot of soil. In qualitative terms, the soil has good water supplying capacity for vegetation.

10. pH and calcium carbonate - The pH is 8.2 to 8.4 and the calcium carbonate percentage is 18.9 to 20.6 in the fill. The qualitative rating for this level of calcium carbonate is fair for a vegetative growth medium. An effect of the lime and pH is to reduce phosphorus availability.

11. EC and SAR - These measures of salt and sodium are low and indicate no problems.

12. Soil structure - The reconstructed embankment will have granular or crumb structure if not compacted and will be massive or platy if compacted.

13. Soil compaction - It is not known to what degree the reconstructed embankment will be compacted. Surface compaction will restrict root development and vegetative growth.

14. Soil drainage and permeability - The soils are well drained and have moderately rapid permeability when not compacted. Permeability will be restricted by compaction.

15. Soil nutrients - Nitrogen levels are adequate for vegetative growth in all samples except the 36 to 63 inch layer which has a moderate level of nitrogen. Phosphorus is low in all of the fill material. Potassium levels are adequate.

Summary and Management Recommendations, Lower Sediment Pond

The soils generally have a good potential for revegetation on the sediment pond embankment. The primary limiting factors are a low phosphorus level, moderately high erosion hazard, and restricted rooting if the embankment is compacted.

If the reconstructed embankment is compacted, it is recommended that at least one foot and preferably two feet of surface fill on the embankment be left uncompacted to enhance vegetative growth.

The erosion hazard can be reduced and the surface soil protected from rapid drying during seedling establishment by mulching. The mulch should consist of 1.5 to 2.0 tons of hay, straw or hydromulch. A hay or straw mulch would need to be held in place with netting, or hydromulch would need a tackifier.

Fertilizer will be needed to make up for the phosphorus deficiency. It is recommended that the same fertilizer mix be used for the sediment pond area as on the rest of the project rather than use a separate treatment for this small area. The extra nitrogen will help make up for the possible nitrogen demand by the mulch. The initial fertilization at seeding time should be 40 to 50 pounds per acre of nitrogen, 80 to 100 pounds of phosphate and 40 to 50 pounds of potash per acre. Annual refertilization is probably not necessary on this area.

4.0 Characteristics of Topsoil Piles and Fill, Samples Taken From Scattered Locations

4.1 Topsoil Piles About a Mile Below the Mine at Lamb's Trailer (Lab Identification 10 and 11)

Two small piles of topsoil are located next to each other on the north side of the road. The east pile has been there for a year or more and the west pile has just been hauled in.

The east pile (Lab Identification 10) is good quality topsoil.

The west pile (Lab Identification 11) generally has good characteristics except that it contains about 20 percent rock fragments less than 3 inches in diameter and 15 percent rock fragments that are 3 to 10 inches in diameter. The calcium carbonate percentage is also a little high. Due to the scarcity of topsoil in the mine area, this material should definitely be saved for topdressing. The rock fragments can cause some problems for spreading and seeding and reduces available water, but is much more suitable for vegetation than the unproductive soils on many of the cuts and fills in the mine area.

4.2. Fill at Junction of the South Fork and North Fork Roads Just West of Hiawatha (Lab Identification 12-1 and 2)

From a few brief observations in this area, it is apparent that at least several kinds of fill material have been hauled in and spread in layers. Much of the material has a high content of rock fragments--35 to 50 percent. This coarser material is represented by sample 12-1.

A layer which has finer texture and fewer coarse fragments is represented by sample 12-2. (The sampling and lab data doesn't accurately reflect the coarse fragment content of these soils.) The layer represented by sample 12-2 has favorable characteristics for topdressing but it could be difficult to separate out the layers of fill.



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

Bio-West Inc.
1063 S 1400 N
Logan, UT 84321

SOIL, PLANT and WATER
ANALYSIS LABORATORY
UMC 48

23 June 1982

Samples received 6/14/82

USU Log #	Ident.	% > 2 mm	pH	mmhos/cm		ppm		NO ₃ -N	% Organic Matter
				ECe	P	K			
82-1249	#1 Road Fill 0-18	39.7	8.4	.7	1.2	40	1.4	1.71	
1250	#2 Con. Belt 0-18	44.1	8.2	1.7	1.5	51	1.7	1.74	
1251	3-1 Coal Pile 0-18	34.5	8.4	.7	1.3	42	1.1	.86	
1252	3-2 " 18-36	22.7	8.4	.5	1.6	54	1.3	.90	
1253	3-3 " 36-54	31.4	8.5	.5	1.4	42	.4	.84	
1254	3-4 " 54-72	16.3	8.4	.5	.9	47	.7	.90	
1255	3-5 " 72-90	21.1	8.4	.6	1.0	55	2.0	1.17	
1256	3-6 " 90-105	27.0	8.3	.5	.7	59	2.0	1.41	
1257	3-7 " 108-126	29.6	8.4	.5	.8	60	1.8	1.58	
1258	4-1 " 0-18	25.7	8.4	.4	1.0	49	1.9	1.17	
1259	4-2 " 18-36	31.2	8.4	.4	.7	42	1.3	.88	
1260	4-3 " 326-54	20.6	8.4	.5	.8	46	.4	.88	
1261	4-4 " 54-72	28.5	8.5	.6	.7	41	1.0	.88	
1262	5-1 Load Cut 0-12	39.0	8.5	.4	.3	32	.9	.90	
1263	5-2 " 12-24	54.4	8.4	.4	.1	17	4.1	.72	
1264	6-1 " 0-12	35.9	8.2	.4	.3	38	.6	1.47	
1265	6-2 " 0-12	42.5	8.4	.4	.1	25	.2	1.10	
1266	7-1 "Fill 0-18	41.9	8.5	.5	.2	37	.3	1.07	
1267	7-2 " 18-36	48.8	8.5	.5	.3	36	.8	.90	
1268	7-3 " 36-48	40.2	9.0	.5	.7	36	.9	1.07	
1269	8-T:P.U.S.P. 15-20	20.7	8.2	1.1	6.2	127	3.6	4.00	
1270	9-1 L.S.P. 0-18	18.0	8.2	.7	.7	80	20	2.64	
1271	9-2 " 18-36	18.8	8.3	.6	.6	90	14	2.27	
1272	9-3 L.S.P. 36-63	14.2	8.4	.4	.3	79	9.3	2.81	
1273	9-4 " 63-80	7.7	8.2	.3	4.4	201	15	5.78	
1274	10 T.P.L.T. 0-24	21.3	7.9	.6	5.7	179	19	5.34	
1275	11 " 0-24	26.6	8.1	2.1	1.5	109	14	7.84	
1276	12-1 So.F 20-30	35.6	8.4	.6	1.0	47	2.9	1.15	
1277	12-2 " 20-30	40.4	8.1	2.7	8.4	205	4.6	1.74	

DIVISION OF
OIL, GAS & MINING

RECEIVED
AUG 05 1982



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

Blowest P. 2 23 June 1982

SOIL, PLANT and WATER
ANALYSIS LABORATORY
UMC 48

USU Log #	Ident.	Mechanical Anal.-- Hydrometer					H ₂ O Sol. meq/l in Sat. Ext.		
		%Sand	%Silt	%Clay	Texture	%CaCO ₃	Na	Ca+Mg	SAR
82-1249	#1 0-18	62	24	14	Sandy Loam	21.7	1.5	3.7	1.1
1250	#2 0-18	58	27	15	Sandy Loam	20.7	3.5	15.5	1.3
1251	3-1 0-18	64	21	15	Sandy Loam	13.3	1.6	3.3	1.7
1252	3-2 18-36	66	20	14	Sandy Loam	9.9	1.2	3.7	.9
1253	3-3 36-54	68	19	13	Sandy Loam	13.2	1.6	3.8	1.2
1254	3-4 54-72	65	20	15	Sandy Loam	12.0	1.3	3.7	1.0
1255	3-5 72-90	65	20	15	Sandy Loam	11.5	1.6	5.1	1.0
1256	3-6 90-105	72	14	14	Sandy Loam	12.2	.89	3.7	.7
1257	3-7 108-126	68	17	15	Sandy Loam	14.0	.92	3.5	.7
1258	4-1 0-18	62	23	15	Sandy Loam	15.5	1.1	2.7	.9
1259	4-2 18-36	65	22	13	Sandy Loam	15.5	1.0	3.3	.8
1260	4-3 36-54	65	21	14	Sandy Loam	14.0	1.4	3.5	1.1
1261	4-4 54-72	66	21	13	Sandy Loam	15.1	1.2	3.2	.9
1262	5-1 0-12	63	22	15	Sandy Loam	16.3	.87	2.7	.7
1263	5-2 12-24	71	16	13	Sandy Loam	19.0	1.5	3.5	1.1
1264	6-1 0-12	61	25	14	Sandy Loam	17.8	1.3	4.0	.9
1265	6-2 0-12	61	27	12	Sandy Loam	19.7	1.4	2.9	1.2
1266	7-1 0-18	65	21	14	Sandy Loam	18.1	2.0	3.3	1.6
1267	7-2 18-36	65	22	13	Sandy Loam	18.8	1.6	3.3	1.2
1268	7-3 36-48	65	22	13	Sandy Loam	18.9	1.9	3.5	1.5
1269	8 15-20	63	22	15	Sandy Loam	14.8	3.9	2.5	3.5
1270	9-1 0-18	57	28	15	Sandy Loam	18.9	2.4	9.8	1.1
1271	9-2 18-36	60	27	13	Sandy Loam	20.1	1.4	9.9	.6
1272	9-3 36-63	58	28	14	Sandy Loam	20.6	1.7	6.4	1.0
1273	9-4 63-80	50	34	16	Loam	18.5	1.1	5.6	.7
1274	10 0-24	61	26	13	Sandy Loam	15.4	1.8	7.6	.9
1275	11 0-24	49	30	21	Loam	20.8	2.8	23.1	.8
1276	12-1 20-30	62	26	12	Sandy Loam	21.1	1.7	4.7	1.1
1277	12-2 20-20	38	39	24	Loam	16.0	9.1	25.0	2.6

SHARONSTEEL • Mining Division

SHARON STEEL CORPORATION

File ACT/007/011

AN **NVE** COMPANY

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

July 8, 1982

RECEIVED
JUL 09 1982

**DIVISION OF
OIL, GAS & MINING**

State of Utah
Natural Resources & Energy
Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attention: Ms. Sandy Pruditt, Reclamation Officer

Ladies and Gentlemen:

This letter in company with the revised Drawing No. EFC-133-R8-1, the calculations and the ammended Proposed Specifications of rebuilding of Sedimentation Pond are submitted as a response to the review letter from DOGM dated June 21, 1982.

I have reviewed the lay of the land and have completed more detailed calculation - which are attached. All elevations are approximate, and there may be some field corrections as pond construction proceeds.

Item No.

Response

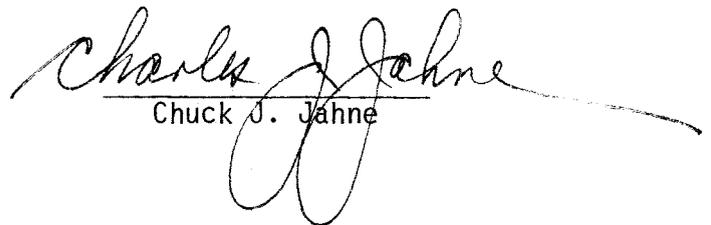
1. It would appear that the applicant can remove as much as 18" of surface soil from the area under consideration for pond expansion. This excavation would result in about 467 cu. yd. of dirt which can be added to the existing topsoil pile. These figures are approximate, corrections will have to be made in the field, so that no dirt need be purchased to construct the pond extension. Final quantities of dirt delivered to the topsoil pile will be reported to DOGM for final reclamation data.
2. The Proposed Specifications have been ammended to state, "In addition to the run-off ditch, the resulting topsoil pile is to be seeded in keeping with the Interim Soils Control Plan."
3. There is some confusion as to the "borrow area". As I interpret the phrase, it refers to the area on the east side of Miller Creek which is situated north and east of the Middle Fork access road. This area is presently an undisturbed area with a growth of sage brush on it. It is called the "borrow area" because it has been

Item No.

Response

3. (cont.) submitted by the applicant that this location be the site of borrowing top and sub soil for final property reclamation. The location in question here - the junction of the South Fork and Middle Fork Roads - has long been a storage area for fill dirt by the applicant. During the excavation of the coal pile and truck turn-out areas, dirt was moved to this area for storage. U.S. Fuel Company considers the dirt as fill dirt. Rather than have it disappear over the ensuing years, I should like to use it in the new banks of the sedimentation pond.
4. A breakdown of dirt estimated to be needed for construction as well as that estimated to be available is in the accompanying calculations.
5. The Proposed Specifications have been ammended to state, "The contractor must be aware that there may be a need to pump out water and possibly to sand bag dike or to construct emergency dikes in any gaps in the pond banks during construction. This may be necessary in order to prevent excessive solids from entering the adjacent stream. If the stream is dried up, such precautions will not be necessary, but any sediment or dirt that washes into the stream bed must be removed before construction is complete.
6. See calculations accompanying this letter.
7. Please note the stake placed into the east pond bank at the maximum sedimentation storage level.
8. The 4" diameter drain pipe has been located at section 2 as requested.
9. See calculation accompanying this letter.
10. See calculation accompanying this letter.
11. See calculation and drawing accompanying this letter.
12. On June 28, 1982, Interim and Final Revegetation Plans for the South Fork Canyon area were submitted for review to DOGM - to the attention of Mary Boucek. The Sedimentation Pond Area was included in the Interim Revegetation Plan.

Happy Pioneer Day!!!!


Chuck J. Jahne

PROPOSED
SPECIFICATIONS FOR REBUILDING OF
SEDIMENTATION POND

King VI Mine Overland Belt
South Fork Miller Creek Canyon
Hiawatha, Utah

RECEIVED
JUL 09 1982

DIVISION OF
OIL, GAS & MINING

GENERAL:

The present sedimentation pond for the King VI Overland Belt Project must be rebuilt due to the possibility of unstable side and end banks, incorrectly arranged primary overflow and secondary spillway and the possibility of continual sloughing of dirt from the south bank into the stream bed of the South Fork of Miller Creek. The South Fork of Miller Creek is an ephemeral stream which flows annually between the months of March to November. It receives water from the surrounding South Fork Canyon watershed.

It is the intention of this specification that (1) the banks of the rebuilt sedimentation pond be stable, (2) the sloughing problem be corrected and (3) the primary overflow be situated below the discharge level of the secondary spillway.

SCOPE OF WORK:

1. The present sedimentation pond is to be extended in an eastward direction some 200 feet (from the top of the present east bank to the toe of the new east bank). Approximate grade elevation at this point is 7708 A.S.L. The new pond will parallel the South Fork Canyon Road and the outslopes of the new south bank are to be about 3'-0" back from the edge of the existing fall to the creek bed. NOTE: All new banks, either installed or as a result of re-construction of existing banks are to be installed with upstream and downstream slopes of 1v:3h.
2. Remove the vegetation that is in existence between the present east bank and the location for the new pond east bank. The resulting trash is to be burned at the site of the work.
3. Remove 18" of topsoil from the vegetation-cleaned area and store it atop the existing topsoil pile located at W-5700, S-1700 shown on Drawing EFC-133-R3. This area is noted as "Lamb's Trailer Area."
4. Construct a run-off ditch around the new topsoil pile resulting from (3) above. For further information see Ammendment No. 1.
5. Compact perimeters of area resulting from (1) and (3) above where the new east and south banks for the sedimentation pond will stand.

6. Using fill dirt stored at the junction of the South Fork Canyon and Middle Fork Canyon roads begin construction of the new pond east bank.

NOTE:

An estimated quantity of 1416 cu. yd. of dirt will be required for the pond expansion. About 450 cu. yd. is stored at the junction noted above.

7. Pump out the existing sedimentation pond so as to allow the east and south banks to dry out as much as possible. Allow 10 days for the banks to dry out. (Deliver the water generated by the pumping to slurry pond No. 1 north and east of the tipple.) See Ammendment No. 2.

8. Excavate area resulting from (1) and (3) above so as to provide a bottom of pond elevation of 7712 A.S.L. Apply excavated dirt to east and south sides of new pond area as banks.

9. Remove existing pond east bank and use dirt in the construction of the pond extension.

NOTE:

An estimated quantity of 400 cu. yd. of dirt constitutes the existing east bank.

10. Excavate as necessary to provide a bottom of pond profile as shown on Drawing EFC-133-R8-1.

11. Reconstruct the entire existing south bank of the present sedimentation pond. The following is to be accomplished:

- A. Retrieve all of the excavated and loose dirt that is on the outslope of the existing south bank.
- B. Retrieve all of the excavated and loose dirt on the top of the existing south bank.

NOTE:

It is difficult to determine the quantity of excavated dirt that has been placed on the present south bank outslope. It is estimated at between 25 and 40 cu. yd. Retrieval to original or natural grade is the goal of (A) and (B) above. (Dirt retrieved from the outslopes and top of the existing south bank may be used in the construction of the pond extension.)

- C. Remove the 4" diameter primary overflow pipe, re-constitute the excavated bank and relocate the pipe at the elevation and location shown on Drawing EFC-133-R8-1.

- D. Rebuild the existing south bank of the sedimentation pond to correspond to the shape and depth of the pond shown on Drawing EFC-133-R8-1.

12. Reconstruct the existing west bank of the existing sedimentation pond. The following to be accomplished:

- A. Retrieve all excavated and loose dirt that is on the out-slope of the existing west bank.
- B. Retrieve all of the excavated and loose dirt on the top of the existing west bank.
- C. Use dirt accumulated from (A) and (B) above as fill dirt at the west end of the new pond.

NOTE:

No estimate of the excavated or loose dirt on the west bank has been made, since it is intended to be used as fill for the west end of the new pond.

13. Rip-rap the area of the pond under the 24" diameter corrugated galvanized steel pipe, as well as the inlet and discharge of the secondary spillway at the east end of the pond and the 4" diameter pipe discharge.

14. Compact the new banks and the re-constructed existing banks to a 90% proctor as the banks are developed.

AMMENDMENTS TO PROPOSED SPECIFICATIONS

- 1. In addition to the run-off ditch, the resulting, topsoil pile is to be seeded in keeping with the Interim Soils Control Plan.
- 2. The Contractor must be aware that there may be a need to pump out water and possibly to sand bag dike or to construct emergency dikes in any gaps in the pond banks during construction. This may be necessary in order to prevent excessive solids from entering the adjacent stream. If the stream is dried up, such precautions will not be necessary, but any sediment or dirt that washes into the stream bed must be removed before construction is complete.

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

VOLUMES - RUN-ORR VOLUME & DETENTION TIME

PLAN, HIAWATAA SHEET NO. 1 OF 8

JOB KING VI 42" OVERLAND BELT

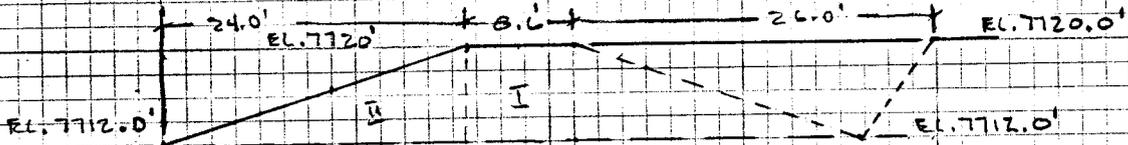
COMPUTED BY JAHNE DATE 6-29-82

REF. DWG. EFC-133-RB

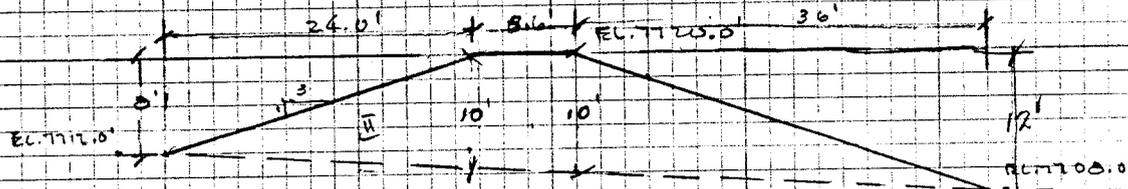
I. DIRT VOLUMES:

SEC. 1.

$$W = (H+35) \div 5 = (8+35) \div 5 = 8.6 = 8'-7\frac{1}{4}"$$



$$A = 24 \times 8 + 8.6 \times 8 = 261 \text{ FT}^2$$

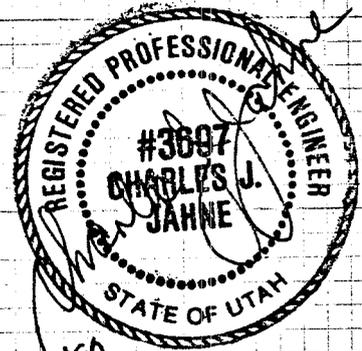


$$V_1 = (8.6 \times (26 + 8.6) \times 10) \div 27 = 110 \text{ TD}^3$$

$$V_2 = \left[\frac{1}{3} \times 24 \div 3 \times 90 \div 180 \times (0.5 \times 9 \times 24) \right] \div 27 = 50$$

$$V_3 = (0.5 \times 18 \times 36 \times 26) \div 27 = 191$$

$$351 \text{ TD}^3$$



SEC. 2

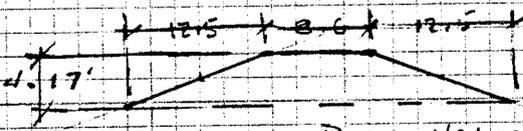


$$A = 15 \times 5 + 8.6 \times 5 = 189 \text{ FT}^2$$

$$A_1 + A_2 \div 2 = (261 + 189) \div 2 = 225 \text{ FT}^2$$

$$\text{Bank Vol.} = 225 \times 45 \div 27 = 375 \text{ TD}^3$$

SEC. 3

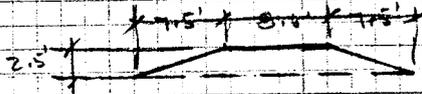


$$A = (12.5 + 8.6) \times 4.17 = 88 \text{ FT}^2$$

$$A_2 + A_3 \div 2 = (189 + 88) \div 2 = 139 \text{ FT}^2$$

$$\text{Bank Vol.} = 139 \times 40 \div 27 = 205 \text{ TD}^3$$

SEC. 4

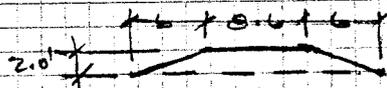


$$A = (7.5 + 8.6) \times 2.5 = 40 \text{ FT}^2$$

$$(A_3 + A_4) \div 2 = (88 + 40) \div 2 = 64 \text{ FT}^2$$

$$\text{Bank Vol.} = 64 \times 40 \div 27 = 95 \text{ TD}^3$$

SEC. 5



$$A = (6 + 8.6) \times 2 = 29 \text{ FT}^2$$

$$(A_4 + A_5) \div 2 = 40 + 29 \div 2 = 35 \text{ FT}^2$$

$$\text{Bank Volume} = (35 \times 40) \div 27 = 52 \text{ TD}^3$$

SEC. 6



$$W = (5 + 35) \div 5 = 8.0$$

$$A = (10.5 + 8) \times 3.5 = 65 \text{ FT}^2$$

$$(A_5 + A_6) \div 2 = (29 + 65) \div 2 = 47 \text{ FT}^2$$

$$\text{Bank Volume} = 47 \times 50 \div 27 = 87 \text{ TD}^3$$

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

VOLUMES - RISE - ORZ VOLUME + DETENTION TIME

PLANT HIWATRA SHEET NO 2 OF 8

JOB KINGVI 42' OVERLAND PILE

COMPUTED BY JAHNE DATE 6-29-82

REF. DWG. ERC-133-RB

I. DIRT VOLUMES (CONT.):

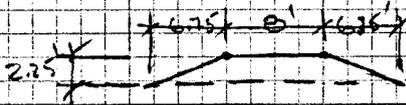
SEC. 7



$$A = (A_6 + A_7) \div 2 = (6.5 + 5.1) \div 2 = 5.8 \text{ FT}^2$$

$$\text{BANK VOLUME} = 5.8 \times 60 \div 27 = 129 \text{ TD}^3$$

SEC. 8



$$A = (6.75 + 8) \div 2 \times 2.25 = 33 \text{ FT}^2$$

$$(A_7 + A_8) \div 2 = (5.1 + 3.3) \div 2 = 4.2 \text{ FT}^2$$

$$\text{BANK VOLUME} = (4.2 \times 60) \div 27 = 93 \text{ TD}^3$$

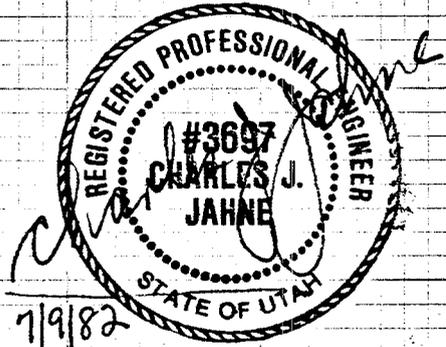


$$A = 0.5 \times 2 \times 6 + 8 \times 2.5 + 0.5 \times 5 \times 15 - 0.5 \times 2 \times 15 = 49 \text{ FT}^2$$

$$\text{BANK VOLUME} = 49 \times 16 \div 27 = 29 \text{ TD}^3$$

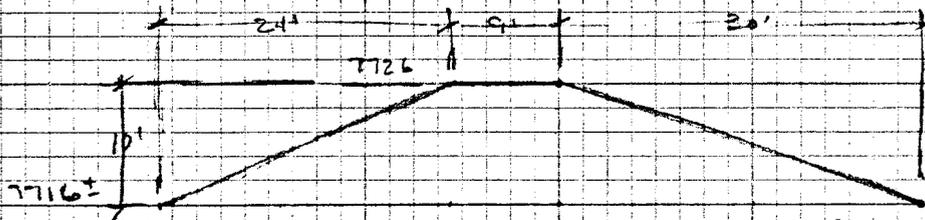
TOTAL BANK VOLUME:

351
275
205
93
52
129
93
29
1416 TD³



AMOUNT OF DIRT AVAILABLE IN PRESENT EAST BANK:

71982



$$A = 0.5 \times 10 \times (24 + 30) + 9 \times 10 = 360 \text{ FT}^2$$

$$\text{BANK VOLUME} = (360 \times 30) \div 27 = 400 \text{ TD}^3$$

AMOUNT OF DIRT AVAILABLE FOR STORAGE:

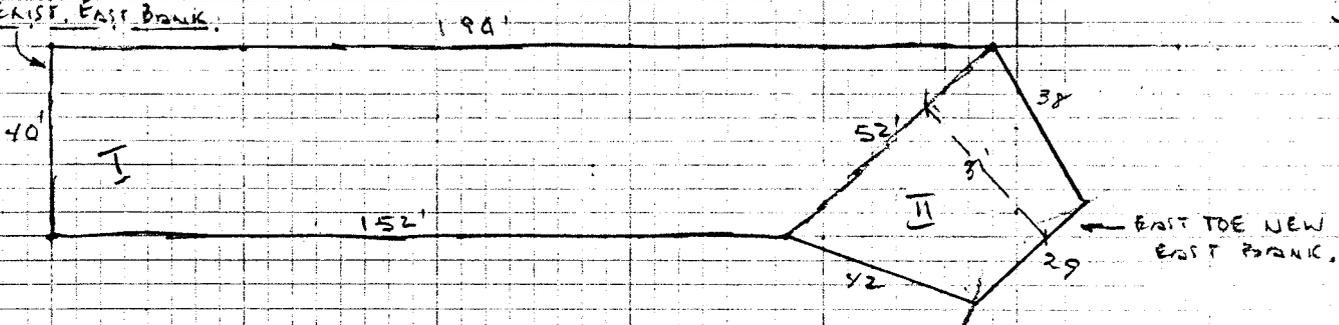
ASSUME 18" REMOVED FOR TOP SOIL STORAGE

$$V_1 = [(52 \times 40 + 0.5 \times 40 \times 42 \times 1.5) \div 27] = 384$$

$$V_2 = [(29 \times 37 + 0.5 \times 37 \times 23) \times 1.5] \div 27 = 83$$

467
TD³

WEST TOE EXIST. EAST BANK:



CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH
COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

PLANT ALUMINUM SHEET NO. 3 OF 8

JOB KING T1 42" OVERLAND BELT

COMPUTED BY JANNE DATE 6.30.82

REF. DWG. _____

VOLUMES - RISE-ORZ VOLUME + DETENTION TIME.

