

40-3453

CONCEPTUAL DESIGN, COST AND
GROUND WATER COMPLIANCE INFORMATION
NUCLEAR REGULATORY COMMISSION
REQUEST FOR INFORMATION
MOAB, UTAH, URANIUM MILL SITE

1.0 INTRODUCTION

Canonie Environmental Services Corp. has prepared a response to the Nuclear Regulatory Commission's (NRC's) request for information in its letter dated October 8, 1993. The request for information relates to conceptual design and cost information for alternative disposal sites and ground water compliance to Atlas Corporation's (Atlas') Moab Mill site. The requested cost information is summarized in Table 1 and includes comparisons of the costs associated with the reclamation plan versus two conceptual off-site disposal alternatives. The costs associated with ground water monitoring for the in-place reclamation site and the alternative disposal sites are included in the cost estimates. Also, a discussion is provided on how proposed alternative concentration limits (ACLs) for ground water may be permitted considering applicable laws.

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PDR ADOCK 04003453
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Canonie Environmental

2.0 RECLAMATION ALTERNATIVES

2.1 In-Place Reclamation

Appendix A shows the costs associated with in-place reclamation at the site consistent with the closure plan. These are direct costs exclusive of contractor profit and contingency. Table 1 provides an estimate of the total contract price. This estimate assumes a 10-percent variance from the number presented in the attachments. The range that could be expected for this scope of work, including contractor's fee and contingency, would be \$13 million to \$16 million for the reclamation. This estimate also addresses the cost associated with the current ground water treatment program. The direct costs are shown on Sheet 33 of Appendix A. The estimated costs for the ground water treatment program are \$96,000 per year. As requested, all costs are in 1993 dollars.

2.2 Alternative Disposal Site "A"

Appendix B shows the cost estimate for a disposal site designated as Site "A," as discussed in the Dames and Moore report entitled "Tailings Management and Reclamation Alternatives Study for Atlas Minerals at Moab, Utah" dated October 1977. This site is located approximately 8 miles from the tailings site as shown on Figure 1. A conceptual design for the site is included as Figure 2. Alternative Disposal Site A is located in a box canyon on the west side of Moab Canyon. The site slopes gently to the northwest and has a drainage area of approximately 0.6 square mile. The soil and bedrock conditions at the site consist of a thin veneer of coarse alluvium overlying the Moenkopi Formation. The Moenkopi Formation consists of siltstone and sandstone and is generally of low permeability. The sidewalls of the box canyon are over 400 feet high. The Chinle Formation, consisting of a basal conglomeratic sandstone and overlying mudstones, siltstones, and sandstones, is exposed on the canyon sidewalls. The formation is generally well cemented and stable in vertical cuts.

The costs in this estimate include moving approximately 10.5 million tons of tailings by truck and disposing them in the repository. Assuming the same 10-percent variance as presented in the on-site alternative, the range of costs that could be expected for this scope of work would be \$89 million to \$107 million. The cost for performing an environmental impact statement for this alternative site is included in this estimate. The cost for ground water monitoring is assumed to be the same as that presented in Appendix A. Additionally, as shown on Sheets 38 and 40, the estimated cost for ground water monitoring is \$84,000 per year during the treatment operations and a total of \$139,000 for subsequent long-term monitoring.

2.3 Alternative Disposal Site "B"

Appendix C shows the cost estimate for Alternative Disposal Site "B," located approximately 18 miles to the northwest of the tailings site. As shown on Figure 1, this site would be approximately 2.5 miles southwest of the airport. A conceptual design for the site is included on Figure 3. Alternative Disposal Site B is located in a relatively flat area known as Klondike Flat. The ground surface slopes up steeply north of the site and is relatively flat for several miles south, east and west of the site. The site is underlain by the Mancos Shale. The Mancos Shale consists mostly of a marine shale with some marine and non-marine sandstone units.

The costs included in this estimate include moving approximately 10.5 million tons of tailings by rail and disposing them in the repository. Assuming a 10-percent variance, the range of costs that could be expected for this scope of work would be \$94 million to \$114 million. A cost has also been included for performing an environmental impact statement for the new location. Additionally, as shown on Sheets 39 and 40, the estimated costs for ground water monitoring are the same as provided with the Alternative Disposal Site A estimate.

3.0 GROUND WATER ISSUES

Provisions for establishing ACLs have been incorporated into the NRC's regulations governing the disposal of uranium mill tailings (10 CFR Part 40, Appendix A). Also, the U.S. Environmental Protection Agency's (EPA's) protection standards for uranium and thorium mill tailings (40 CFR Part 192) indicate that ACLs can be established by EPA at designated processing or depository sites. It is our understanding that NRC has not finalized the guidance or methodology for establishing ACLs at uranium mills, however, the NRC regulations (10 CFR Part 40, Appendix A) provide the factors [Appendix A to Part 40, Criterion 5B(6)] for consideration when making a present and potential hazard finding for a particular constituent ACL. If these factors are followed, the constituent ACL will provide protection of human health and the environment based on health protection standards. Also, NRC has developed a "Draft Technical Position on Alternate Concentration Limits for Uranium Mills, Standard Format and Content Guide and Standard Review Plan for Alternate Concentration Limit Application" (June, 1988).

In making the present and potential hazard finding, the factors listed below will be addressed. Preliminary responses on how these factors relate to the Moab Mill site and additional technical analyses that may be required to support ACLs are provided.

- "(a) Potential adverse effects on ground-water quality, considering:
 - (i) The physical and chemical characteristics of the waste in the licensed site including its potential for migration;"

Response - The physical and chemical characteristics of the waste have been well characterized. The active dewatering system and the minimization of infiltration by runoff control and capping will prevent expansion of the contaminant plume.

"(ii) The hydrogeological characteristics of the facility and surrounding land;"

Response - The hydrogeological characteristics of the facility and surrounding land have been well characterized. However, some additional characterization of the interaction of the alluvial aquifer below the tailings with the deeper salt water or brine zone, the bedrock, and the Colorado River will be performed.

"(iii) The quantity of ground water and the direction of ground-water flow;"

Response - The direction of ground water flow is defined. Using existing data, a model will be developed indicating ground water flow conditions after completion of reclamation.

"(iv) The proximity and withdrawal rates of ground-water users;"

Response - No water supply wells exist in the vicinity of the facility.

"(v) The current and future uses of ground water in the area;"

Response - The ground water in the vicinity of the facility is not being used and future use will be precluded by institutional controls.

"(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;"

Response - The shallow ground water below the tailings has been impacted. The reduction of infiltration through the facility will improve water quality over time. The impact of infiltration on the existing ground water conditions under the reclaimed site will be evaluated.

"(vii) The potential for health risks caused by human exposure to waste constituents;"

Response - Institutional controls that prevent human exposure to hazards in the ground water will be implemented.

"(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;"

Response - The reclamation plan and institutional controls will provide protection of the environment to exposure from contaminated ground water.

"(ix) The persistence and permanence of the potential adverse effects."

Response - Because of relatively low ground water velocities, uranium concentrations in the ground water below the tailings may be elevated for a number of years. However, implementation of the reclamation plan and institutional controls will minimize the impact on human health and the environment, and this persistence will have no significant adverse effect.

