

June 7, 1989

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DIVISION OF
OIL, GAS & MINING

Ms. Pamela Grubaugh-Littig
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Pamela:

Re: Permit Bond Calculations With SFC Reclamation Area Included
Sunnyside Mines - ACT/007/007

We have recalculated the bond for Sunnyside Mines with the reclamation liability included for Sunnyside Fuels Corporation land that contains the slurry and refuse area used by Sunnyside Mines. We have included tables pertinent to the changes and costs that were discussed by phone on Monday. A brief discussion of the changes follows:

1. Pond reclamation volumes were included for the SFC area, including the new Borrow Area Pond. All push distances and associated unit costs were checked and revised as necessary. Unit costs are from the tables submitted and previously reviewed with the SRS bond.
2. Table III-30 was revised to include additional monitoring time and associated costs for the SFC area. Subsidence costs were included, and costs to generate reports were also included.
3. The culvert removal costs were identified for the SRS and the SFC areas; however, the total cost remains the same.
4. Costs to move borrow material and regrade the disturbed SFC area were put in the estimate using the original yardages estimated by Kaiser. Unit costs were from the SRS bond estimate submitted earlier. Material movement costs were based on a 3/4-mile haul for a total of 5.6 cycles per hour using a 35-ton haul truck.
5. The original Kaiser bond shows \$13,280 for structure removal in Area 7. All of the structure removal costs are included in "Dismantling and Removing Facilities" in the SRS bond submittal.
6. Revegetation acreage for the SFC area was based on the acreage used in the Kaiser bond. Unit costs were from the SRS bond submitted earlier.

Ms. Pamela Grubaugh-Littig
Page 2
June 7, 1989

7. Soil testing, preparation, and fertilizing for the SFC area were based on acreage in the Kaiser bond and unit costs from the SRS bond submittal.
8. The revegetation failure rate of 40% used in the SRS bond submittal was included for the SFC area. This cost was not included in the original Kaiser bond.
9. Construction management and contingency of 15% was added to all costs. Part of the costs were included in the previous SRS bond submittal, but a contingency was added at your request.

The text is being revised to include the SFC area and will be forwarded to you shortly. We are looking forward to a speedy resolution of the bond estimate.

If we have missed any of the items discussed on Monday, please let me know.

Sincerely,



W. P. Balaz, P. E.
Mine Manager

WPB:th

Enclosures

cc: Jim Cooper
Ken Oldham, Esq.
Karl Houskeeper

CHAPTER III

SUNNYSIDE RECLAMATION & SALVAGE
 SUNNYSIDE MINE - RECLAMATION BOND
 BOND ESTIMATE
 REVISED 6/7/89

TABLE III-29
 TOTAL PERFORMANCE BOND ESTIMATE

	SRS AREA	SFC AREA	TOTAL
Mine Sealing	\$52,919		\$52,919
Regrading Disturbed Areas	\$68,722	\$580,914	\$649,636
Regrading Highwall Areas	\$172,346		\$172,346
Portal Closure & Fill	\$13,835		\$13,835
Soil Testing, Preparation & Fertilizing	\$21,883	\$35,831	\$57,714
Revegetation	\$48,964	\$86,419	\$135,383
Pond Reclamation	\$7,833	\$19,438	\$27,271
Dismantling & Removing Facilities	\$769,718		\$769,718
Culvert Removal	\$7,879	\$1,605	\$9,484
Plug Drill Holes	\$1,956		\$1,956
Contractor Mobilization & Demobilization	\$10,000		\$10,000
Monitoring During 10 Year Responsibility	\$97,180	\$69,840	\$167,020
Revegetation @ 40% Failure Rate *	\$28,339	\$48,900	\$77,239
	\$1,301,574	\$842,947	\$2,144,521
Construction Manage. & Contingency - 15%	\$195,236	\$126,442	\$321,678
TOTAL PERFORMANCE BOND ESTIMATE	\$1,496,810	\$969,389	\$2,466,199