AMOUNT OF DIRT AVAILABLE FOR CONSTRUCTION - NEW AREA!

AVERAGE DEPTH FROM PRESENT GRADE TO NEW BOT. OF POND = 2.8 FT

DEPTH REMOVED FOR TOPSOIL = 0.5 FT

FOR CONSTRUCTION - DEPTH = 2.3 FT

QUANTITIES

$$V_1 = [(152 \times 40 + 0.5 \times 40 \times 42) 2.3] \div 27 = 589 \text{ TD}^3$$

$$V_2 = [(29 \times 37 + 0.5 \times 37 \times 23) 2.3] \div 27 = 128 \text{ TD}^3$$

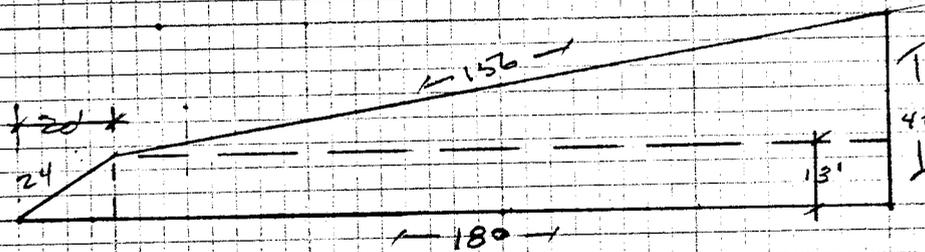
$$717 \text{ TD}^3 \leftarrow$$

AMOUNT OF DIRT AVAILABLE FOR CONSTRUCTION - UNDER PRESENT POND!

AVERAGE DEPTH FROM PRESENT POND BOTTOM TO NEW POND BOTTOM = 1.8 FT.

$$1 \times 28 + 2 \times 96 = 220 \div 124 = 1.8 \text{ FT.}$$

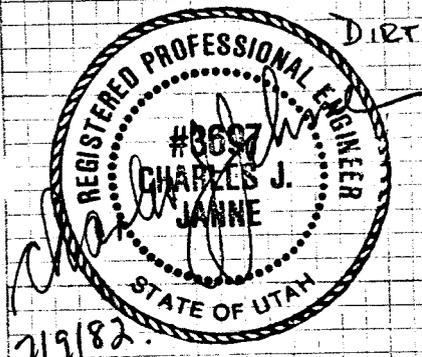
$$V = [(180 \times 13 + 0.5 \times 27 \times 160 + 0.5 \times 13 \times 20) 1.8] \div 27 = 309 \text{ TD}^3 \leftarrow$$



SUMMARY:

DIRT REQUIRED TO CONST. BANKS:	1416 CU. TD.
PROPOSED FOR TOPSOIL STORAGE:	467
TOTAL	1883 CU. TD.

DIRT IN PRESENT EAST BANK	=	400 CU. TD.
DIRT AVAILABLE FOR CONST. - NEW AREA	=	717 CU. TD.
DIRT AVAILABLE FOR CONST. - UNDER PREL. PD.	=	309 CU. TD.
DIRT AVAILABLE FOR CONST. - MID. FL. / SOIL	=	450 CU. TD.
		<u>1876</u>



CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

PLANT HIAWATHA SHEET NO. 4 OF 8

JOB KW6 VI 42" OVERLAND PSLT

COMPUTED BY JANNE DATE 6.30.82

REF. DWG. _____

VOLUMES - RISE-OFF VOLUME & DETENTION TIME

SEDIMENTATION VOLUMES:

SEE REPORT OF DEC. 5, 1980 -

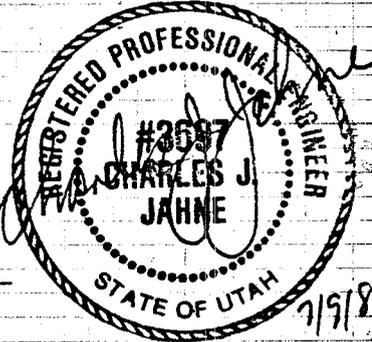
RISE-OFF = 0.313 A.F

SEDIMENTATION = 0.286 A.F

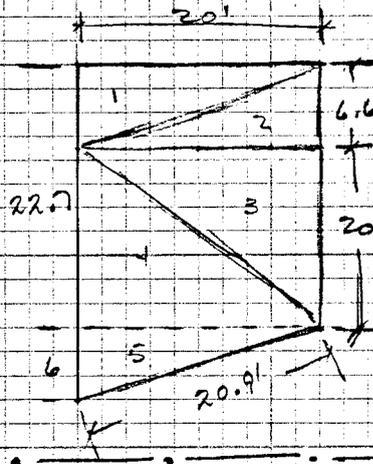
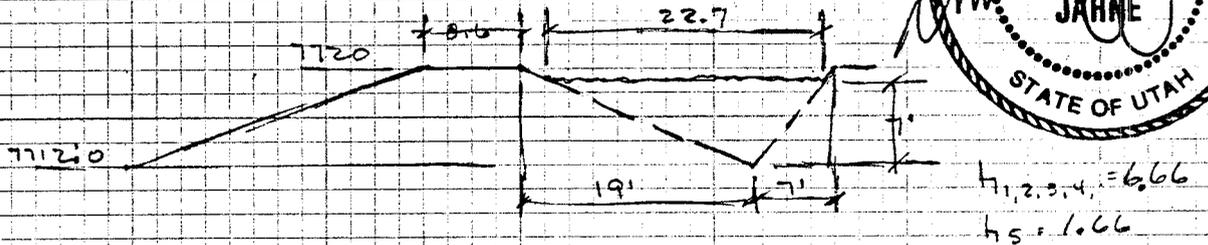
TOTAL POND VOL. = 0.599 x 0.6 A.F. = 26,136 FT³

RISE-OFF VOL. = 0.313 x 43,560 = 13,634 FT³

POUND CAPACITY ≥ 26,136 FOR 24 HR. DETENTION TIME.



SEC. 1.



$V_1 = 0.25 \times 20 \times 6.66 \times 6.66 = 222$

$V_2 = 0.25 \times 20 \times 6.66 \times 6.66 = 222$

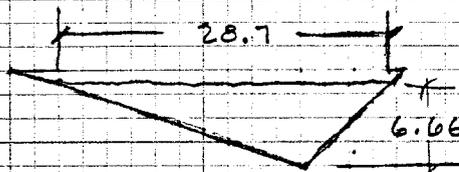
$V_3 = 0.25 \times 20 \times 20 \times 6.66 = 666$

$V_4 = 0.25 \times 20 \times 20 \times 6.66 = 666$

$V_5 = 0.25 \times 20 \times 6 \times 1.66 = 50$

$V_1 = 1826 \text{ FT}^3$

SEC. 1-2



$\Delta = 0.5 \times 28.7 \times 6.66 = 96 \text{ FT}^2$

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

VOLUMES - RUN-OFF VOLUME + DETENTION TIME

PLANT NAWAHITA SHEET NO. 5088

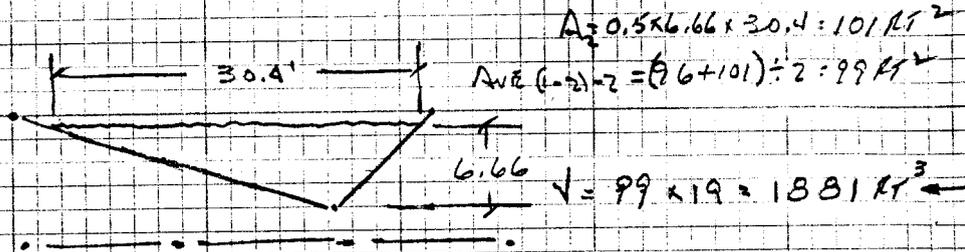
JOB KING VI 42" OVERLAND BELT

COMPUTED BY JAHNE DATE 6-30-82

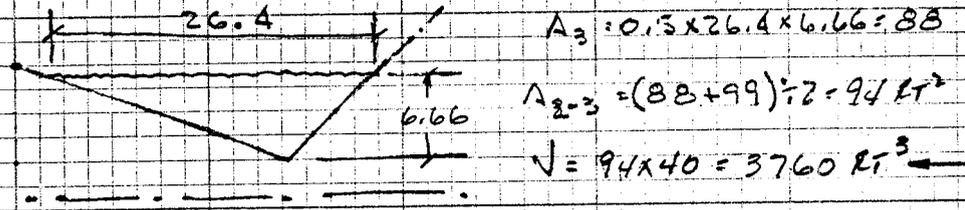
REF. DWG. _____

SEDIMENTATION VOLUMES (CONT'D):

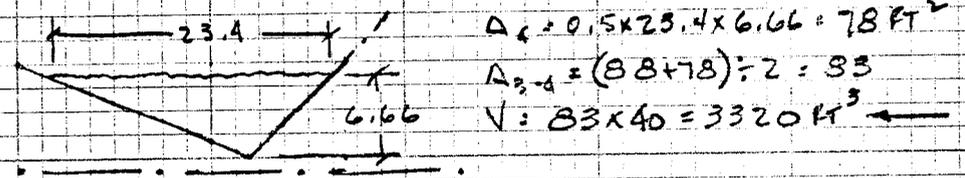
SEC. 2



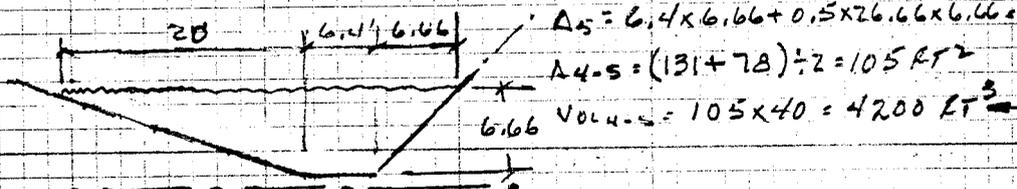
SEC. 3



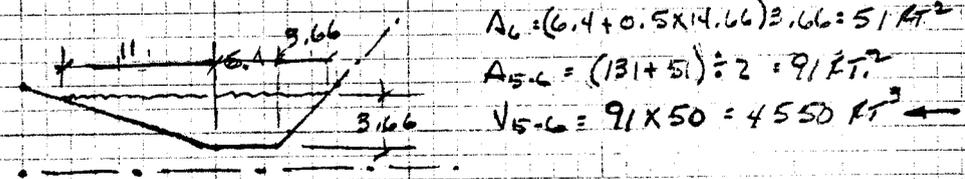
SEC. 4



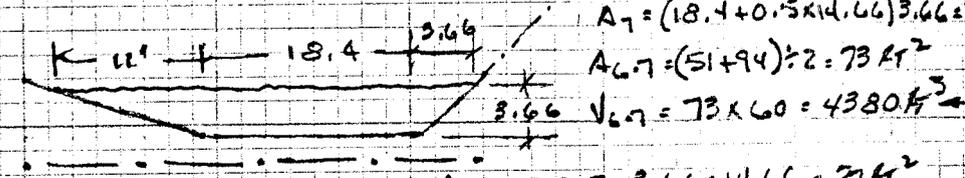
SEC. 5



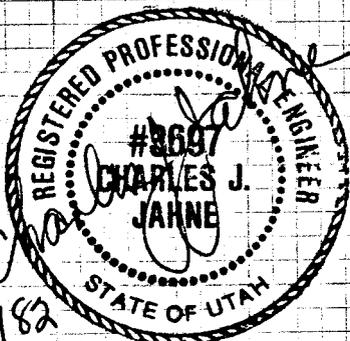
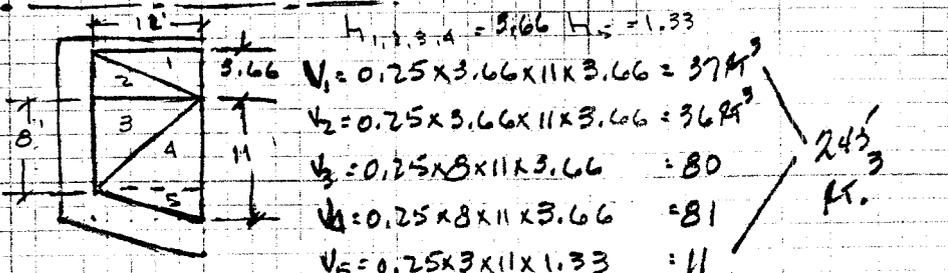
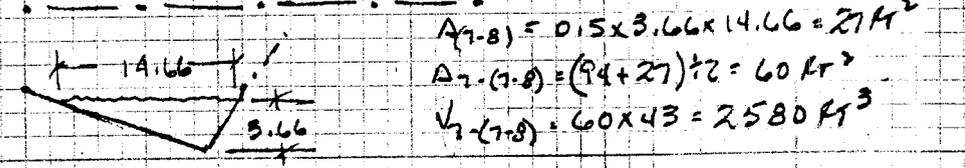
SEC. 6



SEC. 7



SEC. 7-8



CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

VOLUMES - RISE-OFF VOLUMES + DETENTION TIME

PLANT HIAWATHA SHEET NO. 6 OF 8

JOB KING JI MINE 42" OVERLAND BELT

COMPUTED BY JAHNE DATE 6.30.82

REF. DWG. _____

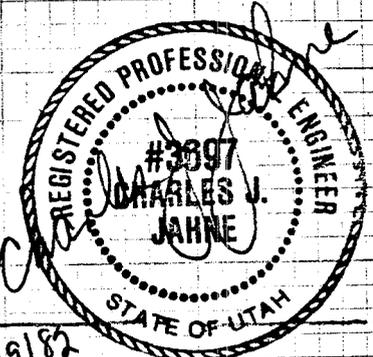
SEDIMENTATION VOLUMES (CONT'D.):

SUMMARY:

SEC. 1 = 1826 FT³
 SEC. 1-2: 1881
 SEC. 2-3: 3760
 SEC. 3-4: 3320
 SEC. 4-5: 4200
 SEC. 5-6: 4550
 SEC. 6-7: 4380
 SEC. 7-8: 2580
 SEC. 8: 245

AVAIL: 26,742 FT³
 REQ'D: 26,136 FT³ - OK

26,742 FT³



CHECK SURFACE AREA:

SEC. 1: $A_s = 22.7 \times 20 + 0.3 \times 6 \times 20 = 514$ FT²
 SEC. 1-2: $A_s = (28.7 + 30.4) \times 0.5 \times 19 = 561$
 SEC. 2-3: $A_s = (20.4 + 26.4) \times 0.5 \times 40 = 1136$
 SEC. 3-4: $A_s = (26.4 + 23.4) \times 0.5 \times 40 = 996$
 SEC. 4-5: $A_s = (23.4 + 28.9) \times 0.5 \times 40 = 1046$
 SEC. 5-6: $A_s = (28.9 + 22.4) \times 0.5 \times 50 = 1283$
 SEC. 6-7: $A_s = (22.4 + 34.4) \times 0.5 \times 60 = 1704$
 SEC. 7-8: $A_s = (24.4 + 14.6) \times 0.5 \times 43 = 1049$
 SEC. 8: $A_s = 12 \times 9 + 0.5 \times 2 \times 9 = 117$

AVAIL: 8406 FT²
 REQ'D: 2076 FT²

SEE REPORT SUBMITTED
 12-5-1980!

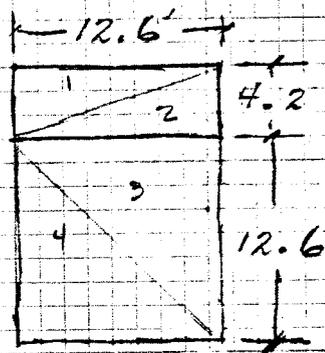
8406 FT² - OK

DETERMINE ELEV. OF SEDIMENT:

REQUIRED VOLUME = $0.286 \times 43,520 \times 0.6 = 7476$ FT³

TRT: 4.2'

SEC. 1



$V_1 = 0.25 \times 4.2 \times 12.6 \times 4.2 = 55$ FT³
 $V_2 = 0.25 \times 4.2 \times 12.6 \times 4.2 = 56$ FT³
 $V_3 = 0.25 \times 12.6 \times 12.6 \times 4.2 = 167$ FT³
 $V_4 = 0.25 \times 12.6 \times 12.6 \times 4.2 = 167$ FT³
745 FT³

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

VOLUMES - RUN-OFF VOLUMES + DETENTION TIME

PLANT HIWATHA SHEET NO. 7 OF 8

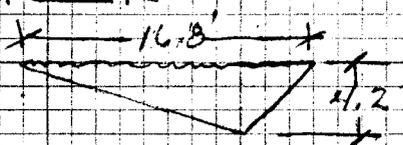
JOB KING #1 42" OVERLAND BELT

COMPUTED BY JANNE DATE 7-1-82

REF. DWG. _____

DETERMINE ELEV. OF SEDIMENT (CONT'D.):

SEC. 1-2:



$$A_{1-2} = 0.5 \times 16.8 \times 4.2 = 35 \text{ FT}^2$$

SEC. 2:

SAME PROFILE AS
SEC. 2

$$A_2 = A_{1-2} = 35 \text{ FT}^2$$

$$A_{(2)-2} = (35 + 35) \div 2 = 35 \text{ FT}^2$$

$$V_{(2)-2} = 35 \times 19 = 665 \text{ FT}^3$$

SEC. 3:

$$A_3 = A_2 = 35 \text{ FT}^2$$

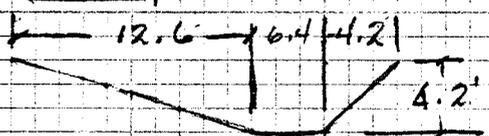
$$V_{2-3} = 35 \times 40 = 1400 \text{ FT}^3$$

SEC. 4:

$$A_4 = A_3 = A_2 = 35 \text{ FT}^2$$

$$V_{3-4} = 35 \times 40 = 1400 \text{ FT}^3$$

SEC. 5:

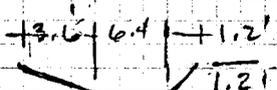


$$A_5 = 6.4 \times 4.2 + 0.5 \times 16.8 \times 4.2 = 62 \text{ FT}^2$$

$$A_{4-5} = (35 + 62) \div 2 = 49 \text{ FT}^2$$

$$V_{4-5} = 49 \times 40 = 1960 \text{ FT}^3$$

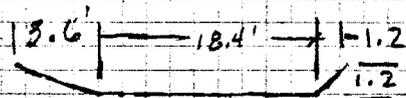
SEC. 6:



$$A_6 = 6.4 \times 1.2 + 4.8 \times 0.5 \times 1.2 = 18.4 \text{ FT}^2$$

$$V_{5-6} = 18.4 \times 50 = 920 \text{ FT}^3$$

SEC. 7:

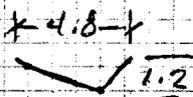


$$A_7 = 18.4 \times 1.2 + 0.5 \times 4.8 \times 1.2 = 25 \text{ FT}^2$$

$$A_{6-7} = (18.4 + 25) \div 2 = 22 \text{ FT}^2$$

$$V_{6-7} = 22 \times 60 = 1320 \text{ FT}^3$$

SEC. 7-8:



$$A_{(7-8)} = 0.5 \times 4.8 \times 1.2 = 3 \text{ FT}^2$$

$$A_{7-(7-8)} = (25 + 3) \div 2 = 14 \text{ FT}^2$$

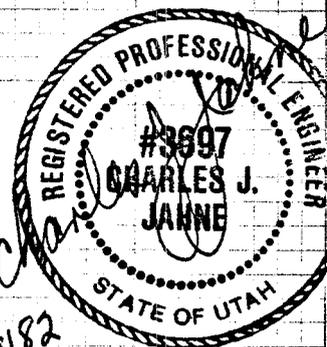
$$V_{7-(7-8)} = 14 \times 43 = 602 \text{ FT}^3$$

SEC. 8

- IGNORE

SUMMARY: 445 + 665 + 1400 + 1400 + 1960 + 920 + 1320 + 602 = 8712 FT³ - OK.

RUN-OFF VOL. AVAILABLE: 26,742 - 8712 = 18030 FT³ - OK.



7/9/82

CALCULATION SHEET

Sharon Steel Corporation

ENGINEERING DEPT., SALT LAKE CITY, UTAH

COMPUTATION FOR DIRT VOLUMES - SEDIMENTATION

VOLUMES - RUN-AR-PIPE VOLUME - DETENTION TIME

PLANT HAWKTRAK SHEET NO. 8 OF 8

JOB KING TII 42" OVERFLOW PIPE

COMPUTED BY JAHNE DATE 7-7-82

REF. DWG. _____

CHECK ABILITY OF SPILLWAY + OVERFLOW PIPE TO DISCHARGE 257R-24HR STORM:

$P(257R) = 2.60"$
 $P(107R) = 2.25" > P(\text{MIN SPILLWAY}) = 0.55"$

$A = 125,000 \text{ FT}^2$ $CN = 90$ $L = 250$ $S = 24.39$ $V = 10 \text{ FT/SEC.}$

$S = (1000 / CN) - 10 = (1000 / 90) - 10 = 1.11 \text{ INCHES}$

$Q = (P - 0.25)^2 \div (P + 0.85) = (0.55 - 0.2 \times 1.11)^2 \div (0.55 + 0.8 \times 1.11) = 0.075"$

$L = [(L)^{0.8} \times (S+1)^{0.7}] \div 190 \sqrt{S} = [(250)^{0.8} \times (1.11+1)^{0.7}] \div 190 \sqrt{24.39} = 0.014 \text{ HRS.}$

$Tp = 1.17 L = 1.17 \times 0.014 = 0.017 \text{ HRS.}$

$A_u = 125,000 \div 43,560 \times 640 = 0.004 \text{ SQ. MI.}$

$Qp = 484 \times A_u \times Q \div Tp = 484 \times 0.004 \times 0.075 \div 0.017 = 8.54 \text{ FT}^3/\text{SEC.}$

$Qp = 8WR^2 = 8 \times 10R^2 \therefore R = (8.54 \div 80)^{0.5} = 0.33$

$A_{\text{SPILLWAY}} = 8R^2 = 8 \times 0.33^2 = 0.854 \text{ FT}^2 = 123 \text{ IN.}^2$

DEPTH @ 2'-6" = 4.1"

CHECK SIZE REQUIRED FOR PRIMARY OVERFLOW PIPE: 107R-24HR. EVENT

$P = 2.25$ $CN = 90$ $S = 1.11$

$Q = (2.25 - 0.2 \times 1.11)^2 \div (2.25 + 0.8 \times 1.11) = 1.31"$

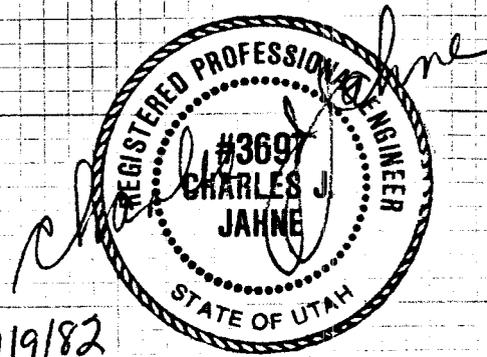
TOTAL FLOW - 24 HRS:

$V = 125,000 \times (1.31 \div 12) = 13,646 \text{ FT}^3$

$GPM = 13,646 \times 7.481 \div 24 \times 60 = 71 \text{ GPM.}$

TRY 4" SCH. 40 PIPE - $v @ 71 \text{ GPM} = 1.8 \text{ FT/SEC.}$

$h = 1.8^2 \div 2 \times 32.2 = 0.05 \text{ FT} = 5/8" - \text{OK.}$



File ACT/007/011

SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

June 28, 1982

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

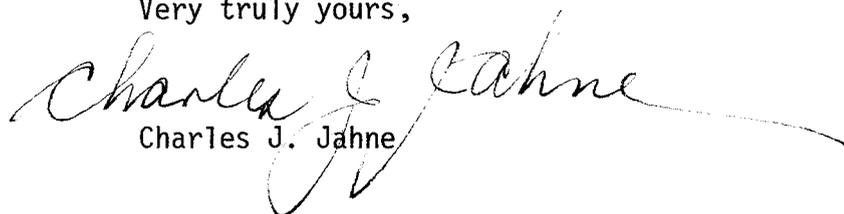
Attention: Ms. Mary Boucek, Reclamation Specialist

Gentlemen:

This letter transmits the "Revegetation Plan for the King VI Mine which is attached. I wish to note that this plan addresses the disturbed area pertinent to the 42" Overland Belt and the South Fork Canyon Road.