"(b) Potential adverse effects on hydraulically-connected surface water quality, considering -

"(i) The volume and physical and chemical characteristics of the waste in the licensed site;

"(ii) The hydrogeological characteristics of the facility and surrounding land;

"(iii) The quantity and quality of ground water, and the direction of ground-water flow;

"(iv) The patterns of rainfall in the region;"

Response - All of the above factors relate to the impact infiltration through the tailings will have on ground water quality. The active dewatering system and implementation of the reclamation plan will minimize infiltration. An evaluation of infiltration through the reclaimed site and the impact this infiltration will

have on ground water flow conditions and ground water quality will be performed.

"(v) The proximity of the licensed site to surface waters;

"(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

"(vii) The existing quality of surface water including other sources of the contamination and the cumulative impact on surface water quality;"

Response - As previously mentioned, the interaction of site ground water with vicinity surface water will be evaluated. This will include an evaluation of the impact proposed ACLs for ground water will have on the Colorado River if ground water having these concentrations is discharged to the river. Also, the current and future uses of the Colorado River will be evaluated as will any future impact on surface water quality. Currently, ground water seepage to the Colorado River has no impact on surface water quality.

"(viii) The potential for health risks caused by human exposure to waste constituents;

"(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

"(x) The persistence and permanence of the potential adverse effects."

Response - A human health and ecological risk assessment will be performed to assess the potential hazards of ground water containing proposed ACLs being released to vicinity surface water.

It is recognized that Atlas must provide the basis for proposed ACLs, including consideration of practicable corrective actions and that the ACLs are as low as reasonably achievable (ALARA). Atlas has been implementing the only technically

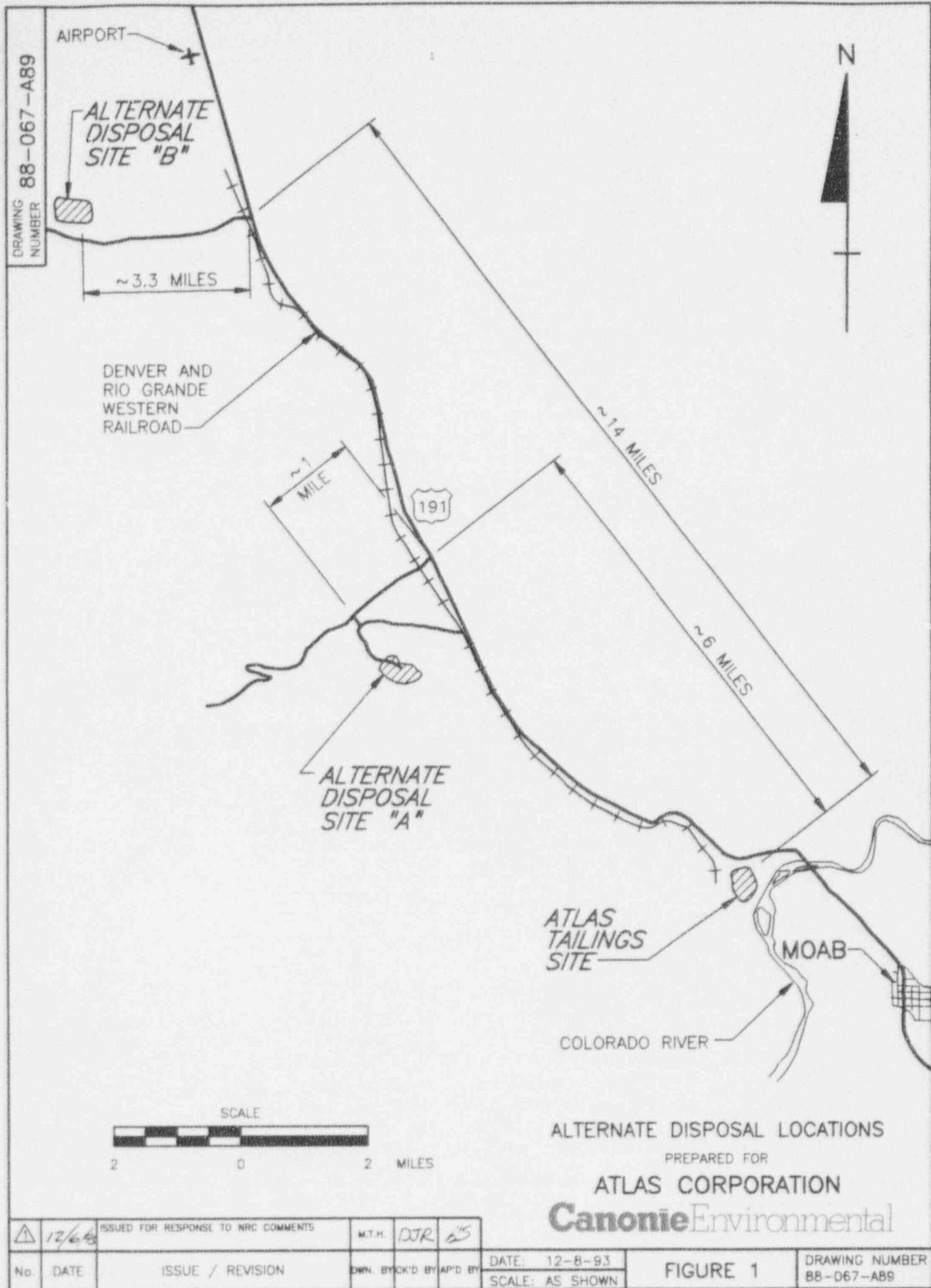
feasible ground water remediation for the site, consisting of active dewatering of the tailings. The in-place reclamation plan will improve ground water quality further by controlling surface water infiltration to the dewatered tailings. Resultant seepage to the ground water system will be minimal.

ACL application is appropriate since the majority of seepage has already entered the foundation soils; removal of the tailings will not influence seepage which has already migrated from the tailings. Pumping of that water adjacent to the Colorado River is not technically feasible. Therefore, considering the cost of off-site reclamation with little added benefit, the most practicable and cost-effective option is to implement in-place reclamation. The cost of in-place reclamation is \$10 to \$15 million. The cost of relocation is approximately \$100 million. The relocation option will require local and federal financial support.