* Calculation for Revegetation Failure Rate Cost

Soil Testing, Prep., & Fertilizing	\$21,883	\$35,831	\$57,714
Revegetation	\$48,964	\$86,419	\$135,383
Total Revegetation & Soil Testing	\$70,847	\$122,250	\$193,097
Disturbed Acres	107.13	175.42	282.55
Cost/Disturbed Acre	\$661	\$697	\$683
Cost at 40% Failure Rate	\$28,339	\$48,900	\$77,239

CHAPTER III

SUNNYSIDE RECLAMATION & SALVAGE
SUNNYSIDE MINE - RECLAMATION BOND
BOND ESTIMATE
REVISED 6/6/89

TABLE III-30
TEN YEAR RESPONSIBILITY PERIOD MONITORING

A. EROSIONAL

2 mandays/month at \$30.00/hr x 12 months x 10 years x 8 hrs./day = \$57,600

B. HYDROLOGIC

- 1) Sample each discharge pond on a 10 year - 24 hour storm frequency basis. Assume each pond will require sampling one time during the ten year responsibility period.

8 ponds x 2 hours each x \$30.00/hr. = \$480

- 2) Sample 2 stream channels 4 times per year x 2 hrs./sample x 10 years x \$30/hr = \$4,800

- 3) Laboratory costs @ \$280/sample x 88 samples in 10 years = \$24,640

Total Hydrologic = \$29,920

C. VEGETATION

- 1) Biannual sampling of vegetation reference areas and revegetated areas during responsibility period. Assume 5 years of sampling 15 days/year.

75 days x 2 men x \$30/hr. x 8 hrs. = \$36,000

- 2) Final vegetation survey for reclamation bond release

30 days x 2 men x 8 hrs./day x \$30/hr. = \$14,400

- 3) Biannual Report assembling and writing

5 days x 2 men x 8 hrs./day x \$30/hr. x 5 reports = \$12,000

- 4) Final vegetation report assembling and writing

15 days x 2 men x 8 hrs./day x \$30/hr. = \$7,200

Total Vegetation = \$69,600

D. SUBSIDENCE SURVEY

- 1) Subsidence survey annually for 3 years after closure.

3 days x 3 men x 8 hrs./day x \$25/hr. x 3 yrs. = \$5,400

- 2) Annual subsidence report

5 days x 1.5 men x 8 hrs./day x \$25/hr. x 3 yrs. = \$4,500

Total Subsidence Monitoring = \$9,900

TOTAL MONITORING COST = \$167,020

* Lab sample costs are from 5/88 lab costs.
Labor costs are from recent contractor quotes.

CHAPTER III

SUNNYSIDE RECLAMATION AND SALVAGE
 SUNNYSIDE MINE - RECLAMATION BOND
 BOND ESTIMATE
 REVISED 6/6/89

TABLE III-22
 CULVERT REMOVAL COST ESTIMATE

CULVERT I.D.	CROSS REF. NO.	STATUS	DIAMETER INCHES	SLOPE %	LENGTH FEET	COST /LF	REMOVAL COST
Concrete Culvert*		KAISER	102		121.0	\$11.34	\$1,372
C-14	C-14	SFC LAND	36		226.0	\$3.46	\$782
C-15	C-15	SFC LAND	36		42.0	\$3.46	\$145
C-17	C-17	SFC LAND	48		50.0	\$3.46	\$173
Manshaft Road			18		50.0	\$2.08	\$104
RC01-1	C-11		36	3%	120.0	\$3.46	\$415
RC01-2				3%			
RC01-3	C-12		36	5%			
RC01-4	C-16		12	5%	60.0		
RC01-5		SFC LAND	12		63.0	\$2.08	\$131
RC01-6		SFC LAND	12		60.0	\$2.08	\$125
RC01-7			18	9%	40.0	\$2.08	\$83
RC02-1		SFC LAND	24	5%	80.0	\$2.08	\$166
RC02-2		SFC LAND	24	5%	40.0	\$2.08	\$83
RC02-3			24	3%	40.0	\$2.08	\$83
RC02-4			36	3%	26.0	\$3.46	\$90
RC02-5			24	2%	40.0	\$2.08	\$83
RC02-6							
RC0							
RC03-1				5%			
RC03-2				5%			
RC03-3				5%			
RC03-4				5%			
RC03-5				5%			
RC03-6				5%			
RC03-7	C-09		12		81.0	\$2.08	\$168
RC03-7 DS			12		11.5	\$2.08	\$24
RC07-1				5%			
RC07-2							
RC07-3				5%			
RC07-4				5%			
RC10-1	C-01		36	1%	45.0	\$3.46	\$156
RC10-2	C-03		18	15%	70.0	\$2.08	\$146
RC10-3	C-06		30	3%	100.0	\$3.46	\$346
RC10-4				10%			
RC10-5	C-02		13		350.0	\$2.08	\$728
RC10-6	C-04		24		100.0	\$2.08	\$208
RC10-7	C-05		12	1%	100.0	\$2.08	\$208
RC10-8	C-07		36	2%	240.0	\$3.46	\$830
RC10-9	C-08		12	4%	141.0	\$2.08	\$293
RC10-9 DS	C-08 DS		12	42%	21.0	\$2.08	\$44
Slurry Pipe			18		1,200.0	\$2.08	\$2,496
							\$9,484