Happy Fourth of July!

Very truly yours,


Charles J. Jahne

CJJ:

RECEIVED

JUN 29 1982

DIVISION OF
OIL, GAS & MINING

REVEGETATION PLAN FOR THE
KING VI MINE

PR-69-1

Prepared by

John A. Rice

BIO/WEST, Inc.
P. O. Box 3226
Logan, Utah 84321

Prepared for

U. S. Fuel Company
136 East South Temple
Salt Lake City, Utah 84111

U. S. Fuel Purchase Order No. H-16597

June 16, 1982

June 18, 1982

Stipulation 7-81-2

Revegetation Plan

The goal of this revegetation plan is to establish a permanent, effective and diverse vegetative cover, capable of self-regeneration and plant succession, for use as rangeland and wildlife habitat. A prompt vegetative cover will be established which, through time, will allow vegetative cover, woody plant density and productivity to recover to levels equal to the cover, density and productivity of reference areas. U.S. Fuel Company proposes an Interim Revegetation Plan to test individual species and a variety of steep slope revegetation methods. The Interim Revegetation Plan will provide information which will help determine the success and survivability of each species planted and whether or not introduced species can aid in establishing a diverse, effective and permanent cover compatible with postmining land use. A variety of steep slope revegetation methods will be tested during the interim to evaluate their effectiveness in soil stabilization and vegetative establishment.

Interim Revegetation Plan

Interim Revegetation efforts will begin soon after site preparation during the fall of 1982. The areas to be revegetated during the interim are listed in Table 1. These areas were formed during construction

Table 1. Disturbed area (acres) in each vegetation type to be revegetated during the interim at the King VI Mine.

Vegetation Type	Location					Total
	Stacker Conveyor	Sediment Pond	Coal Pile	Truck Turnout	Conveyor	
Riparian	0.00	0.10	0.00	0.00	0.00	0.10
Pinyon-Juniper	0.00	0.00	0.15	0.40	0.20	0.75
Sagebrush	0.25	0.20	0.10	0.00	0.00	0.55
Total	0.25	0.30	0.25	0.40	0.20	1.40

by clearing vegetation, cut-and-fill or excavation. The soils of these areas are a mixture of topsoil and subsoil (see Topsoil Plan) with slopes up to 90%. In addition to steep slopes, compaction of soils presents a problem to revegetation in the areas under the stacker conveyor and between the truck turnout and haul roads. A variety of steep slope revegetation methods and ripping to a depth of 14-16 inches during seedbed preparation will be used to alleviate these problems. The soil stabilization methods proposed consist of a variety of combinations of chemical tackifier, nylon netting and mulch. Each combination to be tested includes hydraulic application of seed (Attachment 1, 22 lbs pure live seed/acre), fertilizer (as per recommendations based on the results of soil tests) and chemical tackifier (140 lbs/acre). This application will be followed by one of these treatments:

1. Nylon netting oversprayed with wood fiber mulch (2000 lbs/acre) and chemical tackifier (120 lbs/acre).
2. Hydraulic application of straw mulch (1000 lbs/acre) with chemical tackifier (120 lbs/acre), overlaid with nylon netting, oversprayed with wood fiber mulch (1000 lbs/acre) and chemical tackifier (60 lbs/acre).
3. Hydraulic application of straw mulch (2000 lbs/acre) with chemical tackifier (120 lbs/acre), overlaid with nylon netting.
4. Hydraulic application of wood fiber mulch (2000 lbs/acre) with chemical tackifier (120 lbs/acre).

Treatments 1 and 2 will be tested on the steeper slopes of the conveyor, coal pile and truck turnout areas. Treatments 3 and 4 will be

tested on the less steep slopes of the truck turnout area, under the stacker conveyor, and on the sediment pond outslopes. Specific location of study plots will be determined in consultation with Utah Division of Oil, Gas and Mining (UDOGM).

Interim revegetation will be monitored annually during the first five years, semi-annually during the second five years, and every third year thereafter until final reclamation. Monitoring will be conducted during the peak production period (late July to early August) when plant cover is near maximum and individual species are recognizable. Percent plant, litter, rock, and bare ground cover will be ocularly estimated using a 0.5 m² rectangular quadrat. In addition, percent plant cover will be estimated for each individual species. The sample size for each treatment area will be adequate at 90% confidence with 10% precision using the following formula:

$$n = \frac{S^2 t^2}{D^2}$$

where, n = minimum sample size

t = t distribution for a given level of confidence

S² = the variance estimate from preliminary sampling

D = level of accuracy desired for the estimate of the mean.

Final Revegetation Plan

Final Revegetation efforts will begin following the close of operations in the King VI Mine area, dismantling of the conveyor system and soon after backfilling and final grading. The areas to be revegetated during Final Revegetation are listed in Table 2.

Backfilling and final grading will eliminate the steeper slopes of the conveyor, coal pile, truck turnout and sediment pond areas. Following final grading and topsoiling, slopes are expected to be less than 50% in these areas.

Final revegetation will be accomplished in two phases. Phase 1, initial seeding of disturbed areas, and Phase 2, augmentation of Phase 1 with additional seedings (during the fall season) or transplantings (during the spring season). Phase 1 will be accomplished soon after seedbed preparation during the fall season. Phase 2 will be initiated based upon the results of monitoring for two growing seasons.

Phase 1

The present plan for slopes from 25 to 50% is to hydroseed (Attachment 2, 22 lbs/acre of pure live seed) with fertilizer (as per recommendations based on the results of soil tests) and chemical tackifier (140 lbs/acre); overspray with straw mulch (2,000 lbs/acre) and chemical tackifier (120 lbs/acre); and overlay nylon netting. Data collected during Interim Revegetation would provide a basis for potential modifications to this plan. Slopes less than 25% will be

Table 2. Disturbed area (acres) in each vegetation type to be revegetated during final reclamation at the King VI Mine.

Vegetation Type	Location							Total
	Stacker Conveyor	Sediment Pond	Coal Pile	Truck Turnout	Conveyor	Haul Road	Diversion Ditch	
Riparian	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.10
Pinyon-Juniper	0.00	0.00	0.50	1.25	0.20	4.00	0.03	5.98
Sagebrush	0.25	0.40	0.30	0.00	0.00	6.50	0.00	7.45
Total	0.25	0.50	0.80	1.25	0.20	10.50	0.03	13.53

topsoiled; ripped to a depth of 14-16 inches to loosen the packed soil and to promote better root and moisture penetration; disked to prepare the seedbed; fertilized as per recommendations based on the results of soil tests; harrowed to incorporate the fertilizer; seeded using a rangeland drill; and mulched with straw (2,000 lbs/acre) mechanically crimped into the soil to control erosion, promote germination, and increase moisture retention of the soil.

Phase 2

Herbaceous species often germinate and become established more rapidly than woody species, thus outcompeting woody species for water and essential nutrients when they are seeded simultaneously. Therefore, U.S. Fuel Company proposes to monitor the success of Phase 1 for two growing seasons and, thereafter, take corrective actions as necessary to ensure revegetation success. The principal corrective actions anticipated are additional seeding (herbaceous and woody species) and transplanting (woody species). Areas where Phase 1 was unsuccessful in vegetative establishment will be examined to determine which additional treatments (applications of seed, fertilizer, mulch or other soil stabilizers) are needed to ensure vegetative establishment. Shrubs and trees will be transplanted as necessary to meet revegetation standards of success for woody plant density and community diversity (Attachment 2).

Monitoring and Standards for Success

Final revegetation will be monitored annually during the first 5 years and semi-annually during the remainder of the responsibility period (except annually for the last two years). Reference areas will also be monitored annually during the last two years of the responsibility period. Monitoring will be conducted during the peak production period (late July to early August) when plant cover is near maximum and individual species are recognizable. Parameters to be monitored include cover, production and woody plant density. Cover and production will be measured in 0.5 m² quadrats located randomly in permanently located areas in the disturbed communities. At least one permanent location will be established in each disturbed area to be revegetated, listed in Table 2. Total cover and cover by species will be ocularly estimated in each quadrat. Production will be estimated by clipping current annual growth of species in each quadrat. Woody plant density will be estimated using randomly located 1 x 2 m quadrats. The sample size (number of quadrats) for each parameter in each area to be sampled will be considered adequate at 80% confidence with 10% precision (formula given in Interim Revegetation Plan). The 80% confidence level is used because the area disturbed was shrubland.

The Reference Areas Method will be used for revegetation standards. The cover, production, and woody plant density of the revegetated area will be considered equal if they are at least 90% of the cover, production and woody plant density of the reference area with 80% statistical confidence (shrublands). Student's t-tests will be performed to test

these hypotheses. Similarity in species composition between revegetated and reference areas will be demonstrated using a similarity index such as Jaccard's Community Coefficient or Sorenson's Index of Similarity.

ATTACHMENT 1

Seed Mix For Interim Revegetation

The following seed mix was developed to provide a variety of predominantly native species to be tested for their ability to survive and be successful in stabilizing the soil and establishing a diverse, effective and permanent vegetative cover. The seed mix is composed of grasses (bunchgrasses and sod formers), forbs, and shrubs, adapted to the soils and climate of the King VI Mine.

Scientific and Common Name

% by Weight of Pure Live Seed

NATIVE GRASSES

Agropyron riparium
Streambank wheatgrass

7

Agropyron smithii
Western wheatgrass

7

Agropyron trachycaulum
Slender wheatgrass

7

Elymus cinereus
Basin wildrye

7

Poa pratensis
Kentucky bluegrass

2

INTRODUCTED GRASSES

Agropyron intermedium
Intermediate wheatgrass

7

Elymus junceus
Russian wildrye

7

NATIVE FORBS

Eriogonum umbellatum
Sulfur flower

7

Hedysarum boreale
Northern sweetvetch

7

Artemisia ludoviciana
Louisiana sagebrush

2

INTRODUCTED FORBS

Medicago sativa
Alfalfa

7

Melilotus officinalis
Yellow sweetclover

7

Scientific and Common Name

% by Weight of Pure Live Seed

NATIVE SHRUBS

Artemisia tridentata wyominyensis
Big sagebrush

2

Cercocarpus montanus
True mountain-mahogany

7

Chrysothamnus nauseosus albicaulis
Rubber rabbitbrush

7

Ephedra viridis
Green ephedra

10

In addition to the above seed mixture, U.S. Fuel Company requests approval from UDOGM to include 10 lbs of rye and 10 lbs of barley to serve as a nurse crop.

Information from field tests will help determine whether or not the use of the introduced species can be justified for final reclamation. The introduced species were selected for their ease of establishment, erosion control and compatibility with post-mining land use.

ATTACHMENT 2

Seed Mix for Final Reclamation

The following seed mix was developed to provide a variety of native species which should be successful in stabilizing the soil and establishing a diverse, effective and permanent vegetative cover. The seed mix is composed of grasses (bunchgrasses and sod formers), forbs, shrubs, and trees adapted to the soils and climate of the King VI Mine. The seed mix may be modified (upon approval by UDOGM) based upon the results of Interim Revegetation field tests.

<u>Scientific and Common Name</u>	<u>% by Weight of Pure Live Seed</u>
GRASSES	
<u>Agropyron riparium</u> Streambank wheatgrass	7
<u>Agropyron smithii</u> Western wheatgrass	7
<u>Agropyron trachycaulum</u> Slender wheatgrass	7
<u>Elymus cinereus</u> Basin wildrye	7
<u>Poa pratensis</u> Kentucky bluegrass	2
FORBS	
<u>Eriogonum umbellatum</u> Sulfur flower	7
<u>Hedysarum boreale</u> Northern sweetvetch	7
<u>Artemisia ludoviciana</u> Louisiana sagebrush	2
SHRUBS	
<u>Artemisia tridentata wyominyensis</u> Big sagebrush	2
<u>Cercocarpus montanus</u> True mountain-mahogany	7
<u>Chrysothamnus nauseosus albicaulis</u> Rubber rabbitbrush	7
<u>Ephedra viridis</u> Green ephedra	10
TREES	
<u>Pinus ponderosa</u> Ponderosa pine	14
<u>Pseudotsuga menziesii</u> Douglas fir	14
Total	100

This seed mix will be augmented by transplanting (as seedlings, tubelings or container-grown stock) the following species not listed in the seed mix:

Pinyon-Juniper and Sagebrush Areas

Shrubs

Cercocarpus ledifolius
Curleaf mountain mahogany

Juniperus communis
Common juniper

Mahonia repens
Creeping Oregon grape

Trees

Juniperus scopulorum
Rocky Mountain juniper

Pinus edulis
Pinyon pine

Riparian Areas

Shrubs

Amelanchier alnifolia
Serviceberry

Juniperus communis
Common juniper

Rhus trilobata
Oakbrush sumack

Rosa woodsii
Woods rose

Trees

Acer glabrum
Rocky Mountain maple

Juniperus scopulorum
Rocky Mountain juniper

Populus tremuloides
Quaking aspen

Prunus virginiana
Chokecherry

These species were selected based on their occurrence in the various vegetation types at the King VI Mine and for their contribution as wildlife habitat. Transplanted plants will be "grouped" so as to maximize benefit to wildlife.



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

June 23, 1982

Ms. Jean Semborski
U.S. Fuel Company
Hiawatha Complex
Hiawatha, Utah 84527

RE: Water Treatment Plan
NAOC #82-2-7-2
ACT/007/011
Carbon County, Utah

Dear Jean:

The plans (dated 6-17-82) for implementing a concrete septic tank to control waste water discharge at the Western Coal Carriers yard is acceptable to the Division provided that the tank will be installed and located to mitigate disturbance to any nearby stream channels.

Sincerely,

A handwritten signature in dark ink, appearing to read 'D.W. Darby'.

D.W. DARBY
RECLAMATION HYDROLOGIST

DWD/tck

cc: Wayne Hedberg, DOGM



STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

June 21, 1982

Mr. Charles Jahne
Environmental Engineer
Sharon Steel Corporation
19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111

RE: King VI Loadout Sediment Pond
Revision
Hiawatha Complex
ACT/007/011
Carbon County, Utah

Dear Mr. Jahne:

The plan for reconstruction of the King VI loadout sediment pond has been reviewed by Wayne Hedberg. The plan cannot be approved at this time until the following comments and deficiencies are addressed:

1. In regard to Item #3, the applicant commits to removing six inches of topsoil from the vegetation-cleaned area to be stored at the "Lamb's Trailer Area." The applicant should not limit stripping to only six inches but remove as much topsoil and suitable subsoil material as may be justifiable from the area for future reclamation purposes. There is a known deficiency of suitable plant growth medium for reclamation of the King VI area and any excess soil material available on-site would preclude the necessity to disturb new areas for alternative sources.
2. A run-off ditch may not be deemed adequate to protect the topsoil pile resulting from Item #3. The stockpile should be further protected from wind and water erosion via reseeding and mulching or a canopy of synthetic cover of some sort.
3. Is the fill dirt specified in Item #6 actually the subsoil generated in loadout development and currently stockpiled in the borrow area?

4. Of the estimated 1,050 cubic yards of required fill dirt, Items #6, 9 and 11 specify that about 590 cubic yards will be generated for use. Will enough fill material be excavated in the course of Items #8 and 10? If not, where will the balance of the material be obtained from? Would there be a deficiency of fill material if more than six inches of topsoil were removed from the area for pond extension?
5. Item #7 states that the existing pond will be pumped out prior to reconstruction. There is no mention as to how dewatering will be accomplished during construction if necessary.
6. The applicant has not provided any specifics or calculations defining the storage volume of the new pond. How much sediment storage would be provided? How much runoff storage is the pond designed to handle? Has any adequate detention time been provided to ensure that any discharges will meet effluent limitations?
7. What is the applicant's plan for removal of sediment from the pond? How will the maximum storage volume be indicated for the pond?
8. Why was the primary discharge pipe located at cross section #4 rather than at #2? Perhaps locating the discharge pipe at cross section #2 would lessen the potential for short-circuiting and hence increase the detention time and settling of suspended sediment (UMC 817.46[e]).
9. Will the four-inch diameter discharge point be of adequate size to prohibit any discharge from the emergency spillway during the 10-year, 24-hour event (UMC 817.46[g]).
10. Cross section #4 depicts the principle discharge elevation at 7,718 feet; however, the drawing does indicate some confusion pertaining to the inverted decant pipe in that the discharge elevation as drawn is referenced to the leading lip of the pipe. In actuality, the water level would rise somewhat higher before discharging due to the inherent design of the inverted pipe. The applicant should clarify this situation to demonstrate compliance with UMC 817.46(i). Also, will the combination of four inch principle decant pipe and the emergency spillway safely pass the runoff volume associated with the 25-year, 24-hour storm event (UMC 817.46[i]).
11. The applicant's designs do not exhibit compliance with UMC 817.46(j). The minimum elevation of the top of the sediment embankment shall be one foot above the water surface in the reservoir with the emergency spillway flowing at design depth. Cross section #1 provides for 10 inches of elevational difference under a no-flow condition. This discrepancy should be cleared up with a new design which shows compliance with the regulation.

Mr. Charles Jahne
ACT/007/011
June 21, 1982
Page 3

12. The applicant should consider the use of cut-off collars on the primary discharge pipe where it bisects the embankment.
13. The entire embankment and surrounding area which was disturbed during construction shall be stabilized with respect to erosion by vegetative cover or other means immediately after the embankment is completed.

Enclosed is a modification to NOV #1 (N82-2-5-1) extending the abatement 30 days until July 11, 1982. An adequate response to these comments should be submitted to the Division no later than July 11, 1982 for abatement of the violation. If you have any questions or comments, please contact Wayne Hedberg or myself.

Sincerely,



SANDY PRUITT
RECLAMATION OFFICER

Enclosures

cc: Steve McNeal, State Health w/plans
Wayne Hedberg, DOGM

SP/btb

file ACT/807/811

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

June 17, 1982

State of Utah
Natural Resources & Energy
4241 State Office Building
Salt Lake City, Utah 84114

RE: Water Treatment Plan
Western Coal Carriers' Yard

Dear Division:

The following written response is United States Fuel Company's plan to take action on NAOC No. 82-2-72 and shall be implemented upon approval by the Department of Oil, Gas and Mining.

Water Treatment Plan for Seepage Western Coal Carriers Yard

Seepage from a covered drain pipe near the perimeter of the Western Coal Carriers yard has been cited as a violation. U.S. Fuel intends to see that the following action is taken should approval for these measures be granted.

A concrete septic tank, 2500 gallon capacity (see enclosed drawing for details) will be ordered. Upon receiving the tank, the drain pipe will be excavated. A hole to fit the dimensions of the septic tank will be dug. The drain pipe will be shortened so that it will enter the inlet on the septic tank. The outlet will be plugged so that all materials entering the tank will be contained there until they are pumped out by a septic tank cleaning service.

The overflow pipe on the top of the septic tank will be directed toward the catch basin located on the north-west side of the yard.

RECEIVED
JUN 21 1982



DIVISION OF
OIL, GAS & MINING

2.

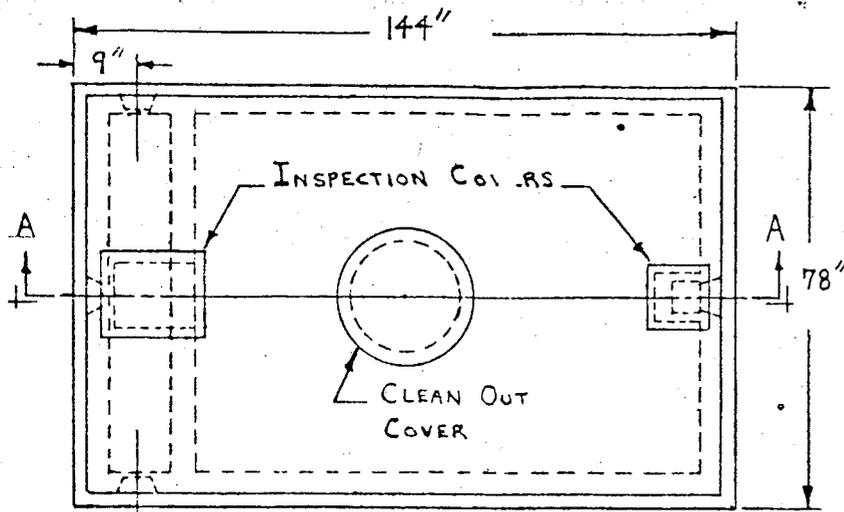
Should any overflow ever occur, it would be contained within this basin until it could be cleaned up and the tank pumped.

United States Fuel Company feels the above stated plan will adequately address the seepage problem. Correction procedures will be enacted then upon written approval from the Division.

Sincerely,

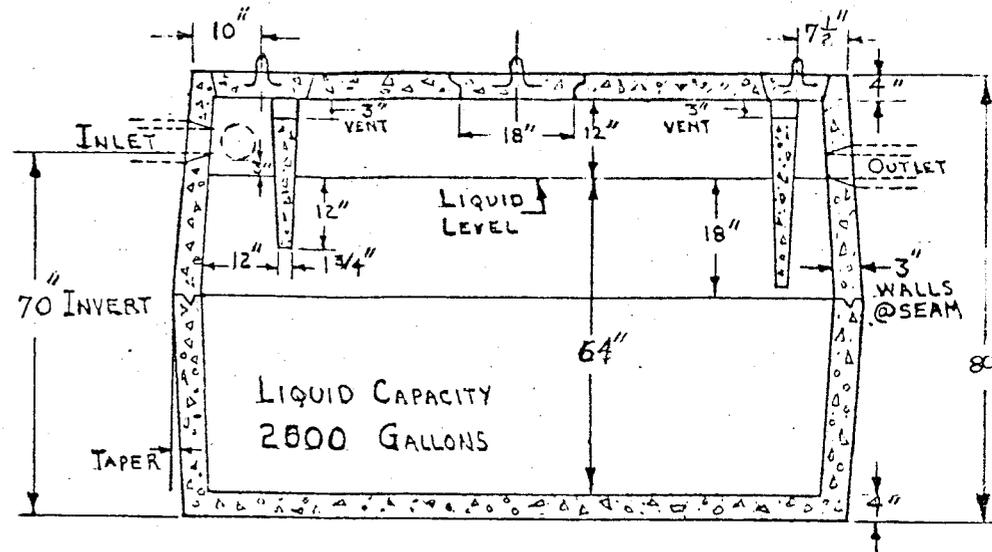
A handwritten signature in cursive script that reads "Jean Semborski". The signature is written in dark ink and is positioned above the typed name.

Jean Semborski



ALT. INLET
KNOCKOUTS 3 PLACES

TOP VIEW

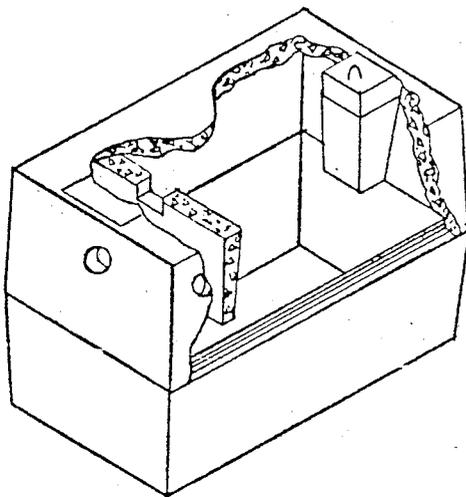


SECTION A-A

NOTE :

CAPACITY - 2500 GALLONS
 WEIGHT - 16000 POUNDS
 EXCAVATION DIMENSIONS - 9' X 15'
 FLOW LINE - 70"

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



CUTAWAY ISOMETRIC

2500 GALLON - TWO PEICE SEPTIC TANK

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

DURA - CRETE, INC.

1475 W. 3500 S.

SALT LAKE CITY, UT

PHONE NO. 972-8686

DRAWING NUMBER

MAIL MESSENGER ROUTING SLIP • (Agencies Outside DSS) (ding)

Division of Corrections

- AP&P Central - 431 S. 300 E., SLC
- Board of Pardons - 2525 S. Main, #15, SLC
- Parole Unit - 355 E. 2100 S. SLC
- AP&P - 202 Kiesel Bldg., Ogden
- AP&P - 184 W. 200 S., Provo
- AP&P - 99 S. Main, Farmington

Community Centers

- 90-Day Diagnostic Unit - 302 W. 800 N., SLC
- Community Center - 1009 S. State, SLC
- Lakehills - 1221 W. North Temple, SLC
- Bonneville - 1122 S. 2250 W., SLC
- Women's Center - 322 E. 300 S., SLC
- Community Ctr. - 949 Washington Blvd., Ogden
- Youth Corrections - 61 W. 3900 S., SLC

Recovery Services

- 1050 S. 500 W., Brigham City
- 533 26th St., Ogden
- 225 S. 200 W., Farmington
- 3195 S. Main, SLC MC O.P. BCSE
- 1665 W. 820 N., Provo
- 201 E. 500 N., Richfield
- 551 S. 300 E., St. George
- 1052 Market Drive, Vernal
- 90 N. 100 E., Price

Institutions

- State Hospital, Provo
- State Youth Development Center, Ogden
- State Prison, Point of Mountain, Draper
- Prison Alcohol Treatment Program
- State Training School, American Fork

APA

- 1 95 W. 100 S., Logan
- 129 N. 100 W., Logan..... 1
- 1 1050 S. 500 W., Brigham City..... 1
- 2-A..... 385 24th St., Ogden 2-A
- 2-B..... 2835 S. Main, Salt Lake
- 3195 S. Main, Salt Lake..... 2-B
- 2-C 312 W. Gentile, Layton 2-C
- 2-K..... 4095 W. 5295 S., Kearns
- 4115 W. 5295 S., Kearns..... 2-K
- 2-N 2835 S. Main, Salt Lake
- 3195 S. Main, Salt Lake 2-N
- 2-R..... 1300 W. 300 N., Salt Lake 2-R
- 2-S..... 191 E. 6100 S., Murray 2-S
- 2-T..... 47 S. Main, #300, Tooele 2-T
- 3 305 N. 500 W., Provo
- 260 W. 300 N., Provo 3
- 4 35 W. 200 N., Mantli 4
- 4 201 E. 500 N., Richfield 4
- 5 551 S. 300 E., St. George 5
- 6 1052 W. Market Dr., Vernal 6
- 7A1 90 N. 100 E., Price 7A1
- 7A3 92 E. Center, Moab 7A3
- 7B 522 N. 100 E., Blanding 7B

Field Services

Attn: Oil, Gas, Mining Date: 6/14/82
 From: _____ Phone: 6146
 Office: _____

Comments:

Room 4241

Department of Health

- Building Superintendent, 44 Medical Drive
- Office of the Medical Examiner, 44 Medical Drive
- Office of the State Health Lab., 44 Medical Dr.
- Division of Community Health Svcs., 825 N. 300 W., SLC
 - Director's Office
 - Local Health Svcs.
 - Chronic Disease Control
 - Communicable Disease Control
 - Emergency Medical Services
- Division of Environmental Health, 825 N. 300 W., SLC
 - General Sanitation
- Division of Family Health Services, 44 Medical Dr.
 - Dental Health EPSDT
 - Maternal & Child Health Tooele School
 - Speech Pathology WIC
- Handicapped Children's Serv. - 2738 S. 2000 E., SLC
- Handicapped Children's Serv. - 1100 Orchard Ave., Ogden
- Primary Children's Med. Center, 320 - 12th Ave., SLC
- Ogden Outreach, 924 - 24th Street, #3, Ogden
- Salt Lake Outreach 140 W. 2100 S., SLC
- Cancer Screening Program, 1212 S. State, SLC
- Air Monitoring Facility, 261 W. 500 S., SLC

Other

- Davis County Health - Courthouse, Farmington
- Salt Lake City-County Health - 610 S. 200 E., SLC
- Utah City-County Health - 107 E. 100 S., Provo
- Weber-Morgan District Health 2570 Grant Ave., Ogden
- Family Resource-Counseling Ctr. 10101 S. State, Sandy
- PSRO - 540 E. 500 S., SLC

Other State Agencies (Capitol Bldg.)