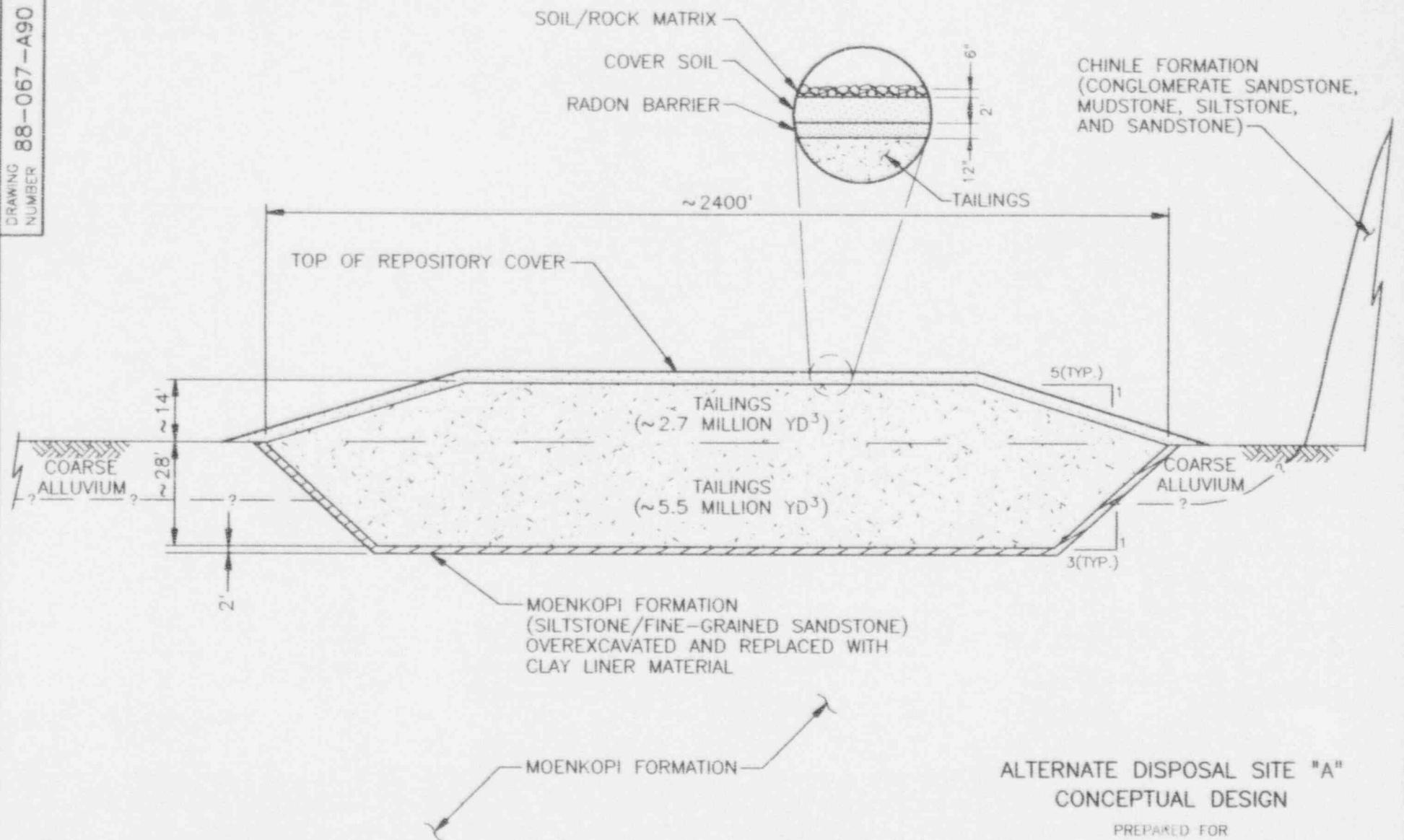
Because of the extreme cost, long duration, and impact on human health and environment related to the relocation option, Atlas chooses to establish ACLs for use as ground water protection standards at this site. The human health and environmental impacts related to relocation include air quality impacts related to excavation and transportation, increased accident and fatality frequency and a longer period of impact on tourism and property development.

TABLE 1
ESTIMATED RANGE OF COSTS
ON-SITE CLOSURE VS. OFF-SITE DISPOSAL

Item Description	On-site Control		Alternate Site A		Alternate Site B	
	Estimated Range (000's)		Estimated Range (000's)		Estimated Ranges (000's)	
Direct Cost	\$9,429	\$11,409	\$66,526	\$80,497	\$70,804	\$85,674
Subtotal	\$9,429	\$11,409	\$66,526	\$80,497	\$70,804	\$85,674
Contractor Overhead and Profit (15%)	\$1,414	\$1,711	\$9,979	\$12,074	\$10,621	\$12,851
Subtotal	\$10,843	\$13,120	\$76,505	\$92,571	\$81,425	\$98,525
Contingency (15%)	\$1,626	\$1,968	\$11,476	\$13,886	\$12,214	\$14,779
NRC Long Term Surveillance	\$650	\$650	\$650	\$650	\$650	\$650
Total Estimated Cost	\$13,119	\$15,738	\$88,631	\$107,107	\$94,289	\$113,954



DRAWING NUMBER 88-067-A90



ALTERNATE DISPOSAL SITE "A"
CONCEPTUAL DESIGN

PREPARED FOR

ATLAS CORPORATION

Canonie Environmental

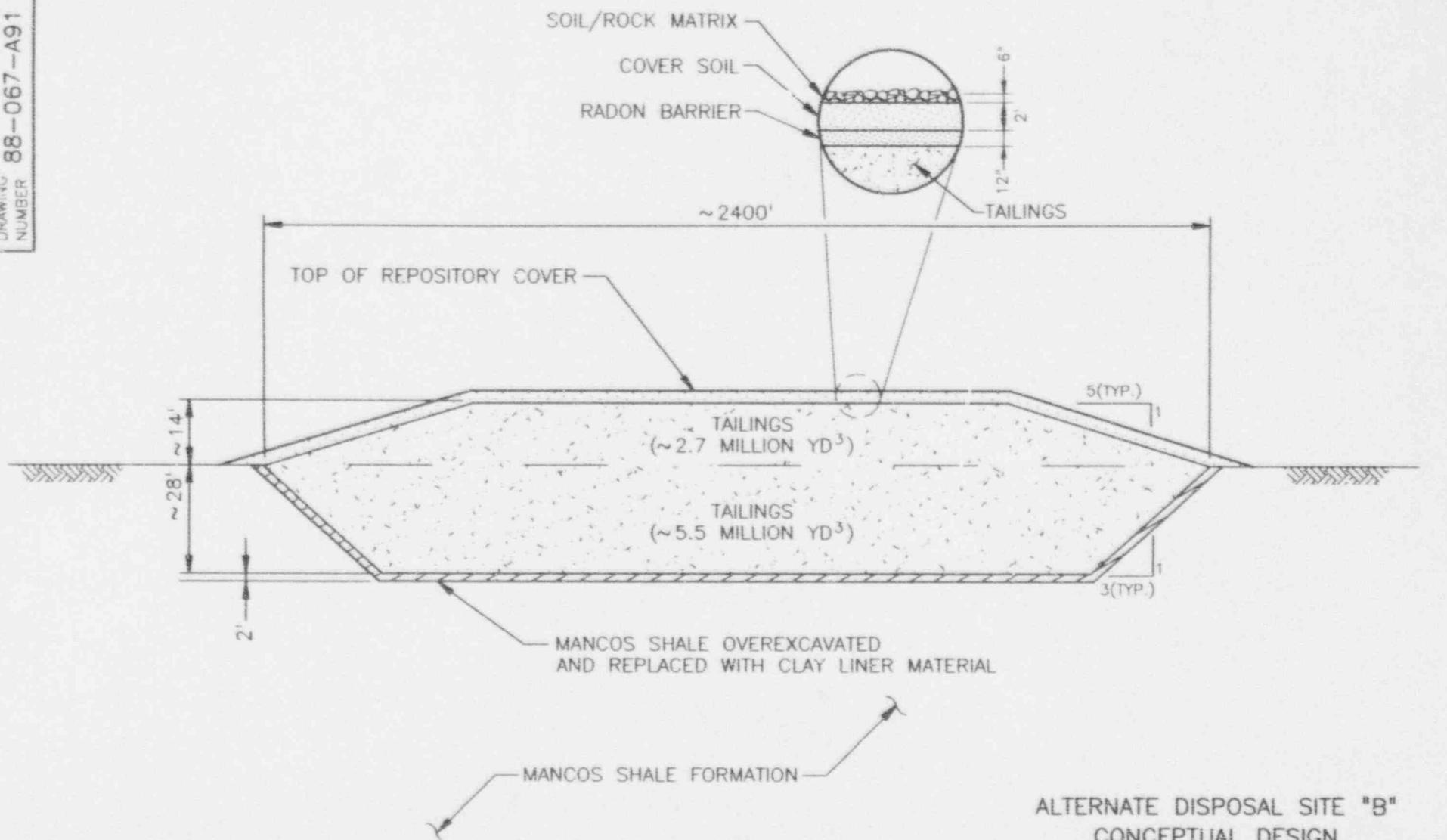
▲	1/13/94	ISSUED FOR RESPONSE TO NRC COMMENTS	P.M.W.	JWS	100
No.	DATE	ISSUE / REVISION	OWN.	BY/C'D BY	A/P'D BY