Costs are from "Means Site Work Cost Data - 1986"
 For culverts 1'- 2' in diameter, Site Work - 12.3-110-1800
 For culverts 3' in diameter, Site Work = 12.3-110-2300

* Costs were generated for a 25' deep trench using a Cat 225 digging a trench with a 402.5 CF/Ft. area. See "Cat 225 Backhoe Production With 8'-0" Stick" production and operating cost sheet. Pipe located in Icelander Wash.

CHAPTER III

SUNNYSIDE RECLAMATION AND SALVAGE
 SUNNYSIDE MINE - RECLAMATION BOND
 BOND ESTIMATE
 REVISED 6/6/89

TABLE III-21
 POND REMOVAL COST

AREA	POND DESCRIPTION	CY CAPACITY	DOZER PUSH DISTANCE	COST /C.Y.	TOTAL COST
1	No. 3 Hoist House Sediment Pond (Removed during Prep Plant highwall regrade)				
1	No. 2 Canyon Lower Sediment Pond	2,014	50	\$0.136	\$274
1	Sunnyside Surface Facilities Sediment Pond	9,346	300	\$0.531	\$4,963
4	No. 2 Canyon Upper Sediment Pond	627	50	\$0.136	\$85
7	Coarse Refuse Toe Sediment Pond	625	100	\$0.217	\$136
7	Railcut Sediment Pond	1,425	100	\$0.217	\$309
7	Pasture Sediment Pond	260	50	\$0.136	\$35
7	Old Coarse Refuse Toe Sediment Pond	645	50	\$0.136	\$88
7	Borrow Area Sediment Pond	5,195	150	\$0.297	\$1,543
7	Coal Slurry Water Sediment Ponds (3)	58,340	150	\$0.297	\$17,327
9	Manshaft Sediment Pond	1,911	50	\$0.136	\$260
9	Twin Shaft Mine Water Discharge Pond	7,397	100	\$0.217	\$1,605
9	Whitmore Shaft Mine Water Discharge Pond	4,754	50	\$0.136	\$647
TOTAL SEDIMENT POND REMOVAL COST					\$27,271

- 1) See "Estimated Dozer Production - D8L", 50' Push distance for Cost/CY
- 2) Volume of Redistributed Material = Pond Capacity to top of embankment