- Governor State Archives
- Attorney General State Budget
- Central Data Processing State Planning
- Central Stores Legislative Research
- State Finance Dept.
- State Personnel Office

State Office Building

Department of Social Services

- 310 Office of the Executive Director - DSS
 Management Planning
 317 Facilities Planning
 320 Management Audit
 Constituent Services
 388 Management Information
 333 Policy Planning & Budget
 353 Office of Administrative Hearings

 154 Bureau of General Services
 Building & Grounds
 Forms Control
 Inventory Control
 135 Printing & Graphics
 140 Service Center (autos/copies/stores)
 118 EDP Control
 117 EDP Processing
 137 Office of the Handicapped
 212 Bureau of Finance
 155 Bureau of Financial Audit

- 275 Bureau of Personnel Staff Dev. & Training
 121 Audio/Visual Specialist (AV equipment)
 Librarian
 275 Volunteer Service Coordinator
 262 Office of Assistance Payments Admin.
 175 Office of Food Stamp Issuance
 258 Office of Quality Control
 250 Office of Recovery Services
 Bureau of Child Support Enforcement
 Bureau of Collections
 Overpayments
 326 Division of Aging
 350 Division of Alcoholism & Drugs
 375 Division of Corrections
 Adult Probation & Parole Admin.
 370 Division of Family Services
 Children, Youth & Families
 Developmental Disabilities/Mental Retardation
 Youth Corrections
 356 Management Support Services
 336 Division of Mental Health
 380 Field Services

Department of Health

- 270 Office of the Executive Director - SDH
 280 Deputy Director of Health
 Financial Audit
 Personnel
 210 Finance
 280 Office of Community Health Nursing
 474 Division of Environmental Health
 Air Quality
 Hazardous Waste Management
 Public Water Supplies
 Radiation Control
 Uranium Mill Tailings Management
 Water Pollution Control
 460 Division of Health Care Financing
 Director's Office
 Policy & Planning
 Management Services
 454 Patient Assessment
 Facility Management
 440 MMIS Development
 440 Education & Training
 230 Support Services
 Program Review
 Quality Assurance
 215 Medical Claims
 280 Office of Management Planning
 Budget
 Management Audit
 Planning & Budget
 160 Health Statistics
 316 Health Facilities & Planning

Attn: _____ Date: ____/____/____

From: _____ Phone: _____

Office: _____

Comments:

Scott M. Matheson
Governor



STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

File
ACT/007/011
Copy to Wayne
JIM

June 14, 1982
533-6146

JUN 22 1982
Alvin E. Rickers, Director
Room 474 801-533-6121

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

Robert Eccli, Engineer
U.S. Fuel
P.O. Box A
Hiawatha, Utah 84527

DIVISIONS
Community Health Services
Environmental Health
Family Health Services
Health Care Financing
OFFICES
Administrative Services
Community Health Nursing
Management Planning
Medical Examiner
State Health Laboratory

RE: Sanitary Systems

Dear Mr. Eccli:

This letter is to express our concern about the U.S. Fuel sanitary drainfield failure observed on June 9, 1982 by Steven McNeal of this Bureau. The surfacing of sanitary wastewater from the coal mine bathhouse drainfield in the Middle Fork Canyon of Miller Creek must be corrected as soon as possible. In view of this, you are hereby requested to immediately submit to this office a compliance schedule to correct the problem.

This schedule should include specific dates for plan submittal, commencement of construction, and completion of construction. The schedule should include two weeks for our review and approval of plans prior to initiating construction of a satisfactory system. Also, the project completion date should not extend beyond August 1, 1982.

In a separate matter we request that you submit information on the King Six Mine as originally requested in the attached August 19, 1981 letter to Mr. Jahne.

Please call Steve McNeal at 533-6146 if you have any questions about the submittal of this information.

Sincerely,

UTAH WATER POLLUTION CONTROL COMMITTEE

Jay B. Pitkin
Calvin K. Sudweeks
Executive Secretary

RECEIVED

JUN 15 1982

SM:ddr
cc: Southeast District Health Department
Southeast AOG
Oil, Gas and Mining

DIVISION OF
OIL, GAS & MINING

1357

SHARONSTEEL • Mining Division

AN **NVF** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

file Act/002/011

June 9, 1982

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

RECEIVED
JUN 10 1982

**DIVISION OF
OIL, GAS & MINING**

Attention: Ms. Sandy Pruitt, Reclamation Officer

Gentlemen:

I am enclosing three (3) copies of Drawing EFC-133-R-8 "Revise Sedimentation Pond - Plan and Sections" along with a proposed specification for rebuilding the pond. I hope that both the drawing and specification meet with the approval of your Agency.

Should you have any questions, please call me.

Have a nice weekend.

Very truly yours,

Charles J. Jahne
Charles J. Jahne

CJJ:jrs

Enclosures

PROPOSED
SPECIFICATIONS FOR REBUILDING OF
SEDIMENTATION POND

King VI Mine Overland Belt
South Fork Miller Creek Canyon
Hiawatha, Utah

GENERAL:

The present sedimentation pond for the King VI Overland Belt Project must be rebuilt due to the possibility of unstable side and end banks, incorrectly arranged primary overflow and secondary spillway and the possibility of continual sloughing of dirt from the south bank into the stream bed of the South Fork of Miller Creek. The South Fork of Miller Creek is an ephemeral stream which flows annually between the months of March to November. It receives water from the surrounding South Fork Canyon watershed.

It is the intention of this specification that (1) the banks of the rebuilt sedimentation pond be stable, (2) the sloughing problem be corrected and (3) the primary overflow be situated below the discharge level of the secondary spillway.

SCOPE OF WORK:

1. The present sedimentation pond is to be extended in an eastward direction some 200 feet (from the top of the present east bank to the toe of the new east bank). Approximate grade elevation at this point is 7708 A.S.L. The new pond will parallel the South Fork Canyon Road and the outslopes of the new south bank are to be about 3'-0" back from the edge of the existing fall to the creek bed. NOTE: All new banks, either installed or as a result of re-construction of existing banks are to be installed with upstream and downstream slopes of 1v:3h.
2. Remove the vegetation that is in existence between the present east bank and the location for the new pond east bank. The resulting trash is to be burned at the site of the work.
3. Remove 6" of topsoil from the vegetation-cleaned area and store it atop the existing topsoil pile located at W-5700, S-1700 shown on Drawing EFC-133-R3. This area is noted as "Lamb's Trailer Area."
4. Construct a run-off ditch around the new topsoil pile resulting from (3) above.
5. Compact perimeters of area resulting from (1) and (3) above where the new east and south banks for the sedimentation pond will stand.
6. Using fill dirt stored at the junction of the South Fork Canyon and Middle Fork Canyon roads begin construction of the new pond east bank.

NOTE:

An estimated quantity of 1050 cu. yd. of dirt will be required for the pond expansion. About 450 cu. yd. is stored at the junction noted above.

7. Pump out the existing sedimentation pond so as to allow the east and south banks to dry out as much as possible. Allow 10 days for the banks to dry out. (Deliver the water generated by the pumping to slurry pond No. 1 north and east of the tipple.)

8. Excavate area resulting from (1) and (3) above so as to provide a bottom of pond elevation of 7712 A.S.L. Apply excavated dirt to east and south sides of new pond area as banks.

9. Remove existing pond east bank and use dirt in the construction of the pond extension.

NOTE:

An estimated quantity of 100 cu. yd. of dirt constitutes the existing east bank. An estimated quantity of 500 cu. yd. of new fill dirt will be needed to complete the sedimentation pond reconstruction.

10. Excavate as necessary to provide a bottom of pond profile as shown on Drawing EFC-133-R-8.

11. Reconstruct the entire existing south bank of the present sedimentation pond. The following is to be accomplished:

A. Retrieve all of the excavated and loose dirt that is on the outslope of the existing south bank.

B. Retrieve all of the excavated and loose dirt on the top of the existing south bank.

NOTE:

It is difficult to determine the quantity of excavated dirt that has been placed on the present south bank outslope. It is estimated at between 25 and 40 cu. yd. Retrieval to original or natural grade is the goal of (A) and (B) above. (Dirt retrieved from the outslopes and top of the existing south bank may be used in the construction of the pond extension.)

C. Remove the 4" diameter primary overflow pipe, re-constitute the excavated bank and relocate the pipe at the elevation and location shown on Drawing EFC-133-R-8.

D. Rebuild the existing south bank of the sedimentation pond to correspond to the shape and depth of the pond shown on Drawing EFC-133-R-8.

12. Reconstruct the existing west bank of the existing sedimentation pond. The following is to be accomplished:

A. Retrieve all excavated and loose dirt that is on the outslope of the existing west bank.

B. Retrieve all of the excavated and loose dirt on the top of the existing west bank.

C. Use dirt accumulated from (A) and (B) above as fill dirt at the west end of the new pond.

NOTE:

No estimate of the excavated or loose dirt on the east bank has been made, since it is intended to be used as fill for the west end of the new pond.

13. Rip-rap the area of the pond under the 24" diameter corrugated galvanized steel pipe, as well as the inlet and discharge of the secondary spillway at the east end of the pond and the 4" diameter pipe discharge.

14. Compact the new banks and the re-constructed existing banks to a 90% proctor as the banks are developed.

Memo to Coal File:

June 10, 1982

RE: Soil Sampling
Hiawatha Complex
ACT/007/011
Carbon County, Utah

On May 28, 1982, Tom Portle, Division Reclamation Soil Specialist, spoke with John Rice, Bio/West Consultants, dealing with soil sampling problems at the Hiawatha Complex. These problems are such that two distinct sets of soil analysis will be done. The following tests will be taken in the coal stockpile and truck turn-about areas:

Bulk density	Potassium
Available nitrogen	Magnesium
Organic matter	Calcium
Phosphorous	Sodium

Core samples will be taken to a six foot depth at 18 inch intervals with depth (thus four samples will be taken).

The sample sites will be appropriately marked and mapped to ensure that each location can be sampled at five year intervals thus providing an indication of change in soil parameters over time.

The following areas will be sampled and tested according to a second group of soil tests:

- Borrow area (the 12 acre area east of Middle Fork)
- Subsoil at the confluence of Middle Fork and South Fork Roads)
- Pond embankment on lower pond in King VI
- Pond embankment on upper pond at King VI (on side where little revegetation success has been achieved)

Tests for the above areas are to be the same as above except no bulk density and with the addition of soluble salts and texture. The soils will be sampled according to horizons or to an 18 inch depth as appropriate.

THOMAS L. PORTLE *TLP*
RECLAMATION SOIL SPECIALIST

cc: Wayne Hedberg, OGM
Sandy Pruitt, OGM
Chuck Jahne, Sharon Steel
John Rice, Bio/West, Inc.

TLP:dc

File ACT/007/011

SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

April 5, 1982

RECEIVED
APR 06 1982

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

**DIVISION OF
OIL, GAS & MINING**

Attention: Mr. Wayne Hedberg, Hydrologist

Re: United States Fuel Company
King VI Mine
ACT/007/011
Stipulation 7-81-11

Gentlemen:

I am enclosing three (3) copies of Drawing ERC-133-R-7 entitled "Portal Sealing Design" for your information and review. The drawing addresses the requirement for sealing King VI Mine portals at the time of final reclamation.

If you have any questions on this, please call me.

Very truly yours,

Charles J. Jahne
Charles J. Jahne

CJJ:jrs

Enclosure

FILE: ACT/007/011 DWI

SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

March 31, 1982

RECEIVED
APR 01 1982

**DIVISION OF
OIL, GAS & MINING**

State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attention: Mr. Wayne Hedberg, Hydrologist

Re: United States Fuel Company
King VI Mine
ACT/007/011

Gentlemen:

This letter is being written for two (2) reasons: (1) to confirm my statements made in our meeting of March 25, 1982 regarding the South Fork Canyon haul road and (2) to transmit a copy of a letter I addressed on March 26, 1982 to Mr. Errol Gardiner, pointing out the fact that deficiencies exist in the Hiawatha Mine Plan submitted last year.

First, relative to the haul road; it is the present intention of the Company to leave the road for access to the King VI Mine area once mining has been completed. The reasons for this are: (1) to provide for access to the water source for the town of Hiawatha, (2) to provide access for repair service on the 6 inch pipe line that carries the water to a 130,000 gallon concrete water tank, which ultimately supplies Hiawatha with water, (3) to provide access into South Fork Canyon for recreational purposes and (4) to provide access for grazing, if the Canyon will one day have that use.

Secondly, I am enclosing a copy of a letter that I mailed to Errol Gardiner last week. I also talked to Mary Boucek about the letter to Errol Gardiner and I think that she may be interested in seeing it.

If you have any questions on any of this, please call me.

Very truly yours,

Charles J. Jahne
Charles J. Jahne

CJJ:jrs

Enclosure

SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

March 26, 1982

United States Fuel Company
P. O. Box A
Hiawatha, Utah 84527

Attention: Mr. Errol M. Gardiner, Vice President and General Manager

Gentlemen:

On Thursday, March 25, 1982, I had a meeting with Wayne Hedberg, Mary Boucek, Lynn Kunzler and Tom Portle of DOGM. The reason for the meeting was to review the status of the responses to the various environmental stipulations surrounding the King VI Overland Belt Project. Several deficiencies were noted - some of which are presently being detailed, by Mary Boucek, for further work.

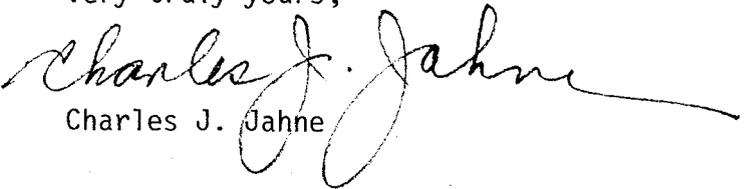
During the discussions on the King VI Project, it was pointed out that there are also several deficiencies in the overall Hiawatha Mine Plan assembled by the John T. Boyd Company and submitted last year (March 23, 1981). Detailed information on these deficiencies is also being compiled at DOGM. The information will be forthcoming sometime between June 1 and June 15, 1982. Examples of deficiencies in the overall mine plan are (1) lack of a final reclamation plan for the South Fork Canyon Road and (2) lack of a final reclamation plan for the King VI Portal area. Evidently there are others, based on vague statements and general statements which do not address items in sufficient detail.

It was also pointed out to me - rather strongly - that expansion of the present operating areas at Hiawatha, to Mohrland for example, would not be approved until these various deficiencies were settled.

I think that it is important that you be aware of the attitude of DOGM in these areas, since the Company is anticipating a Mohrland expansion. We would do well to seek the technical assistance of the John T. Boyd Company in these details, so that any pertinent environmental consideration may be addressed before hand to avoid any fines or delays in starting production. Coincidentally, in a conversation with the John T. Boyd Company today, I was told that JTB Co. sub-contracts the talents it needs in the areas of vegetation, soils and wildlife. These are our areas of greatest deficiency.

If you have any questions on this, please call me.

Very truly yours,


Charles J. Jahne

CCJ:jrs

pc: Mr. E. Peter Matthies

File ACT/007/011
Copy to Lynn
for response

UNITED STATES FUEL COMPANY JIM

HIAWATHA, UTAH 84527

MAR 18 1982

March 12, 1982

James W. Smith, Jr.
State of Utah
Natural Resources & Energy
4241 State Office Building
Salt Lake City, Utah 84114

Re: Raptor Protection
Survey Acknowledgement

Dear Jim:

This past week U.S. Fuel has received a notice dated March 8, 1982 requesting us to seek a Raptor Protection survey. We have had this survey completed as directed by DOGM in their August 7th inspection memo to U.S. Fuel Co, almost seven months ago. Upon receiving your last memo concerning raptor surveys, we then contacted Ron Joseph at the Division of Fish and Wildlife for a document of his inspection in order to answer the March 8th notice. We were told that your division should have been aware of the fact that this survey had been completed at Hiawatha per his report sent to the Division of Oil, Gas and Mining last October.

If so, we would like to know why the Division has of today still not informed the operators involved that you have received the report, what the report states about the operator's facilities and why we are still being asked to do a Raptor Survey after we have already done so and received verbal clearance from the inspecting authority.

Please send us the necessary clearance to prevent U.S. Fuel Co. from being cited for failure to comply after April 30, 1982.

Sincerely,

Jean Semborski

Jean Semborski
Engineering Assistant

RECEIVED
MAR 17 1982

DIVISION OF
OIL, GAS & MINING

JS/lj



File Act 1007/011

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

March 9, 1982

RECEIVED
MAR 10 1982

Ms. Sandy Pruitt
State of Utah, Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

**DIVISION OF
OIL, GAS & MINING**

Dear Sandy:

Please note there has been a revision of the status of the three portals at the South Fork mine yard from that set forth in Mr. Jahne's letter dated December 15, 1981 to you.

Portal one is currently used to convey supplies into the active section.

The second portal is an access to the mine works for the Fire Boss. It is used to inspect the air routes for problems before the shift begins.

Previously, the third portal, which is located about ten to twelve feet above the mine yard, was cited for closure. Now it has been learned that the portal is important as a source of fresh air to the mine works. Closure of this opening at this time may bring about problems with MSHA concerning air intake requirements.

As this portal is accessible only with difficulty due to its location, we don't feel that there is any danger if it is left open at the present time.

My apologies for not discovering this information sooner. We hope this information will settle the situation.

c.c.: Errol Gardiner
John Lind
Chuck Jahne

Sincerely,
Jean Semborski
Jean Semborski



SHARONSTEEL • Mining Division

AN **NVF** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

December 23, 1981

The State of Utah
Natural Resources and Energy
Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Re: United States Fuel Company
King VI Mine
ACT/007/001
Stipulation 7-81-12

*file ACT/007/001
Hawatha*

Attention: Ms. Sandra Pruitt, Environmental Scientist

Dear Ms. Pruitt:

I am enclosing three (3) copies of EFC-133-SK-1 and SK-2 describing the final reclaim contours of the King VI Mine 42" Overland Belt System. The reason for attaching SK-1 to this letter is to let you see that the route of the conveyor belt west of W-11,000 is practically on the edge of the South Fork Canyon road. Final reclamation of the South Fork Canyon road is addressed in the overall mine plan submitted on March 23, 1981, I believe. Whatever would remain of the overland belt support system will be incorporated into the final road disposition upon completion of mining activities. Also, please note that Transfer Point No. 1 is housed at the South Fork Yard area. Final disposition of this area will be done at the same time and in the same way as proposed plans call for in the South Fork Yard area.

With those areas already addressed in previous submittals to the Department of Oil, Gas and Mining, regrading of the coal pile area, the truck turn-around area, the excavated portion of the overland belt and the sedimentation pond remain. Drawing No. EFC-133-SK-2 describes this information.

Relative to your phone call about the "Fire Boss" portal on Monday, December 21, 1981, I have talked to Bob Eccli. Apparently the portal in question is used as a normal part of the Fire Boss' inspection tour before the start of a shift in the mine. Since this occurs twice each day, access to and egress from the mine through this portal is necessary.

Should you have any questions, call me.

Merry Christmas!

Charles J. Janne

Charles J. Janne

RECEIVED
DEC 28 1981

CJJ:ms

Encls.

DIVISION OF
OIL, GAS & MINING

SHARONSTEEL • Mining Division

AN **NVF** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

December 10, 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: King VI Mine
42" Overland Belt
Environmental Considerations
Meeting of December 3, 1981

Attention: Tom Portle, Soils Inspector

Dear Tom:

I want to thank you, Dave Lof and Ken Wyatt for coming to Hiawatha on Tuesday and for spending the time for reviewing the existing status of the environmental aspects of the subject construction project. I also appreciate your phone call of Friday, December 4, 1981 at which time we both agreed that such a meeting should be held and to have the meeting include Mike Lamb and Guy Remick of Lamb Engineering and Construction Company, the contractor on the project. As I said in our phone conversation, I wanted them to see and hear what work of an environmental nature was necessary to be done in order to satisfy the regulations and their intent.

In the course of the four hour site tour, some twelve (12) different items were agreed to by all present as "work to be done" in order to comply with existing regulations. They are summarized as follows:

THE TRUCK TURN-OUT AREAS:

1. The road entering the truck turn-out area from the South Fork Canyon road is to be sloped toward the excavated hillside. This will provide a ditch to capture run-off from the excavated hill and the road. The captured run-off will be conducted toward the culvert which feeds the sedimentation pond. Starting point for this ditch will be directly under the middle of the dam which blocks the mouth of the natural drain of the local watershed.

2. The truck turn-out itself will be paved with about 4" of asphalt atop some 6" of road base gravel. This road base and pavement will cover the turn-out entrance and exit roads also. It was agreed that since such paving will take place, it would not be necessary to slope the turn-out or turn-out exit paved areas since the velocity of the water from the excavated hillside would most likely carry it toward

the collecting ditch on the north side of the South Fork Canyon road and thence through culverts to the sedimentation pond. The possibility of "ponding" of the water on the road itself is considered a minor possibility and no provisions will be made for it.

THE DIVERSION DITCH SYSTEM:

1. The earth dam at the mouth of the natural drain has been addressed in a letter to Sandra Pruitt, dated November 25, 1981. Dam stability versus a 10-year, 24-hour storm was discussed in that letter. The fact that the dam doesn't completely seal the mouth of the natural drainage is also mentioned. Under the label of "work to be done" at the dam, it was agreed that the dam must be completed from side to side of the natural drainage. Besides this, a 15" dia. pipe is to be installed about 40 feet uphill from the dam, set into a rip-rapped basin so as to catch the run-off coming from the east and west diversion ditches as well as the natural drainage. The pipe will be run overland, down the hillside into a rip-rapped area east of the sedimentation pond feed culvert and adjacent to the drainage ditch on the north side of the South Fork Canyon road. The rip-rapping of the upper end of the 15" dia. pipe came under intensive discussion and it was agreed to contact the hydrologists at DOGM upon completion of the installation. This will be done.

2. There are two diversion ditches in this system. One extends in an uphill, easterly direction from the natural drainage mentioned above. The other extends in an uphill, westerly direction from the same source. The discharge end of the east diversion ditch must be rip-rapped so as to decrease water stream velocity as it enters the natural drain gully.

3. The discharge end of the west diversion ditch must be extended and rip-rapped on its inside surfaces and re-directed so as to discharge any contained run-off water over as many of the existing rocks and boulders as possible. Since the west slope of the natural drainage is more rocky than the eastern slope, a lesser amount of rip-rapping will be needed, but some must be installed between in-place boulders.

4. Both the east and west halves of the diversion ditch wander on the hillside. There are several locations on each half that must be rip-rapped on the inside surfaces. One must use his judgment in this application of rip-rap and then see what other areas may require a rip-rap application after a rain storm.

It should be noted here that, upon completion of the work on the diversion ditch system, the hydrologists of DOGM will be contacted in order that an inspection of the system may be made. Since there were no hydrologists in the DOGM party at this meeting, an inspection of the

hydrologic aspects of the environmental considerations will be made in the future.

THE COAL PILE AREA:

1. Somewhat uphill and to the west of the coal pile there are two disturbed areas, each of some 1200 to 1800 square feet. One area was disturbed by a truck or 4-wheel drive and the second was disturbed by some sort of hole digging and power pole setting rig. Since no further disturbance is expected in the first area, it will be seeded as soon as possible by the mine personnel.

2. The second area was agreed upon as a site for a top soil storage pile. Dark brown soil - considered top soil - which is located just south of the reclaim tunnel of the coal pile, was agreed upon as a suitable material for stockpiling as top soil. There is not very much, less than a dump truck load. It was agreed that this dark soil could be piled in this second area, protected, seeded and suitably noted with a sign denoting a top soil pile.

NOTE: Subsequent to the meeting, the DOGM party met with Bob Eccli and Jean Semborski and it was decided to move the subject dark brown soil to the existing top soil stockpile in the "Lamb's Trailer" area. This plan was discussed with me and has been agreed to. The moving of the dark brown soil to its temporary resting place will be handled by the mine personnel.