DATE: 12-10-93
SCALE: N.T.S.

FIGURE 2

DRAWING NUMBER
88-067-A90

DRAWING NUMBER 88-067-A91



ALTERNATE DISPOSAL SITE "B"
CONCEPTUAL DESIGN

PREPARED FOR

ATLAS CORPORATION

Canonie Environmental

	12/13/93	ISSUED FOR RESPONSE TO NRC COMMENTS	P.M.W.	J.W.S	Bleatt
No.	DATE	ISSUE / REVISION	OWN.	BY/C'D BY	APD BY

DATE: 12-10-93
SCALE: N.T.S.

FIGURE 3

DRAWING NUMBER
88-067-A91

PROJECT:
CLIENT:
JOB NO.:
LOCATION:

Atlas Minerals Revised HRC ESTIMATOR: CBS

FILE NAME: Atmc.wet

SHY 1 OF SHY 35

ESTIMATE SUMMARY

ITEM DESCRIPTION	DETAIL SHY	QUANTITY	UNIT	LABOR	SHY EQUP	SHY EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIAL	SURS	TRAVEL	UNIT COSTS	TOTAL COSTS
TOTAL FIXED COSTS SITE SUPERVISION	SHY 6	1 LS		0	0	0	0	0	6	0	0	0	0.00	0
VARIABLE JOBSITE SUPERVISION	SHY 7	75 WEEKS		734,855	56,550	313,039	44,700	37,013	73,875	0	0	16,000.42	1,268,831	
Mobilization	SHY 8	1 ea		8,228	0	8,293	1,268	1,026	2,500	0	35,000	0	56,361.00	56,361
Site Security	SHY 9	75 wks		0	0	0	0	0	0	0	105,000	0	1,000.00	105,000
Radiological Monitoring	SHY 10	75 wks		0	0	0	0	0	0	0	281,250	0	3,750.00	281,250
Regrade Impoundment Slopes	SHY 11	295,500 cy		47,569	0	176,972	23,228	15,795	0	0	0	0	0.89	263,556
Windblown Tailings	SHY 12	71,000 cy		14,027	0	56,009	7,254	4,896	0	0	0	0	1.16	82,106
Flood Pipe Removal	SHY 13	16,700 cy		3,714	0	16,364	2,884	1,392	0	0	0	0	1.68	23,554
S.E. Contaminated Soil	SHY 14	25,000 cy		6,499	0	28,638	3,667	2,436	0	0	0	0	1.65	41,220
Regrade Tailings	SHY 15	223,500 cy		58,981	0	160,926	21,334	16,796	0	62,500	0	0	1.39	310,457
Slimes Excavation	SHY 16	15,000 cy		13,890	0	27,045	2,250	1,900	0	0	0	0	3.01	45,005
Utility Relocation	SHY 17	1 ea		0	0	0	0	0	0	0	1,855,003	0	1,855,003	1,855,003
Contaminated Soils Excavation	SHY 18	200,000 cy		42,201	0	156,986	20,837	13,972	0	0	0	0	1.17	233,196
Clean Fill Excavation	SHY 19	718,300 cy		166,753	0	538,536	70,659	48,865	0	0	0	0	1.12	802,007
Construct Ditches	SHY 20	50,000 cy		4,668	0	10,656	1,438	1,375	0	0	0	0	0.36	18,129
Rip-Rap Ditches	SHY 21	15,505 cy		4,698	0	5,629	872	733	0	161,996	78,424	0	16.00	248,144
Armor Stone, Rnb. Slopes	SHY 22	49,946 cy		28,338	0	35,514	5,503	4,623	0	586,895	239,569	0	18.00	990,413
Rockwall Toe Protection	SHY 23	3,852 cy		4,276	0	13,511	1,791	1,242	0	65,300	18,190	0	21.96	84,687
Clay Cover	SHY 24	73,300 cy		140,761	0	416,598	11,728	10,586	0	38,845	18,000	0	8.57	628,622
Soil Rock Matrix (Rock)	SHY 25	56,266 cy		23,278	0	29,181	4,522	3,798	0	825,628	268,440	0	21.14	1,146,847
Soil Rock Matrix (Soil)	SHY 26	46,646 cy		9,882	0	37,696	5,063	3,366	0	0	0	0	1.15	55,927
Revegetation	SHY 27	220 ac		0	0	0	0	0	0	0	220,000	0	1,000.00	220,000
Demobilization	SHY 28	1 ea		8,228	0	8,293	1,268	1,000	2,500	0	35,000	0	56,361.00	56,361
Clearing and Grubbing	SHY 29	5 ac		2,286	0	1,730	275	225	500	0	0	0	1,003.20	5,016
Fencing	SHY 30	18,700 lf		0	0	0	0	0	0	0	168,400	0	7.94	148,400
Backfill Contaminated Soil Exc.	SHY 31	75,000 cy		6,435	0	14,100	2,200	1,500	0	0	0	0	0.32	24,235
Filter Rock	SHY 32	50,754 cy		28,831	0	36,143	5,681	4,704	0	557,888	243,619	0	17.28	876,786
Radiological Survey	SHY 33	1 ea		0	0	0	0	0	0	0	26,250	0	26,250.00	26,250
Well Maintenance	SHY 34	10 yr		387,677	0	104,000	20,000	26,000	106,000	66,700	256,750	0	95,681	956,887
HRC Overhead Costs	SHY 35	10 yr		0	0	0	0	0	0	0	415,872	0	41,587	415,872
SUBTOTAL		1,715,669	56,550	2,195,853	257,698	195,297	185,375	2,385,827	3,419,855	0	check		30,371,923	

PROJECT: Atlas Option 2 Truck Transportation

CLIENT: ATLAS CORP.