CHAPTER III

SUNNYSIDE RECLAMATION AND SALVAGE
SUNNYSIDE MINE - RECLAMATION BOND
BOND ESTIMATE
REVISED 6/6/89

TABLE III-25
RECLAMATION & REVEGETATION COST SUMMARY

AREA NUMBER	AREA DESCRIPTION	TOTAL ACRES	MINE SEALING	REGRADING DISTURBED AREAS	REGRADING HIGHWALL AREAS	PORTAL CLOSURE & FILL	SOIL TEST FERTILIZE & PREPARE	REVEGETATE	POND RECLAIM	SUB-TOTAL RECLAMATION COST
1	Main complex, including offices, shop, warehouse, parking lot, unit train, preparation plant, No. 3 Mine fan, industrial water tanks, mine portals, & substations.	54.27	\$10,590	\$34,234	\$82,472	\$199	\$11,085	\$21,869	\$5,237	\$165,687
2	No. 2 Mine fan, substations, portals, & road.	2.95	\$4,907	\$1,137	\$2,048	\$1,372	\$603	\$1,189		\$11,256
3	No. 1 Mine Whitmore Canyon shafts & road.	3.43	\$5,200	\$1,323	\$476		\$701	\$1,382		\$9,082
4	Storage yard, No. 2 Canyon fan & portal.	7.82	\$5,619	\$4,958	\$49,430	\$1,700	\$1,597	\$3,151	\$85	\$66,541
5	No. 2 Mine Water Canyon portals & road.	10.71	\$7,833	\$15,244	\$2,604		\$2,188	\$4,316		\$32,184
6	Test plot, camp, manshaft pond road, methane vent, sediment pond, and mine water discharge.	5.72		\$2,261			\$1,168	\$2,305		\$5,734
7	Refuse disposal areas, industrial waste borrow area, & slurry ponds. Columbia bleeders have no regrade.	175.42		\$580,914		\$5,100	\$35,831	\$86,419	\$19,438	\$727,702
8	No. 1 Mine outcrop fan, substations, portals, roads, and Outside Raise	8.35	\$12,713	\$3,300		\$4,594	\$1,706	\$4,423		\$26,735
9	Upper changehouse, twin shaft fan, manshaft, hoisthouse, Pole Canyon shaft, and B Canyon portal.	13.88	\$6,057	\$6,264	\$35,315	\$870	\$2,835	\$10,329	\$2,512	\$64,181
TOTAL		282.55	\$52,919	\$649,636	\$172,346	\$13,835	\$57,714	\$135,383	\$27,271	\$1,109,103

Note: Soil Test, Fertilize, & Prepare cost based on acres x \$204.26/acre
See backup cost calculation sheet.

CHAPTER III

SUNNYSIDE RECLAMATION AND SALVAGE
 SUNNYSIDE MINE - RECLAMATION BOND
 BOND ESTIMATE
 REVISED 6/6/89

TABLE III-11
 REVEGETATION COST SUMMARY

AREA NUMBER	AREA DESCRIPTION	VEGETATION TYPE	TOTAL ACRES	% STEEP SLOPES	HYDROSEEDING			ACRES	DRILLING COST /ACRE	DRILLED COST	TOTAL REVEGETATION COST
					ACRES	COST /ACRE	COST				
1	Main complex, including offices, shop, warehouse, parking lot, unit train, preparation plant, No. 3 Mine fan, industrial water tanks, mine portals, & substations.	Sagebrush grass	54.27	0%	0.00	\$642	\$0	54.27	\$403	\$21,869	\$21,869
2	No. 2 Mine fan, substations, portals, & road.	Sagebrush grass	2.95	0%	0.00	\$642	\$0	2.95	\$403	\$1,189	\$1,189
3	No. 1 Mine Whitmore Canyon shafts & road.	Sagebrush grass	3.43	0%	0.00	\$642	\$0	3.43	\$403	\$1,382	\$1,382
4	Storage yard, No. 2 Canyon fan & portal.	Sagebrush grass	7.82	0%	0.00	\$642	\$0	7.82	\$403	\$3,151	\$3,151
5	No. 2 Mine Water Canyon portals & road.	Sagebrush grass	10.71	0%	0.00	\$642	\$0	10.71	\$403	\$4,316	\$4,316
6	Test plot, camp, manshaft pond road, methane vent, sediment pond, and mine water discharge.	Sagebrush grass	5.72	0%	0.00	\$642	\$0	5.72	\$403	\$2,305	\$2,305
7	Refuse disposal areas, industrial waste borrow area, and slurry pond. No revegetation at Columbia bleeders.	Pinyon-juniper & grass	175.42	20%	35.08	\$701	\$24,577	140.34	\$441	\$61,842	\$86,419
8	No. 1 Mine outcrop fan, substations, portals, roads, and Outside Raise	Pinyon-juniper	8.35	36%	3.01	\$696	\$2,092	5.34	\$436	\$2,331	\$4,423
9	Upper changehouse, twin shaft fan, manshaft, hoisthouse, Pole Canyon shaft, and B Canyon portal.	Mountain brush	13.88	100%	13.88	\$744	\$10,329	0.00	\$494	\$0	\$10,329
TOTAL REVEGETATION			282.55		51.97		\$36,998	230.58		\$98,385	\$135,383

See equipment operating cost sheets for hourly and unit cost backup.