3. South and west of the coal pile - in the general vicinity of Transfer Point No. 2 (T.P.2) - there is a large area of grubbed surface that could become contaminated from the presence of the overland belt and the stacker conveyor. It was agreed that a line of hay bales extending from about T.P.2 eastward along the edge of the hillside, about 80-100 feet, thence north-eastward to the belt access road, should be installed to prevent any contaminated water from spilling over the edge of the hillside to the north wall of the excavation of the South Fork Canyon road. This area will also be seeded.

THE OVERLAND CONVEYOR BELT LINE:

1. In the excavation of the conveyor belt line, blade side wash from the machinery spilled downhill from the cut in many places. This must all be reseeded as soon as possible. Seeding will be done by mine personnel.

2. The belt line rises from the South Fork Canyon road about 800 feet east of Transfer Point No. 1. Some method of catching hillside run-off and directing it to the drainage ditch on the north side of the South Fork Canyon road must be

December 10, 1981

installed. Two methods were discussed; either is acceptable. Method one provides a ditch along the north side of the belt line from the South Fork Canyon road elevation to the top of the rise and a culvert under the belt line to the drainage ditch. Method two would provide a berm on the south side of the belt line, channelling any run-off water to the drainage ditch. In much earlier hydrologic computation work, the OSM did not consider a conveyor belt line as a source of contamination for watershed run-off.

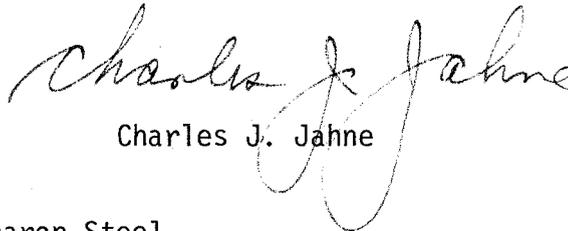
THE SEDIMENTATION POND:

1. The Sedimentation Pond was the last area inspected by the entire group. The following list summarizes the work agreed to be done - all complete by December 18, 1981 - in that area:

- A. Install an elbow on the 36" dia. culvert discharging into the Sedimentation Pond.
- B. Rip-rap the area that will receive the water entering the pond.
- C. Install the spillway on the east end of the pond and install rip-rap on the outslope of the east end of the pond near the spillway.
- D. Extend the discharge pipe into the stream south of the pond.
- E. Clean out the entrance to the 36" dia. culvert that feeds the pond.

This summarizes the step-by-step review of the project. If you have any questions, please call me.

Very truly yours,



Charles J. Jahne

CJJ:ms

cc: C. R. McKendrick - Sharon Steel
M. Lamb - Lamb Engineering & Construction
G. Remick - Lamb Engineering & Construction
D. Lof - DOGM
K. Wyatt - DOGM
J. Semborski - U. S. Fuel Company

SHARONSTEEL • Mining Division

407/007/011

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19TH FLOOR UNIVERSITY CLUB BLDG.
SALT LAKE CITY, UTAH 84111

TELEPHONE (801) 355-5301

FOR INTER-OFFICE COMMUNICATION

October 6, 1981

RECEIVED
DIVISION OF
OIL, GAS & MINING

TO: 'Casey' McKendrick
FROM: Chuck Jahne
SUBJECT: Sedimentation Control - King VI Conveyor Construction Citations
of September 22, 1981 Nos. 2 and 4

This is to confirm our phone conversation of earlier today. In the meeting that I had this morning with Wayne Hedberg and Joe Helfrich of DOGM, we all agreed to the following:

1. Start construction immediately on the Sedimentation Pond and use the culvert presently installed near the end of the paved road area as the supply conduit for the pond.
2. Start construction immediately on the diversion ditch using excavation and/or rock piling methods so long as we maintain the indicated cross sectional areas.
3. It will not be necessary to incorporate the construction of the truck turn out area at this time.
4. Locate the topsoil pile in the location now being used for Lamb's trailer - about one mile east of the work site. Be sure to put a sign up near the topsoil pile identifying it as a topsoil pile.
5. Excavation on the reclaim tunnel may proceed at the coal pile area.

If you have any questions, please call me.

pc: Mike Lamb, Lamb Eng. & Const.
Guy Remick, Lamb Eng. & Const.
Wayne Hedberg, DOGM
Joe Helfrich, DOGM

Chuck Jahne

File ACT/007/011
Copy to Wayne
& Joe

UNITED STATES FUEL COMPANY JIM

HIAWATHA, UTAH 84527

OCT 07 1981

October 1, 1981

RECEIVED
OCT 05 1981
DIVISION OF
OIL, GAS & MINING

Dept. of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

*If this is
OK let me
know & I'll
respond. Thx.
Jim*

Dear Mr. Smith:

On July 29, 1981 U.S. Fuel received a violation fo
to maintain their North Fork jeep trail at Class III ro
and were asked to submit plans to upgrade the road. Thi
temporarily being used as an access road to a construct

*To Jim:
Looks O.K. to
me for what I
can interpret by
this submission.
Jody seems to
feel this is adeq.
w.*

Even before the plan was submitted, travel on the
drastically reduced when the construction was completed
road will be used very infrequently to check the recently constructed
air intake portal, U.S. Fuel would like to submit the following plan
to replace the earlier submitted plan dated August 13, 1981.

DRAINAGE CONTROL PROGRAM - NORTH FORK CANYON JEEP TRAIL

The two perennial stream crossings have been redesigned as
stream fords with low gravel pads as recommended by the Division
in their October 12, 1979 letter.

A culvert sufficient to handle the ten year, 24 hour event has
already been installed in the road to the intake air portal.

Twelve water bars have been placed along the North Fork road
to help prevent erosion of the road. These water bars have been placed
such that they take advantage of the natural drainage-ways that



File ACT/007/011
Copy to Wayne
& Joe

UNITED STATES FUEL COMPANY JIM

HIAWATHA, UTAH 84527

OCT 07 1981

October 1, 1981

RECEIVED
OCT 05 1981
DIVISION OF
OIL, GAS & MINING

Dept. of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Dear Mr. Smith:

On July 29, 1981 U.S. Fuel received a violation for failing to maintain their North Fork jeep trail at Class III road standards and were asked to submit plans to upgrade the road. This road was temporarily being used as an access road to a construction site.

Even before the plan was submitted, travel on the road was drastically reduced when the construction was completed. As the road will be used very infrequently to check the recently constructed air intake portal, U.S. Fuel would like to submit the following plan to replace the earlier submitted plan dated August 13, 1981.

DRAINAGE CONTROL PROGRAM - NORTH FORK CANYON JEEP TRAIL

The two perennial stream crossings have been redesigned as stream fords with low gravel pads as recommended by the Division in their October 12, 1979 letter.

A culvert sufficient to handle the ten year, 24 hour event has already been installed in the road to the intake air portal.

Twelve water bars have been placed along the North Fork road to help prevent erosion of the road. These water bars have been placed such that they take advantage of the natural drainage-ways that



2.

crossed the road by diverting drainage down established channels. Their placement also considered what was needed to effectively break the path of water flowing down the road and divert it off.

Three inspectors from the Oil, Gas and Mining office, Tom Portle, Rex Fidler and Joe Helfrich, have viewed the road, with the last two also seeing the water bars. It was their opinion that this type of control would be sufficient. With the limited use of the road, water bars may operate the most effectively as culverts on this road wouldn't necessarily be checked on a regular basis.

We feel this provides more protection for the road, along with allowing vegetation to establish, than our earlier plan. The above plan for the North Fork jeep trail complys with Class III road requirements and will be considered our plan for the North Fork road upon approval from the Division.

Sincerely,

Jean Semborski

Engineering Dept., U.S. Fuel

November 20, 1981

RECEIVED
NOV 30 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple Street
Salt Lake City, Utah 84106

DIVISION OF
OIL, GAS & MINING

Attention: Ms. Sandra Pruitt, Biologist

Re: U. S. Fuel Company
King VI Mine
ACT/007/011
Stipulation Response

To Lynn for review
then file
ACT/007/011

FILE ACT/007/011
FOLDER 3 B

Gentlemen:

From the University Club Building on Wednesday, November 18, 1981, it a States Fuel Company responses to the subject stipulations were rather scattered, missing or just not read. I have attempted to gather all responses into one booklet, to which additional responses may be added. The booklet has been assembled based on the numerical order of the stipulations. Drawings used to address various stipulations are contained in the envelope in the back. The drawings are labeled in ink to indicate which stipulation description they accompany. I hope that this booklet is of some value to you.

Included in the booklet is the base-line report from B10-West which will be used as data for the re-vegetation plan to be submitted in 1982. Because of the construction of the booklet, Lynn Kunzler can copy the report and review it, if he wishes.

Future responses will be sent to you on sheets prepunched for insertion into the booklet.

Very truly yours,

Charles J. Jahne
Charles J. Jahne

Report + MAPS ARE
located in MAPS Folder.

November 20, 1981

RECEIVED
NOV 30 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple Street
Salt Lake City, Utah 84106

**DIVISION OF
OIL, GAS & MINING**

*To Lynn for review
then file
ACT/007/011*

Attention: Ms. Sandra Pruitt, Biologist

Re: U. S. Fuel Company
King VI Mine
ACT/007/011
Stipulation Response

Gentlemen:

From the meeting held at the University Club Building on Wednesday, November 18, 1981, it appeared that the United States Fuel Company responses to the subject stipulations were rather scattered, missing or just not read. I have attempted to gather all responses into one booklet, to which additional responses may be added. The booklet has been assembled based on the numerical order of the stipulations. Drawings used to address various stipulations are contained in the envelope in the back. The drawings are labeled in ink to indicate which stipulation description they accompany. I hope that this booklet is of some value to you.

Included in the booklet is the base-line report from B10-West which will be used as data for the re-vegetation plan to be submitted in 1982. Because of the construction of the booklet, Lynn Kunzler can copy the report and review it, if he wishes.

Future responses will be sent to you on sheets prepunched for insertion into the booklet.

Very truly yours,

Charles J. Jahne
Charles J. Jahne

CJJ:jrs

Enclosures

SHARONSTEEL • Mining Division

AN **NVE** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

file ACT/001/04

November 18, 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84111

Attention: Ms. Sandy Pruitt, Biologist

Gentlemen:

This letter transmits three copies of Drawing EFC-133 SK-1 Rev. 2 for your records. This drawing now shows the general routing for the diversion ditch at the King VI overland conveyor belt site. It also shows routing of the 15" diameter PVC drain pipe from the proposed new dam at the mouth of the natural water run-off to the road.

Should you have any questions on this, please call me.

Very truly yours,

Charles J. Janne
Charles J. Janne

CJJ:jrs

Enclosures

SHARONSTEEL • Mining Division

File: ACT/007/011

AN **(NVE)** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

November 13, 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple Street
Salt Lake City, Utah 84111

Attention: Mr. Wayne Hedberg, Hydrologist

Re: U.S. Fuel, King No. VI
ACT/007/011
Stipulation 7-81-9

Gentlemen:

In the area of the King VI overland belt project, there are five separate areas considered for soil disturbance. They are (1) the roadside area over which the conveyor belt will be erected, (2) the hillside west of approximately W-10,500, (3) the coal storage area, (4) the truck turn-out area and (5) the sedimentation pond area.

Since the roadside is an already disturbed area, there is no plan or consideration being given to soils considerations. Excavations for footings and supports have been dug and backfilled with all of the soil being kept right at the location of the work. Any dirt left over from the work done will be distributed between footings and between the road and the hillside. A drainage ditch, existing prior to construction, will be reconstituted so as to direct hillside run off into two existing culverts.

At about W-11,250, the path of the conveyor belt starts to rise up the hillside. This area has been "grubbed" of all vegetation and the top soil was pushed eastward to the coal storage pile area. Subsoil was also pushed in the same general direction. "Sidewash" from the dozer blade has resulted in both top soil and subsoil being deposited on the hillside below the belt line cut and the South Fork Canyon road. Plans call for this deposited soil to be reseeded to control erosion from the new bank. A large excavation and fill volume is necessary to establish the base for the coal storage pile, and the above subsoil and some of the top soil from the belt line excavation will be needed. Estimated volumes of the excavated belt line on the hillside is 4500 cu. ft. of topsoil and some 30,000 cu. ft. of subsoil. Top soil is considered to be that soil in the top six to eight inches of earth. All other soil is considered subsoil. The reasoning here is based on the report from the Soil Conservation Service which is attached. The three soil types which are involved in the entire project are described as (1) N3G-"extremely bouldery, fine sandy loam, (2) B4E-"stoney fine loam" and (3) B2D-"loam".

An excavation of an estimated 408,000 cu. ft. was planned for the coal-pile base at the desired elevation. This work has been done in a "cut and fill" operation and is 95% complete. All of the soil removed from the location of the coal pile storage area--most of it extremely bouldery--has been reestablished as fill for the coal pile base. The outer portions of the slopes of this fill are covered with the top soil removed from the original area.

State of Utah
Department of Natural Resources
Attention: Mr. Wayne Hedberg, Hydrologist
November 13, 1981
Page -2-

Presently, work of a similar cut and fill nature is going on at the truck turn-out area. An estimated 5000 cu. ft. of top soil has been excavated at that site. It has been set aside at the truck turn-out location and is being replaced as top soil at the same location. An estimated 3500 cu. ft. of top soil is involved. Originally an estimated 65,000 cu. ft. of subsoil was estimated based on contour maps and design drawings. Actual excavation of the subsoil is closer to 50,000 cu. ft. and field conditions have dictated a policy of redistribution of the subsoil rather than stock piling. Some 10,000 cu. ft. was used as fill material in the yard area to meet a demand of the mine operations, about 30,000-33,000 cu. ft. will be reused in the truck turn around area and the rest will be stockpiled. The stockpile location is immediately north of the intersection of the South Fork and Middle Fork roads. In an inspection visit by Sandy Pruitt and Dave Lof of DOGM, it was suggested that rather than stockpiling any soil from the truck turn-out area, it might better be used for covering and seeding of badly disturbed areas at Hiawatha. I have discussed this with Bob Eccli and John Lynn and they feel the idea has merit. Final determinations could be made once the final quantity or excess soil is known. DOGM may wish to consult on final disposition of this soil when the time comes.

The Sedimentation Pond is the last of the areas considered for excavation. To date, some 4,000 cu. ft. of top soil has been re-established on the side walls of the pond along with moving about 15,000 cu. ft. of subsoil. An additional 7,000 cu. ft. was moved to the yard area for fill dirt use.

It is intended that all of the top soil be used for finish grade and hillside and pond side cover prior to seeding. Seed will be hand broadcast over the areas to be reseeded at a rate of 10-15 lbs. per acre, as has been done in the past at Hiawatha. Most of the areas are on southern exposure slopes but the elevation above sea level is almost 8000 ft. A combination of "high level mix" and "low level mix" (terminology used by Hiawatha site personnel) is planned. The following is the list of grasses and shrubs that make up the planned final mix and the percentages of each:

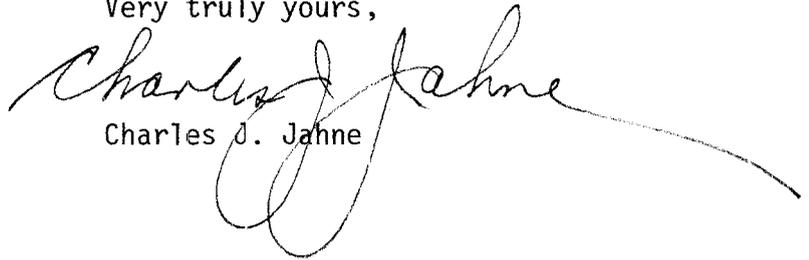
Smooth Brome Grass	7%
Orchard Grass	6%
Intermediate Wheatgrass	12%
Kentucky Bluegrass	5%
Meadow Foxtail	5%
Timothy	5%
Ranger Alfalfa	10%
Arrowleaf Balsamroot	5%
Mountain Lupine	3%
Sweet Vetch	8%
Western Wheatgrass	6%
Canada Wildrye	6%
Slender Wheatgrass	6%
Fairway Crested Wheatgrass	6%
Indian Rice Grass	5%
Small Burnet	5%
	<u>100%</u>

State of Utah
Department of Natural Resources
Attention: Mr. Wayne Hedberg, Hydrologist
November 13, 1981
Page -3-

Reseeding has not been done at this elevation above sea level before at Hiawatha, so there is some question as to the growth success of all of these species. Rain fall will probably most determine the results. Late summer to first permanent snow fall is the scheduled time for seeding.

I hope that this letter along with the attached information from the Soil Conservation Service is satisfactory. If you have any questions, please call me.

Very truly yours,


Charles J. Jahne

CJJ:jrs

Attachments

SOIL SURVEY AND INTERPRETATIONS

for

U.S. Fuel Co. Mine Area
near Mohrland and
Hiawatha, Utah

At the request of Bob Eccli, representing U.S. Fuel Company, headquartered at Hiawatha, Carbon County, Utah and the Price River Watershed Soil Conservation District, the Soil Conservation Service performed a detailed soil survey on existing mine and proposed mine properties. The survey was designed to comply with the March 1979, Permanent Regulatory Program requirements of the Office of Surface Mining Reclamation and Enforcement, Department of Interior.

The survey covers approximately 240 acres near Mohrland, Sections 8, 9, 10, 15, 16, T.16S., R.8E., SLBM, Emery County; 37 acres in Left Fork Canyon, Section 32, T.15S., R.8E., SLBM Carbon County; and 33 acres in Middle Fork Canyon, Section 32, T.15S., R.8E., SLBM, Carbon County. The soils are shown on the attached map.

Each soil is identified with a three letter symbol, and the pattern and extent are shown by the soil boundary lines on the map. All areas having the same symbol are essentially the same kind of soils. There may be small areas of other soils included within the delineations that are slightly different. The soils are named but have not been correlated. When the overall county survey is completed, small areas may become inclusions in other map units. Some names may change also. Following the soil descriptions is a table listing the limitations of the soils for a variety of uses. The soil horizonation symbols, procedures and nomenclature are as defined in the Soil Survey Manual (Agriculture Handbook No. 18), the National Soil Handbook of the Soil Conservation Service, and Soil Taxonomy.

More detailed information is on file in the Price Field Office of the Soil Conservation Service.

SOIL LEGEND

<u>Soil Symbol</u>	<u>Soil Mapping Unit Name</u>
B2C	Brycan loam, 6 to 8 percent slopes <u>1/</u>
B2D	Brycan loam, 8 to 10 percent slopes <u>1/</u>
B4E ✓	Brycan Variant stony fine sandy loam, 15 to 20 percent slopes <u>2/</u>
B5E	<u>1/</u> Brycan stony loam, 15 to 25 percent slopes
DM	Mine Dumps
G3E	Grobutte very stony loam, 10 to 20 percent slopes
G4G	Guben extremely bouldery loam, high rainfall, 30 to 60 percent slopes
IEC	Ildefonso very stony loam, 3 to 8 percent slopes
IEE	Ildefonso very stony loam, 8 to 30 percent slopes
INE2	Ildefonso - Shingle complex, 8 to 30 percent slopes, eroded 55% Ildefonso very stony loam, 8 to 30 percent slopes 35% Shingle extremely stony loam, 8 to 20 percent slopes, eroded
N3G ✓	Norte Variant extremely bouldery fine sandy loam, 30 to 70 percent slopes <u>3/</u>
NJG2	Shingle - Ildefonso - Badland Complex, 50 to 70 percent slopes, eroded 40% Shingle extremely stony loam, 50 to 70 percent slopes, eroded 30% Ildefonso very stony loam, 50 to 70 percent slopes 20% Badland

Soil Symbol

Soil Mapping Unit Name

P3G

Podo - Zillion Variant Complex,
40 to 70 percent slopes

60% Podo very stony loam, 50 to 70 percent slopes

20% Zillion Variant very stony fine sandy loam, 40 to 70 percent slopes ^{4/}.

Q3

Typic Ustorthents - Zillion Variant -
Cumulic Haploborolls, wet, complex

40% Typic Ustorthents extremely stony fine sandy loam, 8 to 60 percent slopes

30% Zillion Variant very stony fine sandy loam, 40 to 70 percent slopes

20% Cumulic Haploborolls, wet

R2G

Repp extremely bouldery fine sandy loam,
40 to 70 percent slopes

S3D

Silas silt loam, 8 to 10 percent slopes,
poorly drained

T3

Typic Ustorthents - Mine Dumps Complex,
8 to 60 percent slopes

35% Typic Ustorthents gravelly fine sandy loam, 8 to 60 percent slopes

30% Typic Ustorthents extremely stony fine sandy loam, 8 to 60 percent slopes

20% Mine Dumps

U3

Ustic Torrfluvents loam, 8 to 15 percent slopes

X2G

Beardall Variant - Beardall Complex,
40 to 70 percent slopes

40% Beardall Variant loam, 40 to 70 percent slopes ^{5/}

35% Beardall stony loam, 40 to 70 percent slopes ^{6/}

TAXONOMIC CLASSIFICATION

<u>Soil</u>	<u>Classification</u>
Beardall <u>6/</u>	Fine-loamy, mixed Typic Cryoboralfs
Beardall Variant <u>5/</u>	Fine-loamy, mixed Mollic Cryoboralfs
Brycan <u>1/</u>	Fine-loamy, mixed Cumulic Haploborolls
Brycan Variant <u>2/</u>	Coarse-loamy, mixed, Cumulic Haploborolls
Grobutte	Loamy-skeletal, mixed (calcareous), frigid Ustic Torriorthents
Guben	Loamy-skeletal, mixed Typic Calciborolls
Ildefonso	Loamy-skeletal, mixed, mesic Ustollic Calciorthids
Norte Variant <u>3/</u>	Loamy-skeletal, mixed, (calcareous), frigid Typic Ustorthents
Podo	Loamy, mixed (calcareous), frigid Lithic Ustorthents
Repp	Loamy-skeletal, mixed, frigid Typic Ustochrepts
Shingle	Loamy, mixed (calcareous), mesic, shallow Ustic Torriorthents
Silas	Fine-loamy, mixed Cumulic Cryoborolls
Zillion Variant <u>4/</u>	Loamy-skeletal, mixed Pachic Argiborolls
-	Loamy-Skeletal, mixed (calcareous) frigid Typic Ustorthents
-	Fine-loamy, mixed (calcareous) frigid Typic Ustorthents
-	Fine-loamy, mixed (calcareous) frigid Ustic Torrifluents
-	Cumulic Haploborolls

Classification Footnotes

- 1/ Brycan is a taxadjunct of the Brycan series and differs in that it lacks a B₂ (cambic) horizon and is calcareous throughout.
- 2/ Brycan Variant is a variant of the Brycan series and differs in that it averages less than 18 percent clay in the 10 to 40 inch layer (25 to 102 centimeter).
- 3/ Norte Variant is a variant of the Norte series and differs in that it lacks a sandy layer in the lower C horizon.
- 4/ Zillion Variant is a variant of the Zillion series and differs in that it lacks a layer of carbonate accumulation and a sandy substratum.
- 5/ Beardall Variant is a variant of the Beardall series and differs in that it is 60 inches (1.5 meters) deep.
- 6/ Beardall is a taxadjunct of the Beardall series and differs in that it lacks a thin dark surface layer.

SHARONSTEEL • Mining Division

AN **NVF** COMPANY

SHARON STEEL CORPORATION

19th Floor, University Club Building
136 East South Temple
Salt Lake City, Utah 84111
Telephone (801) 355-5301

November 13, 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple Street
Salt Lake City, Utah 84111

Attention: Mr. Wayne Hedberg, Hydrologist

Re: U.S. Fuel, King No. VI
ACT/007/011
Stipulation 7-81-9

Gentlemen:

In the area of the King VI overland belt project, there are five separate areas considered for soil disturbance. They are (1) the roadside area over which the conveyor belt will be erected, (2) the hillside west of approximately W-10,500, (3) the coal storage area, (4) the truck turn-out area and (5) the sedimentation pond area.

Since the roadside is an already disturbed area, there is no plan or consideration being given to soils considerations. Excavations for footings and supports have been dug and backfilled with all of the soil being kept right at the location of the work. Any dirt left over from the work done will be distributed between footings and between the road and the hillside. A drainage ditch, existing prior to construction, will be reconstituted so as to direct hillside run off into two existing culverts.

At about W-11,250, the path of the conveyor belt starts to rise up the hillside. This area has been "grubbed" of all vegetation and the top soil was pushed eastward to the coal storage pile area. Subsoil was also pushed in the same general direction. "Sidewash" from the dozer blade has resulted in both top soil and subsoil being deposited on the hillside below the belt line cut and the South Fork Canyon road. Plans call for this deposited soil to be reseeded to control erosion from the new bank. A large excavation and fill volume is necessary to establish the base for the coal storage pile, and the above subsoil and some of the top soil from the belt line excavation will be needed. Estimated volumes of the excavated belt line on the hillside is 4500 cu. ft. of topsoil and some 30,000 cu. ft. of subsoil. Top soil is considered to be that soil in the top six to eight inches of earth. All other soil is considered subsoil. The reasoning here is based on the report from the Soil Conservation Service which is attached. The three soil types which are involved in the entire project are described as (1) N3G-"extremely bouldery, fine sandy loam, (2) B4E-"stoney fine loam" and (3) B2D-"loam".

An excavation of an estimated 408,000 cu. ft. was planned for the coal pile base at the desired elevation. This work has been done in a "cut and fill" operation and is 95% complete. All of the soil removed from the location of the coal pile storage area--most of it extremely bouldery--has been reestablished as fill for the coal pile base. The outer portions of the slopes of this fill are covered with the top soil removed from the original area.

State of Utah
Department of Natural Resources
Attention: Mr. Wayne Hedberg, Hydrologist
November 13, 1981
Page -2-

Presently, work of a similar cut and fill nature is going on at the truck turn-out area. An estimated 5000 cu. ft. of top soil has been excavated at that site. It has been set aside at the truck turn-out location and is being replaced as top soil at the same location. An estimated 3500 cu. ft. of top soil is involved. Originally an estimated 65,000 cu. ft. of subsoil was estimated based on contour maps and design drawings. Actual excavation of the subsoil is closer to 50,000 cu. ft. and field conditions have dictated a policy of redistribution of the subsoil rather than stock piling. Some 10,000 cu. ft. was used as fill material in the yard area to meet a demand of the mine operations, about 30,000-33,000 cu. ft. will be reused in the truck turn around area and the rest will be stockpiled. The stockpile location is immediately north of the intersection of the South Fork and Middle Fork roads. In an inspection visit by Sandy Pruitt and Dave Lof of DOGM, it was suggested that rather than stockpiling any soil from the truck turn-out area, it might better be used for covering and seeding of badly disturbed areas at Hiawatha. I have discussed this with Bob Eccli and John Lynn and they feel the idea has merit. Final determinations could be made once the final quantity or excess soil is known. DOGM may wish to consult on final disposition of this soil when the time comes.