JOB NO.: 88-67-10

LOCATION: Head Creek

DATE:

83-Dec-93

TIME:

07:17 AM

ESTIMATOR:

AGS

SPT 2 OF SPT 37

ESTIMATOR NOTES:

1. ASSUME THE FOLLOWING PRICES FOR ROCK AND AGGREGATES:

SUB TOTAL SPREAD COSTS

FILTER I	76,438 YD	47,769 CY	6.28	296,168	583,485
FILTER II	4,776 YD	2,985 CY	4.52	13,892	22,937
ROCK MULCH 1"	61,000 YD	38,130 CY	7.10	270,723	468,229
ROCK MULCH 3"	25,000 YD	16,130 CY	11.62	187,431	318,632
UPPER DRAINAGE CHANNEL	18,328 YD	6,055 CY	5.72	36,923	62,768
LOWER S.W. DRAINAGE CHANNEL	7,600 YD	4,758 CY	6.55	31,113	52,891
LOWER INPUMPKIN CHANNEL	6,000 YD	4,360 CY	5.88	21,844	37,135
10:1 EMBANKMENT AGG	86,813 YD	53,758 CY	6.28	337,600	596,188
 SUBTOTAL	 278,843 YD	 174,277 CY		 2,854,186	
DRILL AND SHOOT		219,137 CY	2.50	547,843	
OVERSHOOT AT 20%		63,827 CY	2.50	160,569	
MOVE INTO STOCKPILE		262,966 CY	0.50	131,482	
PIT PERMITTING		1 EA	35,000.00	35,000	
PIT DECLARATION		10 AC	3,500.00	35,000	
				858893.2	
				0.01811848	
				1.7	
AVERAGE COST PER YD	7.37 PER YD			2,854,186	
AVERAGE COST OF RIPRAP	6.16 PER YD				
AVERAGE COST OF ROCK MULCH	8.97 PER YD				
AVERAGE COST OF FILTER MUL.	6.46 PER YD				
AVERAGE COST 10:1 AND 10:3	6.93 PER YD				

ASSUME AGGREGATE PIT IS 20 KILOMETERS FROM SITE.

CLIENT: Atlas Minerals
JOB NO.: 00-667-18
LOCATION: Beach Park

BEST MATERIALS USED INC ESTIMATE:

00-Dec-93
04:44 PM

SEARCH TABLE

	C	D	E	F	G	H	I	J	K	L
SEARCH TABLE										
SEARCH TABLE										
DESCRIPTION	FACTOR	MULTPLIER	SUB & TLEV.	BASE	CLASS	EXCATOR	OTHER	BASE	ALL	WBS COMP
									1 ACT	1 HS
SEARCH TABLE										
SEARCH TABLE										
									1 ACT	1 HS
SEARCH TABLE										
SEARCH TABLE										
72 FIELD PERSON	1.00			\$13.92					6.121	\$1.99
73 RECAUT	1.00			\$13.92					6.121	\$1.99
74 RECAUT HELPER	1.00			\$11.60					6.121	\$1.99
75 EFT OPERATING	1.00			\$12.76					6.121	\$1.99
76 LOCAL OBSERVER	1.00			\$12.76					6.121	\$1.99
77 OILER	1.00								6.121	\$1.99
78 RET LABORER	1.00			\$9.00					6.121	\$0.60
79 LOCAL LABORER	1.00			\$9.00					6.121	\$1.99
80 PIPERPIPE	1.00								6.121	\$1.99
81 ELECTRICIAN	1.00								6.121	\$0.60
82 CARPENTER FTR.	1.00			\$13.92					6.121	\$0.60
83 CARPENTER FTR.	1.00			\$12.76					6.121	\$1.99
84 CREST MASON	1.00								6.121	\$1.99
85 TRAVERSE	1.00								6.121	\$0.60
86									6.121	\$0.60
SEARCH TABLE										
SEARCH TABLE										
SEARCH TABLE										
88 PROJECT MANAGER	1.00			\$32.88					6.121	\$1.99
89 SUPERVISOR	1.00			\$21.76					6.121	\$1.99
90 PROJ. SUP. \$150K	1.00			\$25.96					6.121	\$1.99
91 PROJ. MANAGER	1.00			\$23.98					6.121	\$1.99
92 HHS OFFICE	1.00			\$21.63					6.121	\$1.99
93 CHEMIST	1.00			\$21.63					6.121	\$1.99
94									6.121	\$1.99
SEARCH TABLE										
SEARCH TABLE										
96 HHS TECHNICIAN	1.00			\$20.19					6.121	\$1.99
97 AST. PROJ. MGR.	1.00			\$20.19					6.121	\$1.99
98 REGISTERED PLCE.	1.00			\$18.27					6.121	\$1.99
99									6.121	\$1.99
100									6.121	\$1.99
SEARCH TABLE										
SEARCH TABLE										
102 OFFICE MANAGER	1.00			\$9.59					6.121	\$1.99
103 CLERK	1.00			\$8.50					6.121	\$0.60
104									6.121	\$0.60