Average Revegetation Cost/Acre

\$479

CHAPTER III

SUNNYSIDE RECLAMATION & SALVAGE
 SUNNYSIDE MINE
 BOND ESTIMATE
 REVISED 6/6/89

TABLE III-19
 REGRADE AREAS OUTSIDE HIGHWALL

AREA	DESCRIPTION	DISTURBED ACRES	CY REGRADE @ 1' DEPTH	CAT D8L WITH S BLADE				CAT D8L TRIPLE SHANK RIPPER				CAT 769C TRUCK			CAT 988B LOADER			TOTAL COST	AVERAGE COST	
				DOZER C.Y.	PUSH DISTANCE	RATE /C.Y.	DOZING COST	RIPPING C.Y.	RIP DISTANCE	RATE /C.Y.	RIPPING COST	TRUCK C.Y.	HAUL MILES	RATE /C.Y.	TRUCK COST	LOADER C.Y.	RATE /C.Y.			LOADER COST
1	General Area Grading	54.27	87,556	87,556	150	\$0.300	\$26,267	87,556	400	\$0.091	\$7,968	0			\$0				\$34,234	\$0.391
2	General Area Grading	2.95	4,759	4,759	50	\$0.140	\$666	4,759	150	\$0.099	\$471					0		\$0	\$1,137	\$0.239
3	General Area Grading	3.43	5,534	5,534	50	\$0.140	\$775	5,534	150	\$0.099	\$548					0		\$0	\$1,323	\$0.239
4	General Area Grading	7.82	12,616	12,616	150	\$0.300	\$3,785	12,616	300	\$0.093	\$1,173							\$0	\$4,958	\$0.393
5	Water Canyon Refuse Borrow Haul General Area Grading (Area not covered in H.W. regrade or refuse area)	3.73	6,018	6,018	50	\$0.140	\$842	6,018	300	\$0.093	\$560	6,018	2.0	\$1.250	\$7,522	6,018	\$0.662	\$3,984	\$12,908	\$2.145
		5.91	9,535	9,535	50	\$0.140	\$1,335	9,535	100	\$0.105	\$1,001								\$2,336	\$0.245
6	General Area Grading	5.72	9,228	9,228	50	\$0.140	\$1,292	9,228	100	\$0.105	\$969								\$2,261	\$0.245
7	Slurry Area Coarse Refuse (4' Depth) Areas Not Covered by Borrow	71.49	115,337	115,337	50	\$0.140	\$16,147	115,337	400	\$0.046	\$5,306	115,337	0.5	\$0.780	\$89,963	115,337	\$0.380	\$43,828	\$155,244	\$1.346
		47.04	303,565	303,565	50	\$0.140	\$42,499	303,565	400	\$0.046	\$13,964	303,565	0.5	\$0.780	\$236,781	303,565	\$0.380	\$115,355	\$408,598	\$1.346
		56.89	91,783	91,783	50	\$0.140	\$12,850	91,783	400	\$0.046	\$4,222								\$17,072	\$0.186
8	General Area Grading	8.35	13,471	13,471	50	\$0.140	\$1,886	13,471	100	\$0.105	\$1,414								\$3,300	\$0.245
9	General Area Grading	9.88	15,940	15,940	150	\$0.300	\$4,782	15,940	300	\$0.093	\$1,482								\$6,264	\$0.393
SUB-TOTAL		277.48	675,341	675,341			\$113,126	675,341			\$39,078	424,920			\$334,266	424,920		\$163,166	\$649,636	\$0.962

See equipment operating cost sheets for hourly and unit cost backup.