The Sedimentation Pond is the last of the areas considered for excavation. To date, some 4,000 cu. ft. of top soil has been re-established on the side walls of the pond along with moving about 15,000 cu. ft. of subsoil. An additional 7,000 cu. ft. was moved to the yard area for fill dirt use.

It is intended that all of the top soil be used for finish grade and hillside and pond side cover prior to seeding. Seed will be hand broadcast over the areas to be reseeded at a rate of 10-15 lbs. per acre, as has been done in the past at Hiawatha. Most of the areas are on southern exposure slopes but the elevation above sea level is almost 8000 ft. A combination of "high level mix" and "low level mix" (terminology used by Hiawatha site personnel) is planned. The following is the list of grasses and shrubs that make up the planned final mix and the percentages of each:

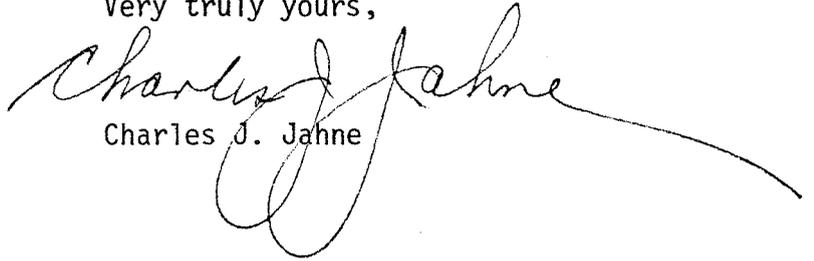
Smooth Brome Grass	7%
Orchard Grass	6%
Intermediate Wheatgrass	12%
Kentucky Bluegrass	5%
Meadow Foxtail	5%
Timothy	5%
Ranger Alfalfa	10%
Arrowleaf Balsamroot	5%
Mountain Lupine	3%
Sweet Vetch	8%
Western Wheatgrass	6%
Canada Wildrye	6%
Slender Wheatgrass	6%
Fairway Crested Wheatgrass	6%
Indian Rice Grass	5%
Small Burnet	5%
	<u>100%</u>

State of Utah
Department of Natural Resources
Attention: Mr. Wayne Hedberg, Hydrologist
November 13, 1981
Page -3-

Reseeding has not been done at this elevation above sea level before at Hiawatha, so there is some question as to the growth success of all of these species. Rain fall will probably most determine the results. Late summer to first permanent snow fall is the scheduled time for seeding.

I hope that this letter along with the attached information from the Soil Conservation Service is satisfactory. If you have any questions, please call me.

Very truly yours,



Charles J. Jahne

CJJ:jrs

Attachments

SOIL SURVEY AND INTERPRETATIONS

for

U.S. Fuel Co. Mine Area
near Mohrland and
Hiawatha, Utah

At the request of Bob Eccli, representing U.S. Fuel Company, headquartered at Hiawatha, Carbon County, Utah and the Price River Watershed Soil Conservation District, the Soil Conservation Service performed a detailed soil survey on existing mine and proposed mine properties. The survey was designed to comply with the March 1979, Permanent Regulatory Program requirements of the Office of Surface Mining Reclamation and Enforcement, Department of Interior.

The survey covers approximately 240 acres near Mohrland, Sections 8, 9, 10, 15, 16, T.16S., R.8E., SLBM, Emery County; 37 acres in Left Fork Canyon, Section 32, T.15S., R.8E., SLBM Carbon County; and 33 acres in Middle Fork Canyon, Section 32, T.15S., R.8E., SLBM, Carbon County. The soils are shown on the attached map.

Each soil is identified with a three letter symbol, and the pattern and extent are shown by the soil boundary lines on the map. All areas having the same symbol are essentially the same kind of soils. There may be small areas of other soils included within the delineations that are slightly different. The soils are named but have not been correlated. When the overall county survey is completed, small areas may become inclusions in other map units. Some names may change also. Following the soil descriptions is a table listing the limitations of the soils for a variety of uses. The soil horizonation symbols, procedures and nomenclature are as defined in the Soil Survey Manual (Agriculture Handbook No. 18), the National Soil Handbook of the Soil Conservation Service, and Soil Taxonomy.

More detailed information is on file in the Price Field Office of the Soil Conservation Service.

SOIL LEGEND

Soil Symbol

Soil Mapping Unit Name

B2C

Brycan loam, 6 to 8 percent slopes 1/

B2D

Brycan loam, 8 to 10 percent slopes 1/

B4E ✓

Brycan Variant stony fine sandy loam,
15 to 20 percent slopes 2/

B5E

Brycan stony loam, 15 to 25 percent slopes
1/

DM

Mine Dumps

G3E

Grobutte very stony loam, 10 to 20 percent
slopes

G4G

Guben extremely bouldery loam, high rain-
fall, 30 to 60 percent slopes

IEC

Ildefonso very stony loam, 3 to 8 percent
slopes

IEE

Ildefonso very stony loam, 8 to 30 percent
slopes

INE2

Ildefonso - Shingle complex, 8 to 30
percent slopes, eroded
55% Ildefonso very stony loam,
8 to 30 percent slopes
35% Shingle extremely stony loam,
8 to 20 percent slopes, eroded

N3G ✓

Norte Variant extremely bouldery fine
sandy loam, 30 to 70 percent slopes 3/

NJG2

Shingle - Ildefonso - Badland Complex,
50 to 70 percent slopes, eroded
40% Shingle extremely stony loam, -
50 to 70 percent slopes, eroded
30% Ildefonso very stony loam, -
50 to 70 percent slopes
20% Badland

Soil Symbol

Soil Mapping Unit Name

P3G

Podz - Zillion Variant Complex,
40 to 70 percent slopes

60% Podz very stony loam, 50 to 70 percent slopes

20% Zillion Variant very stony fine sandy loam, 40 to 70 percent slopes ^{4/}.

Q3

Typic Ustorthents - Zillion Variant -
Cumulic Haploborolls, wet, complex

40% Typic Ustorthents extremely stony fine sandy loam, 8 to 60 percent slopes

30% Zillion Variant very stony fine sandy loam, 40 to 70 percent slopes

20% Cumulic Haploborolls, wet

R2G

Repp extremely bouldery fine sandy loam,
40 to 70 percent slopes

S3D

Silas silt loam, 8 to 10 percent slopes,
poorly drained

T3

Typic Ustorthents - Mine Dumps Complex,
8 to 60 percent slopes

35% Typic Ustorthents gravelly fine sandy loam, 8 to 60 percent slopes

30% Typic Ustorthents extremely stony fine sandy loam, 8 to 60 percent slopes

20% Mine Dumps

U3

Ustic Torrfluvents loam, 8 to 15 percent slopes

X2G

Beardall Variant - Beardall Complex,
40 to 70 percent slopes

40% Beardall Variant loam, 40 to 70 percent slopes ^{5/}

35% Beardall stony loam, 40 to 70 percent slopes ^{6/}

TAXONOMIC CLASSIFICATION

<u>Soil</u>	<u>Classification</u>
Beardall <u>6/</u>	Fine-loamy, mixed Typic Cryoboralfs
Beardall Variant <u>5/</u>	Fine-loamy, mixed Mollic Cryoboralfs
Brycan <u>1/</u>	Fine-loamy, mixed Cumulic Haploborolls
Brycan Variant <u>2/</u>	Coarse-loamy, mixed, Cumulic Haploborolls
Grobutte	Loamy-skeletal, mixed (calcareous), frigid Ustic Torriorthents
Guben	Loamy-skeletal, mixed Typic Calciborolls
Ildefonso	Loamy-skeletal, mixed, mesic Ustollic Calciorthids
Norte Variant <u>3/</u>	Loamy-skeletal, mixed, (calcareous), frigid Typic Ustorthents
Podo	Loamy, mixed (calcareous), frigid Lithic Ustorthents
Repp	Loamy-skeletal, mixed, frigid Typic Ustochrepts
Shingle	Loamy, mixed (calcareous), mesic, shallow Ustic Torriorthents
Silas	Fine-loamy, mixed Cumulic Cryoborolls
Zillion Variant <u>4/</u>	Loamy-skeletal, mixed Pachic Argiborolls
-	Loamy-Skeletal, mixed (calcareous) frigid Typic Ustorthents
-	Fine-loamy, mixed (calcareous) frigid Typic Ustorthents
-	Fine-loamy, mixed (calcareous) frigid Ustic Torrifluvents
-	Cumulic Haploborolls

Classification Footnotes

- 1/ Brycan is a taxadjunct of the Brycan series and differs in that it lacks a B₂ (cambic) horizon and is calcareous throughout.
- 2/ Brycan Variant is a variant of the Brycan series and differs in that it averages less than 18 percent clay in the 10 to 40 inch layer (25 to 102 centimeter).
- 3/ Norte Variant is a variant of the Norte series and differs in that it lacks a sandy layer in the lower C horizon.
- 4/ Zillion Variant is a variant of the Zillion series and differs in that it lacks a layer of carbonate accumulation and a sandy substratum.
- 5/ Beardall Variant is a variant of the Beardall series and differs in that it is 60 inches (1.5 meters) deep.
- 6/ Beardall is a taxadjunct of the Beardall series and differs in that it lacks a thin dark surface layer.

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

November 3 , 1981

Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

11/26/81

this
File Original
in ACT/007/011

Dear Mr. Hedberg:

Upon request from your department for sites where non-coal wastes were complied with UMC 817.89 a). for

*only one map
provided,
I am circulating
it for staff comment.
DWH*

Ian
is

- 1). The materials to be placed in old machinery and parts and would be stored for future use or disposal. (This area would not be used for materials which are taken to a sanitary landfill.)
- 2). The placement and storage areas are in a designated portion of the permit area and are protected by sediment ponds sized for that area.
- 3). Final disposal of any materials in the areas would be taken care of at the time of final reclamation of the mine or when that area is abandoned.

The designated sites have been chosen and developed in concordance with written regulations.

The questions listed in the letter dated Sept. 28, 1981 will be answered below by reference to their number.

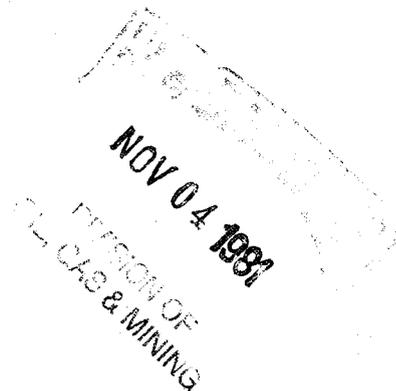


UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

November 3 , 1981

Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116



Dear Mr. Hedberg:

Upon request from your department, U.S. Fuel has submitted a plan for sites where non-coal wastes would be stored. We feel this plan has complied with UMC 817.89 a). for the following reasons:

- 1). The materials to be placed in these sites would be primarily old machinery and parts and would be stored for future use or disposal. (This area would not be used for materials which are taken to a sanitary landfill.)
- 2). The placement and storage areas are in a designated portion of the permit area and are protected by sediment ponds sized for that area.
- 3). Final disposal of any materials in the areas would be taken care of at the time of final reclamation of the mine or when that area is abandoned.

The designated sites have been chosen and developed in concordance with written regulations.

The questions listed in the letter dated Sept. 28, 1981 will be answered below by reference to their number.



- 1). Materials to be stored at these sites are , for example: old machinery, culverts, conveyor rollers, timbers, roof bolts and wire. We are not aware of any restriction on the amount of area in the designated areas as long as it is in the permit area and drainage from it is adequately controlled. We request that all disturbed areas having adequate protection (i.e. mine yards with runoff diversion structures and sediment ponds) be designated for storage of non-coal material. We assume that temporary placement of non-coal materials within these protected areas will be at our discretion.
- 2). The runoff will remain as is presently established. There should be no additional runoff or surface disturbance. (All three areas are presently accessible). The existing sedimentation ponds, built according to the results of a study conducted on the area, are designed to handle the 10 year, 24 hour precipitation event. (Chapter VII). The ponds are total containment and have oil skimmers in the discharge structures. The ponds were also designed to store 0.1 acre foot of volume for each acre of disturbed area within the upstream drainage area.
- 3). Should a spill occur in the mining area, (including the proposed sites) efforts would be made to contain the spill as soon as possible and then clean it up. The mine superintendent, vice-president and general manager, and the general supervisor of surface operations would be notified immediately. In the proposed areas, it is doubtful that materials posing a serious threat from spillage would be stored there. No significant amounts of chemicals, fuels lubricants, or transformer fluids should be stored in these areas. Minor amounts of oil and grease from old equipment would be the extent of this type of material that might occur there. Runoff from this area is carried to a sediment containment pond.
- 4). A raptor survey has been performed on the entire mine operation (including the designated areas). It was determined that the poles in the area did not pose a significant threat and would not require protection devices.

No new areas or wildlife will be disturbed through the use of the specified areas. No threatened or endangered species are known to exist in these areas.

- 5). The soil consists of rocky alluvium, coal fines and slurry in sites 1,2 and 3 respectively. As these areas were previously disturbed, no significant amount of topsoil was present on them. The area will be graded, scriefied and topsoil distrubuted over the affected areas at the time of reclamation and after the materials stored there are removed. Topsoil redistribution will be in accordance with UMC 817.24 b. The area will be reseeded. The reclamation will follow the procedure as stated in the mine plan (Chapter III).
- 6). The areas have been previously disturbed, prior to the Surface Mining and Reclamation Act. A baseline study of the mine area can be found in the U.S. Fuel mine plan.
- 7). Final reclamation plans are to remove any remaining materials stored there and continue relamation as in the other areas of the mine. Final disposal of non-coal wastes stored at the sites will be disposed of in designated areas or if possible, covered by a minimum of two feet of soil. Slopes will be stabilized and revegetation accomplished in accordance with UMC 817.111-817.117. Areas will be graded and topsoil placed over the previously disturbed area. The area will be revegetated with the recommended species.
- 8). The ruin in the upper coal storage yard is part of an old foundation and has no particular importance. The entire mine area has been cleared with Utah's Department of State History (Chapter V and Appendix V-1 of the U.S. Fuel mine plan)

In addition to the three sites previously submitted, we would like to have two additional sites located in the South Fork (King 6) mine yard. Due to the size and physical separation (by canyons) of the U.S. Fuel mines,

more sites are needed to avoid transporting materials long distances. Location makes the site more useful and apt to be used and does not necessarily reflect a large quantity of this type of scrap material.

In conference with Tom Portle on the subject of non-coal waste disposal sites, he agreed with our locations of sites, the need to have several, and felt they were located in adequately protected areas and didn't threaten the environment.

The fourth site would be located in the disturbed area of the South Fork mine yard to the east of the present maintenance shop. The area is protected by the sediment containment pond below the disturbed area. Drainage from this area is drawn on the enclosed map.

At present, there are materials stored here which were generated from an earlier mine in this area. Some materials have been displaced over the edge of the bench on which they and the maintenance shop are situated. A violation was issued on the material over the edge. Efforts have been made to pull this material back from the edge but were hampered by the presence of construction crews on the slope below. A berm exists along the edge to prevent water from the bench causing erosion down the embankment.

We would like to propose retrieving the over bank material and storing it in the present storage area on the bench which is back against the canyon wall. Further clean up efforts will be delayed until approved non-coal waste disposal sites are available for placement of these materials. This area is already disturbed, adequately protected and conveniently located. The berm on the edge would be re-established to prevent erosion on the downslope. The mine yard sites would be reclaimed concurrent with reclamation of the mine yard.

The bench is composed primarily of rock. As this site was previously disturbed, no recoverable top soil is present.

5.

No additional surface disturbance will be required for occupation of this site. The present sediment containment pond is adequately handling the run off and wont need to be increased due to the continued use of this site.

The type of waste to be stored in this area would include: old rail, wire, old mining equipment and timbers. No critical wildlife habitat or vegetation will be endangered through the use of this site.

The fifth site would be located on the bathhouse level, above the level of the fourth site. Materials such as those described for the other site have been stored here for many years. We would like to continue to store them at this site in the disturbed area.

The site is primarily underlain by rock, is quite stable, wouldn't endanger any wildlife or vegetation and is protected by the sediment containment pond. Drainage from this area passes through the mine yard to the sediment pond.

We hope your questions have been answered satisfactorially and the additional areas are discribed clearly.

Sincerely,



Ms. Jean Semborski
Engineering Assistant
U.S. Fuel Company

File A-T/007/011
Copy to Wayne



SCOTT M. MATHESON
GOVERNOR

DC JIM
EID OCT 26 1981

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

September 30, 1981

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101
TELEPHONE 801 / 533-5755

Mr. Jim Smith
Division of Oil, Gas, &
Mining
1588 West North Temple
Salt Lake City, Utah 84104

ATTENTION: Wayne Hedburg

RE: Archeological Reconnaissance for U. S. Fuel Company - King
VI Conveyor Proposal

Dear Mr. Smith:

The staff of the Utah State Historic Preservation Officer has received your letter and attached report of June 25, 1981,

After review of the report, our office can concur with the determination that there will be no adverse effect by the proposed building of the conveyor.

If you have any questions or concerns, please contact Jim Dykman at 533-7039.

Sincerely,

Melvin T. Smith
Director and
State Historic Preservation Officer

JLD:1o E409

SCOTT M. MATHESON
Governor

TEMPLE A. REYNOLDS
Executive Director,
NATURAL RESOURCES

CLEON B. FEIGHT
Director



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

FILE COPY
OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON
Chairman

JOHN L. BELL
EDWARD T. BECK
E. STEELE McINTYRE
BOB NORMAN
MARGARET BIRD
HERM OLSEN

September 28, 1981

Mr. Jean Semborski
Engineering Assistant
United States Fuel Company
Hiawatha, Utah 84527

RE: Plan for Non-coal Waste Disposal
U.S. Fuels Company
Hiawatha Complex
ACT/007/011
Carbon County, Utah

Dear Mr. Semborski:

The Division has reviewed your latest submission in request of three (3) non-coal waste disposal sites. We cannot approve these sites at this time until the following questions are answered:

1. Due to the large amount of area designated for non-coal waste disposal, raises the question as to what types of non-coal wastes are being disposed of. Please define the type of waste to be disposed of in the proposed disposal sites.

Depending on the type of waste, additional information may be required or additional measures may need to be implemented to assure proper containment of the wastes and protection of the surface and ground-water systems.

2. How and/or will undisturbed runoff be diverted around or away from these disposal sites? Will there be any additional surface disturbance created? If so, are the ponds adequately sized to handle the additional runoff from these areas?

Are the ponds total containment, or are they covered by an N.P.D.E.S. permit? Are oil skimmers designed into the discharge structures?

Mr. Jean Semborski
September 28, 1981
Page Two

3. Is there an SPCC plan in effect at the mine site which may be applicable to cover spillages in these areas?

4. If new areas are to be disturbed, has there been a raptor survey done to cover these areas?

Will any critical wildlife habitat (i.e., riparian vegetation) be disturbed? If so, what mitigation measures are proposed to compensate for any losses of habitat? Have any threatened or endangered species (plants or animals) been identified in conjunction with these areas?

5. What soil types are present? What is the plan for topsoil removal, storage and redistribution? Plan must comply with the requirements of 817.21-.25 at a minimum.

6. If this is a new disturbance, what vegetation type(s) will be affected? Has baseline data been obtained for these areas (UMC 783.19)?

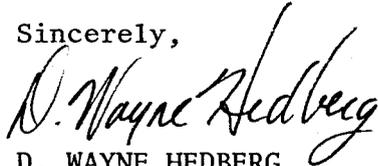
7. What are the final reclamation plans for these disposal sites? Each must comply with 817.89(b). Revegetation must conform to UMC 817.111-.116.

8. What is the "ruin" indicated in disposal site #2? Has this site been cleared with State History?

Before the Division can proceed with a final determination on approving these proposed disposal areas, U.S. Fuels Company will need to provide the information requested above.

If you have any comments or questions, please contact me.

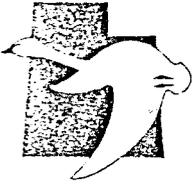
Sincerely,



D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

DWH/te

cc: Bob Hagen, O.S.M.
Jim Smith, DOGM
Joe Helfrich, I&E



DIVISION OF WILDLIFE RESOURCES

DOUGLAS F. DAY
Director

1596 West North Temple/Salt Lake City, Utah 84116/801-533-9333

September 3, 1981

Reply To SOUTHEASTERN REGIONAL OFFICE
455 West Railroad Avenue, Box 840, Price, Utah 84501
(801) 637-3310

Mr. Charles J. Jahne
Sharon Steel
University Club Building, 19th Floor
136 East South Temple
Salt Lake City, Utah 84111

Dear Mr. Jahne:

The Utah Division of Wildlife Resources, in response to correspondence with the Division of Oil, Gas and Mining, letter dated August 19, 1981, has reviewed U.S. Fuel Company's proposed plans for construction of the King #6 Mine, Coal Conveyor System. Because the elevation of the conveyor system will exceed 1 meter at all points, the conveyor system plans comply with the Utah Division of Wildlife Resources' recommendations outlined in correspondence to OGM dated July 30, 1981.

Due to recent findings relative to mule deer and overland coal conveyors in southeastern Utah, it is believed that migration by deer will not be inhibited if a majority of the length of the conveyor is elevated to provide a minimum of one meter clearance beneath the structure.

Thank you for your concern for Utah's wildlife resources.

Sincerely,

John Livesay
John Livesay, Supervisor
Southeastern Region

JL:CLG:gp

cc: Darrell Nish

*Copy sent to US Fuel,
not not to DOI M. Jahne
included copy in Nov. 81
Stipulation Status submitted
Provide copy in our
file Oct. 82
Mary B*

SCOTT M. MATHESON
Governor

TEMPLE A. REYNOLDS
Executive Director,
NATURAL RESOURCES

CLEON B. FEIGHT
Director



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON
Chairman

JOHN L. BELL
EDWARD T. BECK
E. STEELE McINTYRE
BOB NORMAN
MARGARET BIRD
HERM OLSEN

August 19, 1981

Mr. Douglas F. Day, Director
Division of Wildlife Resources
1596 West North Temple
Salt Lake City, Utah 84116

Attention: Larry Dalton, SERO

RE: U. S. Fuel Company
King #6 Mine
Minor Modification
Stipulation 7-81-4
ACT/007/011
Carbon County, Utah

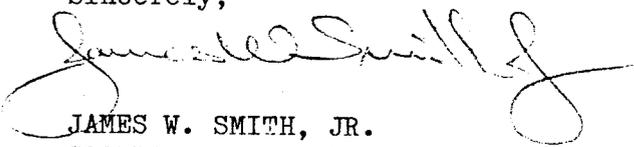
Dear Mr. Day:

Please find enclosed a response from U. S. Fuel Company addressing concerns expressed in your letter dated July 30, 1981, relative to their proposed plans for construction of the King #6 Mine coal conveyor system.

Your cooperation in performing a most expeditious review and forwarding any comments or concerns that you or your staff may still have is greatly appreciated.

In this instance, since time is a critical factor, please copy any response to Mr. Charles J. Jahne of Sharon Steel. Thank you.

Sincerely,


JAMES W. SMITH, JR.
COORDINATOR OF MINED
LAND DEVELOPMENT

Enclosures

cc: Don Crane, OSM
Charles J. Jahne, Sharon Steel

JWS/btm

File Act/007/011
To Wayne
for adrian

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

August 13, 1981

JIM

AUG 26 1981

RECEIVED

AUG 26 1981

DIVISION OF
OIL, GAS & MINING

Re: Plan for disposal of
non-coal wastes.

Utah Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Dear Sirs:

The following plan is being submitted by U. S. Fuel for disposal of non-coal wastes.

NON-COAL WASTE DISPOSAL

The following designated sites shall be used for disposal of non-coal wastes:

DISPOSAL SITES

The first proposed waste disposal site is to be located on the west side of the Middle Fork yard. Drainage from that portion of the yard flows to the sediment pond below the coal loading facility. (See Map #1, sites denoted by blue shading on each map.)

The second site will be located near the upper coal storage facility, off from the Middle Fork canyon road. Any leachate or runoff from this area will be collected by a sediment pond below the tracks. (See Map #2)

The third site specified for non-coal wastes is located in the lower yard in the slurry impoundment area. All runoff from the lower yard areas is diverted to several sediment ponds. (See Map #3)

PLACEMENT

Placement and storage in these areas will take place in a controlled manner such that leachate and runoff does not degrade surface or ground water, fires are prevented and the area remains stable and suitable for reclamation and revegetation.

provided → ?



Utah Department of Natural Resources
Division of Oil, Gas and Mining
August 13, 1981
Page Two

TIME ALLOTMENT

Consolidation and storage of non-coal waste materials in these sites shall begin upon approval of the designated areas and be completed within a 6 month time frame.

Disposal of waste materials will be made on a regular basis and/or when necessary.

The three aforementioned areas shall constitute U. S. Fuel's non-coal waste disposal sites and be constructed and maintained according to UMC 817.89.

Yours very truly,

Jean Semborski

Jean Semborski,
Engineering Assistant

JS/ds

Enclosure(s)

cc: V. Posner

8-14-81

To Lynn (MAW):

Have drafted letter today to Doug Day (attn: Harry Dalton) on this with attachments + given to Jim for review + your comment if needed.

Please make one more copy of letter, review maps enclosed, add any comments + return to me with one set of maps for my response if needed.

Please file one set of maps + original letter!