LOCATION:	HOURLY RENTAL	ESTIMATOR:	TOTAL FEE	BASE RATE					
		CES	UPON PAYING	\$1.00 PER GALLON					
EQUIPMENT RENTAL RATES			F	G	H	I	J	K	L
BASED ON OPERATING HOURS	176 HOURS PER MONTH		MONTHLY RENTAL	USE TAX	HOURLY RENTAL	HOURLY FUEL RATE	HOURLY REPAIRS RATE	PERIOD USAGE D, W, M	ADJUSTMENT FACTOR APPLIED
DESCRIPTION	TYPE								
***** INTERNAL EQUIPMENT *****									
121					1.00	\$0.00	\$0.00	\$0.00	0.00
122					1.00	\$0.00	\$0.00	\$0.00	0.00
123					1.00	\$0.00	\$0.00	\$0.00	0.00
124					1.00	\$0.00	\$0.00	\$0.00	0.00
***** EXTERNAL EQUIPMENT *****									
126 CATERPILLAR 580 BACKHOE	BACKHOE	\$2,500	1.00	\$15.00	\$3.00	\$2.00 H	\$2.00 H	1.00	
127 CAT 215 BACKHOE	BACKHOE	(1.25 LCT)	1.00	\$0.00	\$4.00	\$3.50	\$3.50	0.00	
128 CAT 8L 200 BACKHOE	BACKHOE	(1.42 LCT)	\$8,150	1.00	\$24.99	\$4.50	\$4.25 H	1.00	
129 CAT 235 BACKHOE	BACKHOE	(2.75 LCT)	\$11,500	1.00	\$69.26	\$5.50	\$6.00 H	1.00	
130 CAT 245 BACKHOE	BACKHOE	(3.75 LCT)	\$17,400	1.00	\$194.00	\$11.00	\$7.50 H	1.00	
131									
132 CAT 936 PEL	PEL	(2.75 LCT)	1.00	\$0.00	\$4.00	\$4.00	\$4.00	0.00	
133 CAT 950 PEL	PEL	(3.25 LCT)	1.00	\$0.00	\$5.00	\$5.00	\$5.00	0.00	
134 CAT 966 PEL	PEL	(4.50 LCT)	\$7,650	1.00	\$66.07	\$7.00	\$6.00 H	1.00	
135 CAT 988 PEL	PEL	(7.00 LCT)	\$16,265	1.00	\$97.95	\$8.00	\$10.00 H	1.00	
136 CAT 963 PEL	PEL/track	(2.50 LCT)	\$7,390	1.00	\$84.51	\$4.00	\$6.00 H	1.00	
137 CAT D5 DOZER	DOZER		1.00	\$0.00	\$4.00	\$4.50	\$4.50	0.00	
138 CAT D6 DOZER	DOZER		\$5,745	1.00	\$34.60	\$5.50	\$4.50 H	1.00	
139 CAT D6 DOZER/LGP	DOZER/LGP		\$8,610	1.00	\$51.86	\$5.50	\$4.50 H	1.00	
140 CAT D7 DOZER	DOZER			1.00	\$0.00	\$7.00	\$5.25	0.00	
141 CAT D8 DOZER	DOZER		\$11,705	1.00	\$76.50	\$11.00	\$7.50 H	1.00	
142 CAT D9 DOZER	DOZER		\$14,660	1.00	\$88.29	\$16.00	\$10.00 H	1.00	
143 CAT D9 DOZER	DOZER		\$16,120	1.00	\$97.89	\$16.00	\$10.00 H	1.00	
144 CAT 14 GRD	GRADER		\$8,810	1.00	\$56.65	\$6.00	\$6.50 H	1.00	
145 CAT 16 GRD	GRADER		\$13,730	1.00	\$82.69	\$8.00	\$8.00 H	1.00	
146 CAT 12 GRD	GRADER		\$4,790	1.00	\$28.31	\$6.00	\$6.50 H	1.00	
147 CAT 563 VIB COMP	COMPACTOR		\$4,315	1.00	\$25.99	\$5.00	\$6.00 H	1.00	
148 BOMAG Walk Behind COMPACTOR	COMPACTOR	(48 INCH)		1.00	\$0.00	\$2.00	\$2.00	0.00	
149 CAT 815 COMP	COMPACTOR	SHEEPSFOOT	7985	1.00	\$48.09	\$10.00	\$6.00 H	1.00	
150									
151 CAT 615 SCPR	SCRAPER/SLIDE	(16 LCT)	9950	1.00	\$59.93	\$8.75	\$8.75 H	1.00	
152 CAT 631 SCPR	SCRAPER/SINGLE	(31 LCT)	26340	1.00	\$122.49	\$14.75	\$9.50 H	1.00	
153 CAT 627 SCPR/T	SCRAPER/TWIN	(20 LCT)	\$17,870	1.00	\$102.81	\$17.75	\$12.50 H	1.00	
154 CAT 637 SCPR/T	SCRAPER/TWIN	(31 LCT)	\$28,210	1.00	\$169.98	\$23.75	\$17.50 H	1.00	
155									
156 WATER WAGON	SCRAPER 631		\$13,000	1.00	\$78.38	\$7.00	\$6.00 H	1.00	
157 TANDEM WATER TRUCK	MISC. EQUIPMENT		\$3,500	1.00	\$21.00	\$3.00	\$4.00 H	1.00	
158 4"6" PUMP	MISC. EQUIPMENT			1.00	\$0.00	\$1.00	\$0.50	0.00	
159 350 CFM COMPRESSOR	MISC. EQUIPMENT			1.00	\$0.00	\$4.00	\$2.00	0.00	
160 65 TON CRANE	MISC. EQUIPMENT			1.00	\$0.00	\$5.00	\$4.00	0.00	
161 RENTAL TRUCK			\$8,000	1.00	\$53.00	\$8.00	\$8.00 H	1.00	
162 Bed Dump	MISC. EQUIPMENT		11600	1.00	\$68.65	\$8.00	\$8.00 H	1.00	
163	MISC. EQUIPMENT			1.00	\$0.00	\$8.00	\$8.00	0.00	

CL: Atlas Minerals
 JOB NO.: 88-067-16
 LOCATION: Heber Utah
 VARIABLE COST JOBSITE OVERHEADS
 ESTIMATOR: CBS PROJECT DURATION = 75.0

DESCRIPTION	REQUIRED Y OR N	REQUIRED QUANTITY	DURATION	UNIT RATES	I TOTAL LABOR	J WEEKLY LABOR	K WEEKLY TRY EQUIP	L WEEKLY TRY EQUIP
****FULL TIME EXEMPT****								
246 PROJECT MANAGER			75	\$1,636	0	0		
247 SUPERINTENDENT	Y	1	75	\$1,298	107,338	1,431	154	
248 PROJ. SUPERVISOR			75	\$1,389	0	0		
249 PROJ. ENGINEER	Y	1	75	\$1,172	98,244	1,283		
250 B&B OFFICER	Y	1	5	\$1,104	5,520	74		
251 CHEMIST	Y	1	75	\$1,104	0	0		
252			75					
253			75					
****FULL TIME NON-EXEMPT****								
256 B&B TECHNICIAN			75	\$1,513	0	0		
257 ASST. PROJ. ENG.			75	\$1,513	0	0		
258 ENGINEER TECH.	Y	1	75	\$1,377	103,275	1,377		
259			75					
260			75					
****BONNY SITE HIRERS****								
263 FIELD FOREMAN	Y	1	75	\$1,213	98,955	1,213		
264 MECHANIC	Y	1	75	\$1,213	98,955	1,213	158	
265 MECHANIC HELPER	Y	1	75	\$1,024	76,798	1,024		
266 OFFICE MANAGER	Y	1	75	\$853	0	0		
267 CLERK	Y	1	75	\$772	57,980	772		
268			75					
269			75					
****INTERNAL EQUIPMENT RENTAL****								
272 PRESSURE WASHER (INTERNAL RATES)			75	\$38				
273 SAFETY EQUIPMENT (AIR SAMPLING/OVA)			75	\$138				
274 SITE PICKUPS	Y	6	75	158				
275			75		600	200		
			75					
****EXTERNAL EQUIPMENT RENTAL****								
276 OFFICE TRAILER	Y	2	75	\$100				
279 POOL TRAILER	Y	1	75	\$75			200	
			75					

281 END TRAILER			75	\$100	
283 FUEL TRUCK	T	I	75	\$221	221
284 GREASE TRUCK	T	I	75	\$221	
285 MISC. EQUIP.			75	\$75	
286 SITE SCALERS			75	\$500	
287 PROJECT VEHICLES			75	\$150	
288 STREET SWEEPER			75	\$398	
289			75		
290			75		

*****SUPPLIES*****

293 OFFICE SUPPLIES	T	I	75	\$25	
294 SURVEY SUPPLIES	T	I	75	\$50	
295 SAFETY SUPPLIES	T	I	75	\$600	
296 COPY MACHINE	T	I	75	\$50	
297 PHONE SERVICE	T	I	75	\$150	
298 UTILITY SERVICES	T	I	75	\$400	
299 POTABLE WATER	T	I	75	\$40	
300 SANITARY FACILITIES	T	I	75	\$30	
301 SMALL TOOLS	T	I	75	\$25	
302 JOBSITE PHOTOS	T	I	75	\$15	
303 ON-SITE QC TESTING EQUIP.			75	\$200	
304 ON SITE LAB SUPPLIES			75		
305 DECONTAMINATION SUPPLIES			75		
306			75		
307 Grader for Haul Roads	T	I	75		746
308 Water Truck for Haul Roads	T	I	75		746
309			75		949
310			75		

*****SUBCONTRACTS*****

313 SURVEY CREW (BASED ON \$100/HR FOR 40 HRS)			75	\$5,600	
314 SECURITY (FULL TIME AT \$12/HOUR)			75	\$2,816	
315			75		
316			75		
317			75		

*****TRAVEL COSTS*****

320 TRAVL, EXECUTIVE			75	\$250	
321 KEY OPERATOR ADJUSTMENT			75	\$0	0
322 KEY LABORER ADJUSTMENT			75	\$0	0
323			75		

VARIABLE JOBSITE SUPERVISION (WEEKLY)			9,798	756	4,174
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VARIABLE JOBSITE SUPERVISION (TOTAL)	75 WEEKS		738,855	56,550	313,839
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PROJECT:
C1187:
JOB NO:
DURATION:
TYPE: RELOC/PPTB:

Elton Materials Reisted Inc Reilate
Elton Materials
88-961-19
Road Work
Relocation

RELOC/PPTB:

Allow 3 weeks to mobilize to job site
Include site set up.