Thanks, Wayne



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

OFFICE OF THE REGIONAL DIRECTOR

10 JUL 1981

RECEIVED

JUL 13 1981

DIVISION OF
OIL, GAS & MINING

File ACT/007/011

Copy to Wayne et al

Done Jim

Mr. James Smith, Jr.
Coordinator of Mined Land Development
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Dear Jim:

On May 13, 1981 my staff visited the U.S. Fuels' King #6 Mine and reviewed the request to upgrade the mine access and haul road, to install a coal conveyor system, and to construct a coal stockpile, a truck loadout, a sediment pond, and a diversion system. Since this site visit, supplemental information was submitted by the applicant on May 18, and June 3, 1981, and my staff has completed an analysis of the request. Based upon staff reviews, the USGS environmental analysis, and the Uinta Southwestern Utah EIS and Central Utah Coal EIS, I have determined that the proposal is a minor modification to the USGS approved 211 plan (1977). The proposed improvements and facilities will have no significant environmental impacts which cannot be mitigated; therefore, the request is acceptable. These improvements are necessary to commence coal recovery from King #6 Mine.

By copy of this letter forwarded to the applicant I am approving the minor modification to the approved 211 mine plan (1977) conditional upon written acceptance of the special stipulations provided jointly by the Office of Surface Mining and the State of Utah, Division of Oil, Gas and Mining.

Comments by the Geological Survey and the Forest Service (Manti LaSal Forest) are not included but will be forwarded to you as soon as their reviews are completed. If you have questions or comments about the analysis, please contact Carolyn Zarnekee of this office at (303) 837-5656.

Sincerely,

Robert S. Swenson for
DONALD A. CRANE

Attachments

cc: U.S. Fuels

Special Stipulations
Attached to Departmental Approval of Modification of
Coal Mining and Reclamation Plan
U.S. Fuels Company's King No. 6 Mine
Carbon County, Utah
for Proposed Mining Modification
Federal Coal Lease No. SL-069985

- 1) The applicant shall
 - A) Provide a complete discussion of all topsoil removal, storage, and redistribution;
 - B) Submit calculations on the amount of topsoil removed and stored;
 - C) Provide chemical and physical analysis data on all areas of disturbance or use applicable data, if available, from the Soil Conservation Service.
- 2) Ditches
 - A) A runoff diversion ditch at least 3 feet wide and 1 foot deep shall be maintained along the uphill side of the haul road for the entire length of the road.
 - B) The drain ditch shall be riprapped with 8-inch coarse gravel or cobbles adjacent to those sections of road where the subbase must be replaced.
 - C) Drain ditches shall be sloped for effective approach to culvert inlets.
- 3) Culverts
 - A) Culverts shall be compacted with a minimum depth of 2 feet of well compacted fill.
 - B) Culverts shall cross the road at not less than a 30-degree angle downgrade.
 - C) Inlet ends of all culverts shall be protected by rock headwalls or other suitable inlet structures. Outlets shall not be discharged over a fill outslope without adequate erosion protection.
- 4) Within 8 months of Departmental approval of the proposed action, the applicant, in consultation with OSM and Utah DOGM, shall provide the following baseline vegetation data for the proposed areas to be disturbed (affected areas):
 - A) Affected area:
 - 1) Cover by species, collected by the ocular estimation method or other method approved by the regulatory authority
 - 2) Species diversity, evaluated using the Shannon-Weiner index

- 3) Sampling adequacy using the new data must include a statistical evaluation of the similarity between the reference and affected areas.
- 4) Sampling plots must be laid out at random in the communities of the affected area to insure that all vegetation has an equal chance of being sampled (the affected baseline data collected previously is not acceptable because this did not occur).
- 5) The sagebrush vegetative community along the proposed conveyor belt and associated facilities must be mapped. The area is presently mapped incorrectly as pinyon-juniper.

B) Reference area:

- 1) Shrub density
- 2) Range condition must be fair or better than the affected area.
- 3) Species diversity
- 4) Statistical evaluation of the similarity between the reference area and affected area must be recalculated using the data for the affected areas.
- 5) Sampling adequacy must be shown for shrub density.

C) Methods used in acquiring the above data must be discussed in detail.

D) Production for both the affected and reference areas can be represented from SCS range-site data and does not need to be statistically accurate.

5) Within 8 months of Departmental approval the applicant shall, in consultation with OSM and Utah DOGM, develop an acceptable revegetation plan which shall:

A) Develop seed mixture for revegetation consisting of:

- 1) species useful for the post-mining land uses of wildlife forage and cover and livestock grazing, and
- 2) species identified by pure live seed (PLS) rate in weight/area.

B) Clarify the following statements concerning the proposed seed mixture:

- 1) Use of native species selected from reference areas, on p. II-39;
- 2) No trees, shrubs or forbs will be seeded, on p. III-12;
- 3) Reseed and plant trees, on p. IX-78;
- 4) Seed mixture to enhance wildlife, from Utah DOW on p. X-3.

- C) Provide justification for the use of introduced species in terms of post-mine land use, showing how the species will provide forage for livestock and wildlife and cover for wildlife.
- D) Delineate which mulches and fertilization will be used in revegetation. Indicate the types of mulches, rate to be applied, and the method of securing.
- E) Indicate what measures will be taken to temporarily stabilize topsoil stockpiles including a list of species which will be seeded and the rate of seeding (PLS).
- F) Provide a schedule for revegetation.
- G) Discuss in detail the method which will be used to apply seed (the proposed hand broadcast-seeding is not practical for the acreage involved). Discuss if, and to what depth, the seed will be covered.
- H) Develop a plan for monitoring of revegetation progress during the bond-release period.
- I) Provide evidence supporting the feasibility of successful revegetation using the methods proposed.



SCOTT M. MATHESON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH

CHARLES R. HENDERSON
Chairman

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

JOHN L. BELL
C. RAY JUVELIN
THADIS W. BOX
MAXILIAN A. FARBMAN
EDWARD T. BECK
E. STEELE McINTYRE

June 25, 1981

Mr. James Dykman
Cultural Resource Advisor
Preservation Officer Staff
Utah Division of State History
300 Rio Grande
Salt Lake City, Utah 84101

ACT/007/011

RE: Archaeological
Reconnaissance for U. S.
Fuel Company's King VI
Conveyor Proposal

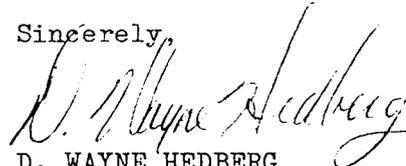
Dear Jim:

This letter is pursuant to our phone conversation this afternoon which pertained to an Archaeological Reconnaissance performed by the Utah Archaeological Research Corporation for U. S. Fuel Company's proposed King VI conveyor, truck turnaround and access road modifications. I have enclosed a copy of the study for your review.

From our conversation, I understand that you will send a memo to this Division verifying our conversation and your concurrence with the report with a formal approval letter to come at a later date with SHPO's sign off.

If you have any questions, please feel free to call me. Thank you for your prompt response.

Sincerely,


D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

Enclosures

DWH/btm



United States Department of the Interior
 OFFICE OF SURFACE MINING
 Reclamation and Enforcement
 BROOKS TOWERS
 1020 15TH STREET
 DENVER, COLORADO 80202

R Route & File
 in appropriate
 mine files.

Jim

Re: Cottonwood
 Price River
 Genwall
 U.S. Fuel
 Natamas

MAY 18 1981
 LCS

APR 14 1981

FP
MSW
DWA
ST

MAY 13 1981
 L-3

ACT/002/011

Mr. James Smith, Jr.
 Coordinator of Mined Land Development
 Utah Department of Natural Resources
 Division of Oil, Gas and Mining
 1588 West North Temple
 Salt Lake City, Utah 84116

Dear Jim:

As you requested in our April meeting, enclosed are the telephone conversation reports for the week of April 6 through 10. These reports summarize meetings or phone conversations between the staff at OSM and Utah operations.

If you have any questions, please call me at 303/837-3773.

Sincerely,

John A. Nadolski
 John A. Nadolski
 Utah Coordinator

Enclosures

APR 17 1981

DIVISION OF
 OIL, GAS & MINING

ACT/007/011

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING
Meeting
CONFIRMATION/REPORT OF TELEPHONE CONVERSATION

T O	Name	F R O M	Name
	Office		Office
	Location		Location
	Telephone Number		Telephone Number

Purpose of Call:

Ms. Greenbourg requested a review by OSM for the modification to the King No. 6 Mine. This modification would involve the construction of a conveyor and a loadout. Mr. Hardaway and I made a quick review of soils, vegetation, bonding, and cultural resources. We found deficiencies in everything except soils. These comments were passed on to Ms Greenbourg. It was suggested that a meeting ~~between~~ between her and others members of the OSM staff would be beneficial. This was tentatively scheduled

Explanatory Remarks:

for next week

According to Ms Greenbourg, DOGM had requested to her for OSM to review the plan. This still has to be confirmed.

4-9-81
(Date)

John Nadolski
(Signature)



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

3 0 APR 1981

MAY 4 1981

DIVISION OF
OIL, GAS & MINING

Mr. James Smith, Jr.,
Coordinator of Mined Land Development
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, UT 84116

Dear Jim:

We met with Ms. Greenberg of John T. Boyd Company and Mr. Jahne of Sharon Steel Corporation on April 21 to discuss further the request of U.S. Fuels to install a conveyor belt, coal stockpile, truck loadout, sediment pond, diversion, and to upgrade the mine access and haul road. I recommend we convey the remaining deficiencies to U.S. Fuels (most of these were likely discussed at either your meeting of April 20th or at our meeting the following day) and, if the material is submitted on or about 8 May, that we proceed to develop the necessary Technical-Environmental Assessment for your review. In order to develop the TEA in a timely manner, I recommend a field inspection on or about the week of May 11 by about four individuals from this office accompanied by your staff if you wish. A target date for the draft TEA would be two weeks after the field inspection (assuming all goes well).

The principal question remaining after the meeting was the status of the existing road and any upgrading of the road in the eyes of the regulatory authority. We concluded that (1) the existing road could be used for access and coal haul and (2) no reviews had been conducted on the proposed upgrading of the road.

We also reviewed the majority of the details of the conveyor system and it appears that all necessary information is available. It also appears that wildlife considerations were properly taken into account.

Questions were posed regarding the actual location of the cultural resources survey and the ages of certain structures (from the historic resources sense).

Questions were also posed regarding the vegetation analysis. Ms. Greenberg suggested we call Bio-West if questions remained. Tom Guobis has discussed these with Marianne and Bio-West.

I have attempted to restate some of the discussion in the Attachment. The information still required, in addition to vegetation, is principally clarification of the extent of the cultural resources survey and the results.

We expect to either find the additional information on sedimentation ponds and soils, culverts and diversions in the mining and reclamation plan or from the company files and thus believe these "apparent" deficiencies to be quickly resolved once the technical analysis is initiated.

File ACT/007/011
Copy to Wayne,
Mary Ann, Lee
Sally, Tom T.,
Gil & Jim

RECEIVED

Jim

-2-

Of course, if U.S. Fuels determines it acceptable, we believe that coal could be trucked on the existing road provided that road is maintained in compliance with Utah's program. The road could be resurfaced, but drains and culverts could only be modified as necessary to maintain them or as necessary to comply with the regulations.

I should note that Mr. Morris's letter to us of April 21 mentions bonding information which was not submitted.

Please let me know your preference. I have not provided this review to U.S. Fuels but will do so as soon as you indicate that it is appropriate.

I hope we can proceed and get the element of the plan under way.

Tom Guobis, Shirley Lindsay and Bill Killam attended the U.S. Fuels meeting with me if you need more information.

Sincerely,



John E. Hardaway
Chief, Technical Analysis
and Research Division

Attachment

Attachment

Discussions at meeting between U.S. Fuels (Sharon Steel Corporation) and OSM on April 21, 1981.

U.S. Fuels is proposing to upgrade facilities servicing the new King #6 portal (the old King #3 mine). Under immediate consideration is the installation of a coal conveyer, about 2400 feet long, a new truck load out at the terminus of the coal conveyer, the upgrading of the existing access road, and associated sediment ponds. The King 6 is expected to operate for about 10 years.

The existing road, which was paved is in a state of disrepair. Above the proposed location of the new coal truck loadout, the road grade is 10 to 12 percent, which USF considers steep for coal trucks during the winter. Grade below the load out is estimated at 8 percent or less. It was noted that the road likely does not meet the current grade standards. However, the details of compliance were not examined during the meeting. It is desired to upgrade the road by widening in presently narrow locations, replacing ditches and other drains, and repaving. The widening is characterized by being generally on the order of 3 feet.

It was noted that the regulatory authority needed the following information, for either the existing road, if it were to be maintained, or for the new road:

1. Location showing all drainage structures, and existing topography.
2. Grade Profile.
3. Calculations for drainage structures.

USF's new submission provides the location of the access-haul road (III-4A and B). This shows the grade and culvert locations. The size of existing culverts is also provided. Typical of the road are shown in Exhibits XIII-1,2,&3

The conveyer, an above ground system, with tension supports every 100 feet (approximately) and cable supports every 10 to 12 feet. The tension supports will be constructed on concrete footings; the cable supports to be supported on railroad ties. The conveyer will be hung from cables and thus will be about four feet above the ground. At four locations there will be deer crossings. At these locations the conveyer will be raised to provide a 3m X 5m opening. USF's new submission shows the "deer crossings" (Maps G 20&21). Since the canyon can be quite windy, USF is planning to cover the conveyer. Despite the drawings, no cuts or fills are planned. Thus no culverts or drainage diversions are planned for the conveyer line. Apparently there are boulders that USF plans to blast and use for riprap in other areas. USF has been correctly advised that the conveyer line, in itself, does not require a sedimentation pond.

USF reports little experience with downhill conveyors and therefore indicated that certain details of the conveyor would have to be worked out.

Examination of the mining and reclamation plan indicates that certain vegetation and soil conditions were recommended for mitigating the impact of the deer crossings. These have not (apparently) been taken into account by USF in the conveyor plan as presented to date, but likely should be. These have to do with use of certain species to provide cover and a "tunnel effect" to guide wildlife through the passages. The m.& r. plan indicates that elk use the general area in the winter. USF indicated that annual snowfall might amount to 24". It would appear that the conveyor deer crossings would provide adequate passage even with snow on the ground.

The load out area will have a diversion and sedimentation pond. USF indicated all calculations were available in the m.& r. plan.

USF's new submission provides Exh. VII-10 with sections of the pond at the portal area 13.75af; sediment (0.80af). This pond shows a pipe leading from upstream of the pond, through the downstream embankment. The truck load out plan is shown in Exh. VII-11,12,13 (0.6af). A few questions arise regarding development of drainage and discharge. It would appear that this pond was approved on March 19, 1981 by the State Health Dept. No calculations are in the new submission.

Brief discussions of the vegetation data indicated that the method of obtaining baseline data was not clear and that USF could not explain the procedures nor the results at the meeting. Therefore it was suggested that OSM discuss the matter in detail with Bio-West who made the measurements. Having contacted Bio-West on April 22, we identified a number of deficiencies.

1. It is not clear what vegetation types will be disturbed by the conveyor belt and its associated facilities.
2. It is not clear whether the reference areas are similar in vegetative cover and density to the corresponding proposed affected areas, from the information presented.

Apparently a step-point transect was used; the accuracy of this method is questionable and may need to be verified by further field sampling.

3. Information on cover by species has not been provided.

Sample data are not provided to show adequacy of the cover, production, and density sampling procedures. No shrub production or density data had been collected; depending upon the postmining land use, one or the other is needed.

There may also be some questions as to the validity of adding production data collected from the sagebrush and pinyon-juniper communities in October, 1980 to the August production sample data for these communities. The range condition of and management plan for the reference areas are not clear.

The information supplied in the revegetation plan lacks specificity in general.

Little or no information on specific seed mixtures, planting methods, timing of reclamation, or revegetation monitoring was supplied. The commitment to employ temporary revegetation in disturbed areas is not clearly in the plan, nor are mulching or soil testing and fertilization procedures.

Further information regarding the baseline inventory deficiencies noted above was requested from Bio-West and the applicant. The details of these deficiencies were discussed with Marianne Wright of UDGOM on April 27, 1981.

The cultural resources survey lacked a map that clearly related to the areas to be disturbed and therefore it could not be determined what had been surveyed. It is expected the survey covered the conveyor along a 100 foot swath, and that it covered the road and truck load out. But this could not be confirmed without an adequate map. Two dates were reported for two buildings that are proposed to be removed (1948 and 1898). The earlier date could make the structure into a potential historic resources. Therefore the date(s) of the buildings must be confirmed. It would also be exceptionally helpful if the entire road had been investigated.

USF's new submission provides a soils map for the conveyor area. The information in the submission will have to include soil depths and stockpile areas in addition. This maybe contained in the m.& r. plan. The descriptions of vegetation from the SCS is useful as background information.

JOHN T. BOYD COMPANY

MINING AND GEOLOGICAL ENGINEERS
PITTSBURGH DENVER HOUSTON HUNTINGTON

Main Office: 400 Oliver Building, Pittsburgh, Pennsylvania 15222 412/562-1770

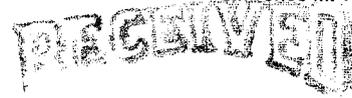
File ACT/007/011
Copy to Wayne
and me.
Jim

President
John T. Boyd
Executive Vice President
Lawrence D. Gent
Administrative Assistant
Marjorie C. Rist
Vice President and Manager
David J. Morris



Vice Presidents
Arthur E. Belton
James W. Boyd
Phillip D. Clady
Marcellus M. Fitzwater, Jr.
James T. Jones
Ronald L. Lewis
James D. O'Donovan
John W. Sabo
Lawrence M. Thomas

April 20, 1981
File: D1412-0



APR 20 1981

DIVISION OF
OIL, GAS & MINING

Mr. James Smith, Jr.
Coordinator of Mined Land Development
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Dear Mr. Smith:

We appreciate the opportunity of meeting with you today in hopes of further clarifying U.S. Fuel Company's request for permit approval to construct an overland conveyor and loadout facility for their King 6 mine. Since we are somewhat confused as to whether DOGM or OSM will lead the review of this request, we are simultaneously presenting the issue to both you and Mr. Crane and his staff in Denver. The intent of this approach is not to cause DOGM and OSM to work at cross-purposes, but to expedite permit approval and allow our client to proceed at last with the reactivation of the King 6 mine.

Enclosed under this cover is an excerpted version of U.S. Fuel's March permit application, which presents only that information pertinent to King 6. Also attached is the following information which will hopefully correct the deficiencies mentioned in Mr. Crane's letter to you, dated February 20, 1981, and subsequently discussed with members of the OSM staff on April 9.

1. Soils and Vegetation. This information is provided in Chapters VIII and IX of the March application and is excerpted. Soil types and the determination of the productivity of grasses, forbs, trees and shrubs was performed by the Soil Conservation Service. In addition, BIO/WEST, Inc. of Logan, Utah, conducted a detailed vegetation study of the entire Hiawatha area which included the South (Left) Fork of Miller Creek where the King 6 conveyor and loadout are located. This study determined the type and amount of vegetation (baseline) and recommended procedures for revegetation that U.S. Fuel intends on following. Seed mixtures and amounts recommended to enhance wildlife are in Chapter X, Appendix B, of the permit and are excerpted. It is U.S. Fuel Company's intention to follow these recommendations.

It is our opinion that baseline vegetation information is provided and the potential for reclamation is demonstrated as required in the State regulations and in 30 CFR 741. Further, U.S. Fuel Company has committed to monitoring a native vegetation

plot during the project to assess impacts and adjust the proposed seed mixtures if new data support such an adjustment. This change, of course, would only be made with full concurrence of the DOGM and OSM.

2. Cultural and Historical Resources. As required under the National Historical Preservation Act and the Antiquities Act, U.S. Fuel contracted with Utah Archaeological Research Corporation to conduct a detailed cultural and historical survey. The methods used by the investigator, Mr. Clayton Cook, have been approved by OSM. This detailed survey of the conveyor and loadout for King 6 was completed subsequent to the March application and are included as Appendix A to the excerpted information.
3. Conveyor Plan. Additional details regarding the planned conveyor system are provided as Appendix D to the excerpted information. These plans were drawn by Mr. Charles Jahne, a registered professional engineer employed by U.S. Fuel. If this supplemental information is still not enough to answer questions posed by either OSM or DOGM, Mr. Jahne will gladly explain the system in person or will provide additional written explanation as required.
4. Bonding. While Mr. Crane stated in his letter to me dated April 17 that bonding information did not have to be provided with the other information, we have included it now to expedite the entire permit approval.

In Chapter III of the March application, U.S. Fuel provided on Table III-12 a cost estimate for reclamation of the King 6 surface disturbance in South Fork canyon. This table shows that, excluding the haulroad which will remain in place for mine access, 14 acres will be disturbed. The table further estimates the total cost of reclaiming this land will be \$40,300, or \$2,878 per acre. Based on our experience with other mines in the area and throughout the West, this is a reasonably accurate per acre figure. Considering that the land is only worth \$150 per acre, the cost benefit ratio for these efforts is high. At the \$100,000 to \$200,000 level mentioned by OSM, the cost per acre ranges from \$7,142 per acre to \$14,285 per acre, which is not realistic.

We believe that the information contained in the excerpts and the supplemental information will satisfy the requirements of both Utah and Federal regulations. If it does not, we respectfully request a written reply listing specific deficiencies so that U.S. Fuel can take immediate action to remedy them.

Mr. James Smith, Jr.
Division of Oil, Gas and Mining

April 20, 1981
Page 3

As emphasized in my letter to Mr. Crane dated April 9, U.S. Fuel Company faces substantial financial hardship if early approval is not granted for construction of the King 6 conveyor and loadout. We appreciate the attention that DOGM and OSM are giving the matter, and hope that the issue can be resolved in the next two weeks.

Very truly yours,



David J. Morris
Vice President and Manager

Book + File: ACT/007/011

Scott M. Matheson
Governor

STATE OF UTAH

DEPARTMENT OF HEALTH

DIVISION OF ENVIRONMENTAL HEALTH

150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110

Handwritten signatures and initials: DWH, J, S, etc.

MAY 15 1981
LCS



533-6108
March 13, 1981

RECEIVED
Administrators, Director
Room 26 801-533-6121
Handwritten initials: T.P., M.S., etc.

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

Charles J. Jahne
Sharonsteel Corporation
19th Floor University Club Bldg.
136 East South Temple
Salt Lake City, UT 84112

DIVISION OF
OIL, GAS & MINING

DIVISIONS
Community Health Services
Environmental Health
Family Health Services
Health Care Financing
and Standards

OFFICES
Administrative Services
Health Planning and
Policy Development
Medical Examiner
State Health Laboratory

Re: King VI Mine Overland Conveyor
Project (Hydrologic Information
King VI Mine area - United States
Fuel Company - Dated Dec. 5,
1980 - Received Dept. of Health
Jan 13, 1981).

Dear Mr. Jahne:

As discussed with you on the telephone, March 11, 1981, we have just become aware of the conveyor project. In our review of the December 5, 1980 document we find that the details furnished on the conveyor will not allow us to do an air quality evaluation. If the information in the Hydrologic document with associated prints (G-1, 2, 3, 4, 6, 11-15, & 18) is all the Division of Oil, Gas and Mining can furnish, more details are required from you.

The Utah Air Conservation Regulations (See Section 3.1, copy enclosed) require that a notice of intent be sent to the Bureau of Air Quality on projects which would be air pollution sources. The conveyor system would not be exempt.

Please provide the notice of intent (letter) with the following to enable us to do an engineering evaluation and proceed with the air quality approval process.

1. Total length of the conveyor with number of transfer points.
2. Size of stockpile (tons and dimensions - max per year).
3. Coal transfer (max per hour, per year).
4. Dust control measures proposed at conveyor transfer points, at loadout, and on stockpile.

Page 2
Charles J. hne
3/13/81

5. Increase in vehicle miles traveled along existing haul and access roadways as a result of the new portal.
6. Dust control measures for the roadways including the loadout turn-around.

Please be reminded that the State requires best available control technology to abate emissions. Also, the emission sources should not be operated until an approval order is issued by the Executive Secretary of the Utah Air Conservation Committee.

Sincerely,

Brent C. Bradford
Executive Secretary
Utah Air Conservation Committee

MRK:job

cc: Division of Oil, Gas & Mining (D.W. Hedberg) ✓

Enclosure



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

File ACT/007/011
Copy to Wayne
Route 900
and others for
review & comment
Jim

OFFICE OF THE REGIONAL DIRECTOR

Mr. James W. Smith, Jr.
Coordinator of Mined Land Development
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

FEB 20 1981
RECEIVED
FEB 23 1981

Dear Jim:

Through a memorandum dated November 5, 1980, the U.S. Geological Survey (USGS) forwarded to OSM a proposed mine plan modification for U.S. Fuel Company's King No. 6 Mine. By way of this letter, I am recommending that U.S. Fuels be allowed to reopen the King No. 6 Mine as addressed in their 1977 30 CFR 211 mine and reclamation plan. The King No. 6 Mine is the reactivation of an abandoned portal site located on fee land (abandoned in 1975). Initial development would involve the mining of coal owned by U.S. Fuel in order to obtain access to recover a block of Federal coal that was left in place during previous mining. The Federal Lease involved is SL-025431, and development would involve mining the Hiawatha coal seam.

In my letter of July 25, 1979 to Mr. Ron Daniels of DOGM, I stated that the approved mine plan for the King Mines did not speak to surface disturbances associated with the King No. 6 Mine. Further research shows this to be only partially correct. Mining at the King No. 6 was addressed as follows in U.S. Fuels 1977 mine plan under the title "South Fork Mine":

South Fork Mine

"This mining unit will be developed in a remnant of the Hiawatha Seam in the South Fork area. Figure 15 shows a development proposal. The A seam has been mined extensively above this unit and may, therefore, require longwall mining methods to provide adequate roof support. The rock interval between the two seams in this area averages about 40 feet.

"Development will require driving two entries through previously mined but uncaved workings for belt haulage and supply facilities. Intake and return airways will then be picked up from existing workings and a six-entry development heading will be driven to the western boundary of the coal block. Panels will then be driven north and south of the main heading in a retreat fashion.

"Surface facilities will be located on fee land in the South Fork Mine yard where an existing dry house, shop, fan building, and water tank can be reactivated.

"Mining operations will be partly in fee land and partly on government lease land. Production rates should approximate 500,000 tons per year when fully operating."

Both the USDA Forest Service (Manti LaSal National Forest) and the USGS-Conservation Division prepared an Environmental Assessment for the U.S. Fuel 1977 30 CFR 211 mine and reclamation plan. Also, U.S. Fuel's King Mine was considered to be an existing operation in the only regional Environmental Impact Statement (Development of Coal Resources of Central Utah, DOI, 1979).