RELOCATED ITEMS AND ASSEMBLIES:

DESCRIPTION	QUANTITY	BULK	LABOR	LT ¹	LT ²	FUEL	REFRS	SUPPLIES	MATERIALS	SESS	TRAVEL	TOTAL	DISCOUNT %	UNIT COST
CST 50A HEL	1.00	18.64		66.87	7.46	6.46						6.46		
LOCAL LABORER	7.00	85	27.87									0.86		

ITEM	QUANTITY	BULK	LABOR	LT ¹	LT ²	FUEL	REFRS	SUPPLIES	MATERIALS	SESS	TRAVEL	TOTAL	DISCOUNT %	UNIT COST
SHUTTLE	1.00	80.0000	45.71	8.66	66.87	7.46	6.46	6.46	6.46	6.46	6.46	134.76		
MATERIALS:														
Permit Leads	10	10										5.000		
Permit Leads	20	20										10.000		
Blac Supplies	1	1										1.500		
												0		

TOTALS	8.238	0	8.393	3.269	1.666	2.368	0	35.460	0	56.361	56.361	56.361
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PROJECT: Blue Minerals Survey
CLUB: BSA
MEMBERS: 200
LOCATION: The Americas
STATUS: Pending

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ITEM	QUANTITY	UNIT	LABOR	OVERHEAD	GROSS PROFIT	NET PROFIT	NET PROFIT %	NET PROFIT %	TOTAL
RECEIVED FROM ABC	1000	PC	100	100	1000	1000	1000	1000	1000

PROPERTY:	All Materials Revised 80% because	REMOVED:	SBT 16	07	SBT 25
CLERK:	BLA: Blandford	REMOVED:	SBT 16	07	SBT 25
JOB:	46-718	REMOVED:	SBT 16	07	SBT 25
LOCATION:	BLA: Blandford	REMOVED:	SBT 16	07	SBT 25
ITEM:	Medical Building	REMOVED:	SBT 16	07	SBT 25

BÖHMISCHE LÄRME, KIRCHENLÄRME

Strands radiating from the center of all concentrical structures are often seen. One in diameter of 31 microns.

ITEM	QUANTITY	UNIT	LABOR	SPRTY	BTY	SPRTY	PBS	MATERIALS	SUPPLIES	MATERIALS	TOTAL	PER UNIT
WESCHER P100	100	PC	100	100	100	100	100	100	100	100	961.7	9.617

PROJECT: Atlan Rancheria Revised MC Estimate
 CLIENT: Atlan Rancheria
 JOB NO: 06-87-16
 LOCATION: Bush Creek
 TYPE: INCORPORATED: Separate Incorporated Slopes
 ESTIMATE: DATE: DEC 5
 TIME: 11:56 AM
 Job quantity: 255,500 cu ft

ESTIMATE NOTES AND ASSUMPTIONS:

Existing independent slopes (terraces) to be graded to uniform 10% slope.
 Material to be hauled into haulments and used for regrading of dependent areas.
 Average Haul Distance = 1000 ft.

ITEM	QUANTITY	WEIGHT	LABOR	COST	CUT	CUT	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUS	TRAVEL	TOTAL	2000 FT. DISTANCE		
														DRIVE ON	DRIVE OFF	
DRIVE ON	4,800 cu ft	70.55		488.74	53.60	38.48										4.80
CUT 00 cu ft	1,800 cu ft	18.68		10.56	11.60	7.90										0.80
CUT 04 cu ft	2,800 cu ft	37.38		18.20	11.80	9.80										0.80
DRIVE OFF	1,800 cu ft	18.68		10.56	5.80	4.80										0.80
DRIVE ON	2,800 cu ft	37.38		18.20	25.99	21.87										0.80

ITEM	QUANTITY	WEIGHT	LABOR	COST	CUT	CUT	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUS	TRAVEL	TOTAL	2000 FT. DISTANCE		
														DRIVE ON	DRIVE OFF	
DRIVE ON	176.18	4.80	45.45	86.40	58.98	48.48										0.80
CUT 00 cu ft	41,565	4	18,812	13,128	15,735	8										0.80
DRIVE OFF	176.18	4.80	45.45	86.40	58.98	48.48										0.80

TOTALS: 1,564 0 1h 97 11.29 18.98 0 0 0 0 0 0 0 0 0 0 0 0

0.80

100

Elias Materials Revised MC Estimate

537035700.

(ES)

SPT 12 OF 387 75

11.887

Atlas Materials

80.461-18

80 Dec 5)

TIME

11.54 48

100.00

80.461-19

802 (PART II)

11.54 48

Local 108

Rock Park

102 (PART II)

11.54 48

100.00

Wadsworth Tailings

102 (PART II)

11.54 48

100.00

100.00

100.00

102 (PART II)

100.00

PROJECT: **Kiln Materials Required For Distance**
 CLIENT: **Kiln Materials**
 JOB NO: **85-967-18**
 LOCATION: **Ridge Road**
 ITEM DESCRIPTION: **Pinek Lime Material**

ESTIMATE NOTES AND ASSUMPTIONS:

Site to be removed and hauled up state independent.
 Material to be used at fill in the regrading of independent prior to copying.
 Average Soil Distance = 5,400 ft

ESTIMATE: **16000.00**
 REC: **86-967-18**
 DATE: **20/01/93**
 QOH: **100 QUANTITY: 10,000.00**

ITEM #	QUANTITY	UNIT	LABOR	BTU	BTU/H	FUEL	REFUSE	SUPPLIES	MATERIALS	SHRS	TRAVEL	TOTAL	NET	COST
CAT 631 BGP	7.00	63	1.00	67	957.00	162.25	66.50					5.00		
CAT 80 DSR	1.00	62	1.00	64	76.50	11.00	1.50					1.00		
CAT 96 DSR	2.00	63	2.00	70	37.20	11.00	.40					1.00		
CAT 96 RHD CRAWLER	1.00	62	1.00	64	15.99	5.00	1.00					1.00		
LORRY LAMPERE	1.00	63		87								1.00		