Operations addressed under the 1977 211 plan have been approved by the Department of Interior, and concurrence has been received by the Forest Service. Your office has also approved, with stipulations, the reactivation of the King No. 6 portal site. U.S. Fuel has committed to the three stipulations of the approval. U.S. Fuel's response has been reviewed by OSM, and I find that the response is acceptable.

One of the stipulations of the July 9 letter is that "the surface shall not be disturbed except to install sediment control facilities and the structures associated with the portals." Through correspondence forwarded from your office dated September 9, 1980, a plan for an additional conveyor portal, a conveyor, and a loadout on fee land was proposed by U.S. Fuels. This plan is currently under review by OSM. A letter was sent to Sharonsteele on October 28, 1980, in regard to deficiencies related to sediment control. The company responded to these concerns on December 5 with a revised plan addressing runoff control for the conveyor, stockpile, loadout, and a repaved road. This plan has been reviewed and has been determined to contain all necessary information in relation to OSM's hydrologic concerns. However, because this is a new site of disturbance, information is needed as to the baseline condition of the area and a demonstration of reclamation is required as specified under 30 CFR 741. Specifically, information is needed on soils, cultural resources, and bonding of the area. Information was received in regard to vegetation baseline data dated December 3, 1980; however, these tables did not supply enough information to determine productivity or density nor does it suggest a permanent or temporary seed mixture.

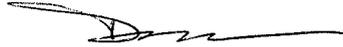
It is my understanding that U.S. Fuels is in the process of completing a permanent program permit application. With this in mind, I strongly recommend that U.S. Fuels provide the information necessary to evaluate compliance with the permanent program for the entire King No. 6 Mine. Without this information, I cannot approve the proposed modifications to the 211 mine plan. If I or any of my staff can be of assistance, the operator should feel free to call upon us.

In summary, activities addressed under the 1977 mine plan have been fully approved and evaluated by the USGS and the Forest Service. Therefore, I find no reason to delay reactivation of the King No. 6 portal site. However, activities proposed in the September 9th letter (an additional portal, conveyor, and loadout) cannot be approved until compliance with 30 CFR 741 is demonstrated. U.S. Fuels has, in the past, been very cooperative in providing data for our informational needs. I am confident that this relationship can continue.

-3-

I request that your office forward this letter to U.S. Fuel. If you have any questions in regard to this review, please call John Nadolski (303/837-3773) of my staff.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Crane", with a long horizontal flourish extending to the right.

DONALD A. CRANE

cc: Moffitt, USGS, SLC
Christensen, Manti LaSal, Price

JOHN T. BOYD COMPANY

MINING AND GEOLOGICAL ENGINEERS
PITTSBURGH DENVER HOUSTON HUNTINGTON

Main Office: 400 Oliver Building, Pittsburgh, Pennsylvania 15222 412/562-1770

File Act/007/011
Copy to Wayne
& me Jim
Route copy for
review & comment

President
John T. Boyd
Executive Vice President
Lawrence D. Gent
Administrative Assistant
Marjorie C. Rist
Vice President and Manager
David J. Morris



Vice Presidents
Arthur E. Belton
James W. Boyd
Phillip D. Clady
Marcellus M. Fitzwater, Jr.
James T. Jones
Ronald L. Lewis
James D. O'Donovan
John W. Sabo
Lawrence M. Thomas

April 14, 1981
File: 1412-0

RECEIVED

APR 15 1981

DIVISION OF
OIL, GAS & MINING

Mr. James W. Smith, Jr.
Division of Oil and Gas
and Mining
1588 W. North Temple
Salt Lake City, Utah 84116

Dear Mr. Smith:

United States Fuel Company needs approval to install a conveyor and loadout facility at the King 6 mine, Carbon County, Utah. A late April approval is necessary because this facility will take 3 months to install and contracts call for shipping coal in August 1981.

We have written Mr. Donald Crane about this situation and have met with John Hardaway and John Nadolski.

The enclosed letters explain United States Fuel Company's situation in detail and the results of our meeting with OSM.

We appreciate your urgent attention to this matter. The adverse economic consequences to United States Fuel Company will be substantial if a late April approval is not granted.

Very truly yours,

David J. Morris
Vice President and Manager

Enclosures

cc: Errol Gardiner

File ACT/007/011
Jim

JOHN T. BOYD COMPANY

MINING AND GEOLOGICAL ENGINEERS
PITTSBURGH DENVER HOUSTON HUNTINGTON

Main Office: 400 Oliver Building, Pittsburgh, Pennsylvania 15222 412/562-1770

President
John T. Boyd
Executive Vice President
Lawrence D. Gent
Administrative Assistant
Marjorie C. Rist
Vice President and Manager
David J. Morris



Vice Presidents
Arthur E. Belton
James W. Boyd
Phillip D. Clady
Marcellus M. Fitzwater, Jr.
James T. Jones
Ronald L. Lewis
James D. O'Donovan
John W. Sabo
Lawrence M. Thomas

April 9, 1981
File: D1412-0

RECEIVED

APR 15 1981

DIVISION OF
OIL, GAS & MINING

Mr. Donald A. Crane
Regional Director
Office of Surface Mining
Brooks Towers
1020 15th Street
Denver, Colorado 80202

Dear Mr. Crane:

U.S. Fuel Company needs an approval to begin construction on a conveyor and loadout facility at the King 6 mine, Carbon County, Utah. An early approval is necessary because contracts call for shipping coal in August 1981 and installation of the facility will take three months. In addition, U.S. Fuel Company already has an approved \$5 million budget and has bought the equipment, which will be delivered this summer.

In May 1977, a 30 CFR 211 report was submitted to the USGS. The 1977 plan contemplated mining the King 6 area. A proposal to definitely mine the King 6 was forwarded to the OSM by the USGS in November 1980. The USGS considered this to be a minor modification to the 30 CFR 211 plan and approved it (see attachment). Subsequently, MSHA approved the roof control and ventilation plans for King 6 as a typical extension of the King 4 mine.

In March 1981, U.S. Fuel Company, with our firm's assistance, submitted a permit application to Utah Division of Oil, Gas and Mining (DOGGM) under Utah's Surface Effects of Underground Mining Activities Promulgated Under UCA 4010-1 et. seq., which was approved by OSM on January 23, 1981. This application addressed the new surface facilities for the King 6 portal which will be required to economically transport the coal from the mine to the preparation plant. As mentioned in the USGS's approval of the mine plan modification, these facilities are located on fee land and fall technically within the jurisdiction of the DOGGM.

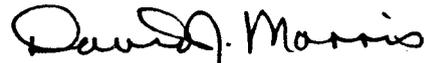
Yesterday we were informed by Mr. Lee Spencer, a mining engineer with the DOGGM, that the U.S. Fuel application would not be reviewed until June, and that final approval probably cannot be expected until early next year. Mr. Spencer suggested that, with OSM's concurrence, the DOGGM would probably give U.S. Fuel conditional approval to construct the conveyor and loadout. He further suggested that we should first present the dilemma and proposal to you before going any further with DOGGM.

Mr. Donald A. Crane
Office of Surface Mining

April 9, 1981
Page 2

We appreciate your urgent attention to this matter and offer our assistance in any way requested to expedite the approval. It is our opinion that the action requested will have minimal adverse effect on the environment around the King 6 portal area, which has already been greatly disturbed by past mining. The adverse economic consequences to U.S. Fuel, however, will be substantial if permission is not granted to proceed.

Very truly yours,



David J. Morris
Vice President and Manager

Attachment

cc: Errol M. Gardiner
James W. Smith, Jr. ✓



United States Department of the Interior

SL-025431

GEOLOGICAL SURVEY

Office of the District Mining Supervisor
Conservation Division
2040 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

January 28, 1981

Mr. Gary Barker
United States Fuel Company
Hiawatha, Utah 84527

Dear Mr. Barker:

You have submitted to this office for approval a plan for development of the King 6 mine in South Fork Canyon. This plan involving Federal lease SL-025431 contemplates mining the Hiawatha seam and to a lesser extent the "A" seam in an area where past mining was carried out in the "B" or uppermost seam.

Your 1977 mine plan for total mine development has been reviewed. The 1977 plan contemplated mining the area covered by the King 6 proposal which is, therefore, considered to be a "minor" modification of the 1977 plan. This modification has been studied in detail and represents a logical approach to recovery of this block of coal. It is recognized that because of the erratic nature of past mining in the "B" seam above, it is impossible to columnize or otherwise lay out a plan to conform with the past mining. In view of this, it is anticipated that unforeseen conditions will dictate plan changes as mining progresses. This will require close coordination with this office to insure maximum recovery of the coal.

The proposed "minor" modification is hereby approved subject to all lease terms and mine plan approval stipulations. The proposed portal area and about the first 1,900 feet of entries are on Fee land and, therefore, are not included in this approval.

Sincerely yours,

Jackson W. Moffitt
Jackson W. Moffitt
District Mining Supervisor

Enclosure

CANYON

FAULT

PROJECT

MINED BY ORDER FROM U.S.G.S.
18, 1950.

COAL TO BE MINE
BY ORDER FROM U.S.G.S.
DATED JULY 1950

ZONE

Bad Reef

ULT

By: _____
Date: _____

District Mining Supervisor

Senior Staff Assistant

Mining Engineer

MODIFICATION TO
MINING PLAN APPROVED BY USGS
District Mining Office

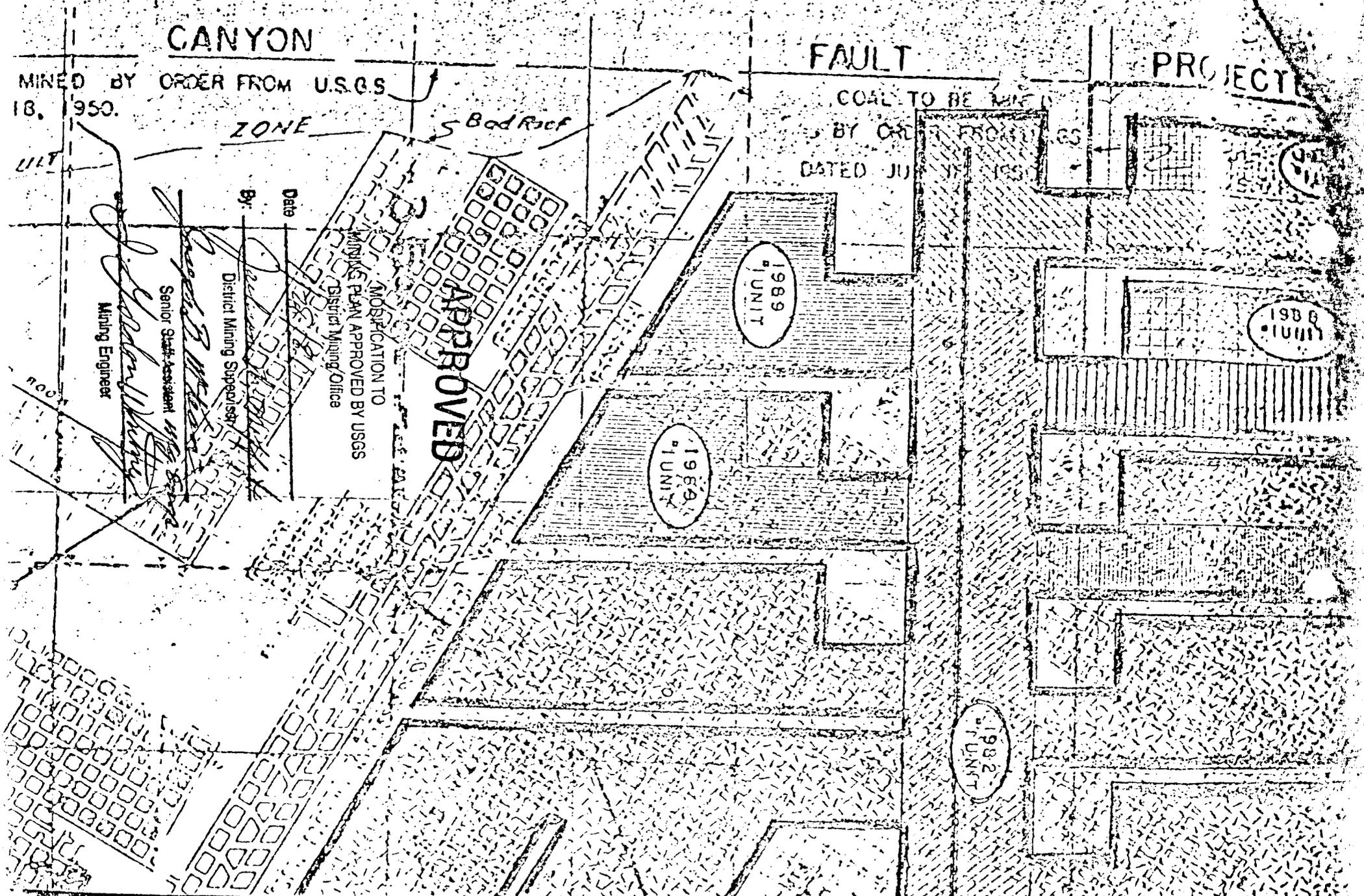
APPROVED

1989
UNIT

1989
UNIT

1989
UNIT

1982
UNIT



JOHN T. BOYD COMPANY

MINING AND GEOLOGICAL ENGINEERS
PITTSBURGH DENVER HOUSTON HUNTINGTON

Main Office: 400 Oliver Building, Pittsburgh, Pennsylvania 15222 412/562-1770

President
John T. Boyd
Executive Vice President
Lawrence D. Gent
Administrative Assistant
Marjorie C. Rist
Vice President and Manager
David J. Morris



Vice Presidents
Arthur E. Belton
James W. Boyd
Phillip D. Clady
Marcellus M. Fitzwater, Jr.
James T. Jones
Ronald L. Lewis
James D. O'Donovan
John W. Sabo
Lawrence M. Thomas

April 10, 1981
File: D1412-0

Mr. Donald A. Crane
Regional Director
Office of Surface Mining
Brooks Towers
1020 15th Street
Denver, Colorado 80202

RECEIVED

APR 15 1981

DIVISION OF
OIL, GAS & MINING

Dear Mr. Crane:

On April 9, 1981, Marcie Greenberg met with John Hardaway and John Nadolski to discuss the action United States Fuel Company must take to expedite the approval of the loadout and conveyor installation for the expansion of their existing operations in Carbon County, Utah.

It is her understanding that OSM considers the information contained in the March 1981 permit to be inadequate, and that OSM requires the following information before approval of the installation can be given.

1. A detailed cultural and historical resources field study incorporating OSM's considerations.
2. A more detailed vegetation survey with the prior approval of the field methods by OSM.
3. A narrative about the conveyor with additional drawings and more detail added to the existing drawings.
4. A reevaluation of the reclamation costs without considering salvage value and funding provided for removal of roads, sewerlines and waterlines, 2 feet additional topsoil to be placed on foundations, soil amendments and deep ripping, reclamation of the topsoil borrow pit, continued monitoring of water and subsidence, planting trees and shrubs, and tearing down the conveyor. John Hardaway said a typical reclamation cost would be \$100,000 to \$200,000 for this site.
5. A report containing information excerpted from the March 1981 permit application concerning the King 6 mine.

It was John Hardaway's and John Nadolski's opinion that it would take 2 months to complete a review of this installation. This delay

Office of Surface Mining
Mr. Donald A. Crane

April 10, 1981
Page 2

is unacceptable to United States Fuel Company because contracts call for shipping coal in August 1981, which means that expansion of the outside coal handling facilities must begin by mid-May. This should be considered a minor modification, reviewed and approved expeditiously. The adverse economic consequences to United States Fuel Company will be substantial if the immediate action is not taken on this matter.

DOG M suggested that our next move on this should be to meet with them. We plan to give them a copy of the report requested by OSM and a letter addressing the revisions requested by John Hardaway.

We request your direct and immediate attention to this matter.

Very truly yours,



David J. Morris
Vice President and Manager

cc: Errol Gardiner
John Hardaway
James W. Smith, Jr. ✓



SCOTT M. MATHESON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

CHARLES R. HENDERSON
Chairman

JOHN L. BELL
C. RAY JUVELIN
THADIS W. BOX
MAXILIAN A. FARBMAN
EDWARD T. BECK
E. STEELE McINTYRE

CLEON B. FEIGHT
Director

February 9, 1981

Mr. Steve McNeal
Utah State Department of Health
Bureau of Water Pollution Control
150 West North Temple
Salt Lake City, Utah 84116

RE: Revision of Surface and
Groundwater Monitoring Plan
United States Fuel Company
Carbon County, Utah
ACT/007/011

Dear Mr. McNeal:

Enclosed is one copy of United States Fuel Company's revised water monitoring plan for their Hiawatha Mining Complex in Carbon County, Utah.

The Division would appreciate an expeditious review and would like to return our comment or approval by February 24, 1981, if possible.

Sincerely,

D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

DWH/te

Enclosure



SCOTT M. MATHESON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH

CHARLES R. HENDERSON
Chairman

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS, AND MINING

JOHN L. BELL
C. RAY JUVELIN
THADIS W. BOX
MAXILIAN A. FARBMAN
EDWARD T. BECK
E. STEELE McINTYRE

CLEON B. FEIGHT
Director

1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

January 16, 1981

Mr. John Nadolski, Hydrologist
Office of Surface Mining
Reclamation and Enforcement
Brooks Towers
1020 Fifteenth Street
Denver, Colorado 80202

RE: Surface and Groundwater
Monitoring Plan (Revision)
U. S. Fuel Company
Hiawatha Complex
ACT/007/011
Carbon County, Utah

Dear John:

Enclosed please find two (2) copies of United States Fuel Company's Surface and Groundwater Monitoring Plan in its revised form incorporating OSM comments on their previous plan. The Division has kept one (1) copy for a work copy and will request that additional copies be sent to your agency and ours to make up for copy deficiencies.

A reminder to the Company by your agency for additional copies may aid in speeding up the process.

The Division would appreciate an expeditious review and would like to return our comment by January 30, 1981, if possible.

Sincerely,

D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

Enclosures

DWH/btm

File At 10/27/81
Copy to Wayne
w/Plans Jim

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

December 23, 1980

Mr. James Smith
Coordinator of Mined Land Development
Utah Department of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

DIVISION OF
OIL, GAS & MINING

Dear Mr. Smith:

Enclosed are three copies of our revised Surface and Groundwater Monitoring plan. This plan has been revised to address comments and recommendations outlined in a review by the Federal Office of Surface Mining on July 18, 1980. Stipulations set forth by your agency on June 15, 1979 and August 21, 1979 were addressed in an earlier plan and carried forward in this revision. We assume you will forward this response to the Office of Surface Mining.

Following is a summary of OSM's comments and recommendations and U. S. Fuel Company's response as incorporated in the plan.

1. Comment: Within the Gentry Mountain area, there are many springs in addition to those on U. S. Fuel Company's map. Many of these springs are critical to the maintenance of the existing population of livestock and wildlife. The Office of Surface Mining (OSM) the Division of Oil, Gas, and Mining (DOGM), the Forest Service (FS), and the Company need to meet to identify critical springs for monitoring.

Response: While it is true that there are many springs within the Gentry Mountain area in addition to those shown on our map, many of these springs to the north and west of our property are being monitored by a neighboring mining company (Plateau Mining Company). We feel that the 10 springs selected by us for monitoring are significant and will be useful in determining the effects of mining. They are significant due to their location with respect to existing and projected underground mine workings. Also, they are significant in that they all had some flow during the fall of the drought year of 1977 when many springs had dried up.

According to 30 CFR 817.52, it is our understanding that the purpose of a hydrologic monitoring plan is to "determine the effects of underground mining activities on the recharge capacity of reclaimed lands and on the quantity and quality of water in the ground water systems in the mine plan and adjacent areas". Monitoring these 10 springs along with the



Mohrland portal mine water discharge and stream drainages, should meet these requirements. If it is deemed necessary to monitor springs because they are critical to livestock and wildlife populations, the company would be willing to consider this in connection with a wildlife plan; however, we feel that this should not be a limiting factor in approving a hydrologic monitoring plan. As a point of interest, 4 of the 10 springs selected (SP-1, SP-4, SP-5 and SP-7), are developed with watering troughs or ponds.

2. Comment: Those springs that contribute to streams flowing through disturbed areas should be monitored monthly.

Response: Springs SP-3, SP-7, SP-9 and SP-10 do not contribute to streams that flow through disturbed areas. Springs SP-1, SP-2, SP-4, SP-5 and SP-6 are located considerable distances from flowing streams and their flow rates (5 to 50 G.P.M.) are so small that any contribution to stream flow would most likely not justify monthly monitoring. Spring SP-8 discharges from a steel pipe directly into Cedar Creek. This spring will be monitored monthly, as recommended.

3. Comment: Final locations and procedures for sampling must be approved by the regulatory agencies.

Response: The accompanying plan describes locations and sampling procedures. U. S. Fuel Company requests approval of this plan.

4. Comment: Basic geologic data, including a map, should be part of this monitoring program.

Response: Geologic data, including a map, have been included as requested.

5. Comment: The Bear Canyon Fault is apparently a major groundwater channel. The effects of mining on flow rates needs to be addressed.

Response: The effects of past mining on flow rates from the Bear Canyon fault is addressed in the accompanying plan. Future plans are to stop all mining within at least 100 feet of the fault. Water derived from the fault is presently being monitored at the old Mohrland portal discharge point.

6. Comment: A ground water inventory should be included in the plan.

Response: A question is raised as to the intended extent of a ground water inventory. If one were to inventory every ground water seep in the Gentry Mountain area, probably over a hundred could be identified. If one were to inventory only those sites which have significant flow rates and are strategically located to reflect the effects of mining,

then the 10 springs selected should constitute a good inventory. The hydrology map (M-2) included with the revised plan shows the location of 7 additional springs selected for monitoring by a neighboring mine. Also shown are 4 springs which are periodically monitored by the U.S. Geological survey. Would the 21 above mentioned springs constitute a good inventory?

7. Comment: Exploratory drill holes and an old gas well that is still cased could possibly be used to develop a water level map.

Response: Eleven exploratory drill holes were drilled for U. S. Fuel Company from the surface of Gentry Mountain to coal seam horizons during 1976 and 1977. All of these holes have been plugged with concrete as required by our U.S.G.S. drilling permit. The old gas well appears to be sealed at the collar. Also, it is located on Federal Lease SL-031286 which is held by a neighboring mine. Drill hole No. 13 (SE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 30, T.15S., R.8E.) was drilled from the surface in 1923 and not plugged; however, its lower extension was intersected by mine workings (no longer accessible) thus precluding its use as a water level indicator.

8. Comment: The plan states that water diverted into the underground storage reservoir will be monitored, but the location and procedure has not been identified.

Response: This water will be monitored at site ST-2A as clarified in the revised plan.

9. Comment: U. S. Fuel Company's program calls for samples of intermittent streams to be analyzed biannually. Samples should be analyzed on a monthly basis, when water is present, so that water quality data is representative of runoff, high and low flows, rainfall and baseflow.

Response: Intermittent streams will be monitored monthly as recommended.

10. Comment: Perennial streams in areas of disturbance should be monitored monthly during baseline collection and after mining begins. If effluent limitations are being exceeded, a higher frequency is required.

Response: Perennial streams will be monitored monthly or more frequently if effluent limitations are exceeded.

11. Comment: We are concerned about how data will be displayed. Appropriate data displays, such as maps, charts, tables, overlays, and narrative descriptions are essential to the success of the program.

Response: Maps, tables and drawings are provided in our plan. Monitoring data will be systematically recorded by qualified personnel. Water samples will be collected in specially treated bottles in accordance

with sampling and transporting recommendations of a certified analyst (Ford Chemical Laboratory, Inc.). Field data and analysis results will be organized and clearly tabulated for submittal to the regulatory authority.

12. Comment: U. S. Fuel Company must make a commitment to maintain the sampling sites and to have qualified persons taking samples.

Response: This commitment is made in the monitoring plan.

13. Comment: We would like to commit the operator to at least annual summaries to the regulatory authority.

Response: An earlier commitment was made with the Division of Oil, Gas, and Mining to submit summaries on a quarterly basis. This has been carried forward in the revised plan.

Yours truly,

Bob Eccli

Bob Eccli,
Mining Engineer

BE/ds

Enclosure(s)



SCOTT M. MATHESON
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON
Executive Director,
NATURAL RESOURCES

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

CHARLES R. HENDERSON
Chairman

CLEON B. FEIGHT
Director

JOHN L. BELL
C. RAY JUVELIN
THADIS W. BOX
MAXILIAN A. FARBMAN
EDWARD T. BECK
E. STEELE McINTYRE

January 16, 1981

Mr. Robert Eccli
Senior Mining Engineer
United States Fuel Company
Hiawatha Complex
Hiawatha, Utah 84527

RE: Request for Additional
Copies of Surface and
Groundwater Monitoring
Plan
Hiawatha Complex
ACT/007/011
Carbon County, Utah

Dear Mr. Eccli:

Thank you for your most recent submittal of three copies of the "revised" Surface and Groundwater Monitoring Plan for the Hiawatha Complex. In your cover letter you requested that our Division forward this plan and your Company's comments to the Regional Office of Surface Mining.

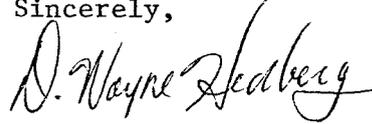
In order to comply with OSM requirements for proper distribution and review procedures, that agency requires at a minimum seven (7) copies of all plans or modifications. This Division usually requires five (5) copies; three (3) for distribution to appropriate State agencies and two (2) for our review and filing purposes.

I have sent two (2) of the copies your Company has submitted to OSM and kept one (1) for our review. The Division would appreciate that an additional five (5) copies be mailed directly to OSM and two (2) copies to this office at your earliest convenience. This will aid in helping alleviate any additional delays in the review of this plan.

Mr. Robert Eccli
ACT/007/011
January 16, 1981
Page two

Thank you for your continued cooperation and coordination. If I can answer any questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "D. Wayne Hedberg". The signature is written in dark ink and is positioned above the printed name.

D. WAYNE HEDBERG
RECLAMATION HYDROLOGIST

cc: Don Crane, OSM

DWH/btm