ITEM #	QUANTITY	UNIT	LABOR	BTU	BTU/H	FUEL	REFUSE	SUPPLIES	MATERIALS	SHRS	TRAVEL	TOTAL	NET	COST
CBB	732.00	#	4.00	1822.77	139.25	47.00	6.00	6.00	6.00	0	0	1,472.12		
STABORAL	16.0000	1.00	0	16,364	2,000	1,392	0	0	0	0	0	16,354	1.00	
MATERIALS:														

TOTALS: **1,714** **0** **36.64** **2,804** **1,392** **0** **0** **0** **0** **0** **23,354** **1.00**

PROJECT	Atlas Materials Revised REC Estimate	ESTIMATE	ES	SPT 14	QT	SPT 35
CLIENT	Atlas Materials	BUDGET	\$6. Rec. 53			
BBB Ref.	BBB Ref. 18	BUDGET	\$7.8M			
LOCATION	Web Web	BBB Ref.				
TYPE	RESTRUCTURE	REC. CONSIDERED	5.3	CONTINUOUS 50:1		

Material to be removed and built up into component.
Baseball to be used as [ii] in the regarding of significant prior to mapping
-average half distance = 2,500 ft

PROJECT:

Atlas Mountain Revised ABC Estimate

CLIENT:

Atlas Mining

JOB NO.:

00-001-70

LOCATION:

North Utah

ITEM DESCRIPTION:

Regrade Tailings

ESTIMATE NOTES AND ASSUMPTIONS:

Assuming of tailings regrade area has established drainage grades prior to carrying
average haul distance = 1000 ft.

PROJECT:

300' Haulage

DATE:

00 Dec 93

TIME:

11:56 AM

JOB QUANTITY:

221,500 CY

UNIT:

CBM

RATE:

300' Haulage

COST:

300' Haulage

MATERIALS:

300' Haulage

SUPPLIES:

300' Haulage

TRAVEL:

300' Haulage

TOTAL:

300' Haulage

DESCRIPTION	QUANTITY	UNIT	Labor	Eqpt	Eff	Equip	Fees	Materials	Supplies	Travel	Total	Unit Cost
CAT 511 SEPR	4.00 EL	74.55		485.15	59.00	38.00					8.00	
CAT 85 028	1.00 EL	18.64		78.50	11.00	1.50					0.00	
CAT 85 038	1.00 EL	37.20		69.20	11.00	1.00					0.00	
CAT 54.5 11B TURP	1.00 EL	18.64		25.95	5.00	1.00					0.00	
LOCAL LABORER	2.00 EL	77.87									0.00	
CAT 54.5 TURP	1.00 EL	18.64		46.61	7.00	1.00					0.00	
LOCAL LABORER	2.00 EL	77.87									0.00	

ITEM	QUANTITY	UNIT	LABOR	EQUIP	EFF	EQPT	FEES	MATERIALS	SUPPLIES	TRAVEL	TOTAL	UNIT COST
CBR	221,500	CBM	781.57	91.30	55.50	6.00	0.00	0.00	0.00	0.00	1,400.00	
SUPPLIES	221,500.00	CBM	168,936	21,334	18,756	0	0	0	0	0	241,551	1.11
MATERIALS:												
Gravel/Cinder	1,230,000.00	CBM				61,346					61,346	
TOTALS:	38,941	CBM	168,936	21,334	18,756	0	61,346	0	0	0	312,423	1.11

PROJECT:

Kilas Materials Revenue Inc. #110000

Abras Materials

CITY:

BB 651 18

JOB #:

LOC 0719

SOB 06

ITEM DESCRIPTION:

SILICA Excavation

ESTIMATE#, DATE: 06 Dec 81

TIME: 11:56 AM

JOB QUANTITY: 15,000 CF

ESTIMATE NOTES AND ASSUMPTIONS:
 Silica to be excavated and haulled with trailers to give required cubes.
 Average haul distance of 1000 ft.

DESCRIPTION	QUANTITY	UNIT	LABOR	LAB	ETD	ETD	FUEL	FUEL	REFILLS	REFILLS	MATERIALS	MATERIALS	TRAVEL	TRAVEL	TOTAL	DISPENSE - 100 HOURS	DISPENSE - 100 HOURS
CAT 35' RR	1.00	HR	18.66		59.35		6.50		6.00							6.00	6.00
BENTL. PUNCH	2.00	HR	37.18		148.00		9.00		8.00							8.00	8.00
CAT 35' RR	2.00	HR	31.28		125.00		6.50		11.00							11.00	11.00
CAT 34' RR COMP	1.00	HR	16.84		63.99		5.00		4.00							4.00	4.00
LOCAL LABORERS	2.00	HR	21.81														

CABIN																		
	118.96		6.00		218.45		22.50		15.00		6.00		6.00		6.00		44.85	
SUMMARY	118.96		6.00		218.45		22.50		15.00		6.00		6.00		6.00		44.85	

MATERIALS

ITEMS 118.96 6.00 218.45 22.50 15.00 6.00 6.00 6.00 44.85

0 0 0 0 0 0 0 0 0

0

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include relocation of oil line, gas line, telephone lines, and electrical lines which are located in the area of the channel reconfiguration. Prices used are those passed by the respective regulators for electrical and telephone lines.

SUBJECT: Kilan Mortars Removal Job: Job #1007
 (11/18)
 Job No.: 100-001-10
 LOCATION: Kilan Job
 TIME REQUESTED: Contaminated soils excavation

EXCAVATION BORNS AND ASSUMPTIONS:

(1) Soil is located in the area of the existing wall. Results of excavation will and some of the material will be below water table.
 (2) Material will be uploaded into scarpers with a backhoe and transported to the implement.
 (3) 100% of material is subject to excavation.
 Average haul distance = 400 ft.

EXCAVATION: 100%
 (11/18)
 DATE: 100-001-10
 TIME: 08:00 AM
 QUANTITY: 200 cu yds

DESCRIPTION	QUANTITY	UNIT	LABOR	LT	BT	EQUIP.	FUEL	BENEFITS	SUPPLIES	TRAVEL	PROFL	DISCOUNT	UNIT COST
CAT 621 SCR	4.00	LS	74.55		485.76	59.06	38.06						8.00
CAT 30 DIB	1.00	LS	18.55		78.58	11.00	7.50						8.00
CAT 64 DIB	2.00	LS	37.20		63.20	11.00	9.00						9.00
CAT 5511B COMP	1.00	LS	18.55		25.55	5.00	4.00						9.00
LOCAL LABOR	2.00	LS	21.07										8.00
CAT 235 DIB	1.00	LS	18.6812		84.26	6.5	5						

ITEM	QUANTITY	UNIT	LABOR	LT	BT	EQUIP.	FUEL	BENEFITS	SUPPLIES	TRAVEL	PROFL	DISCOUNT	UNIT COST
CR88	104.82	HR	774.11	91.58	61.50	8.00	8.00	8.00	8.00				1,016.51
SHPT-70L	217.0005	LS	37.30	0	156.966	30.027	13.92	0	0	0	0	0	1.17

TOTALS: 4,123.8 8 154.800 30.027 11,927 0 0 0 0 0 0 0

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ESTIMATED NOTES AND ASSUMPTIONS:
This material will be received from the site of the recontaminated channel and hauled to [REDACTED] area
where it will be considered a
surface soil residue - 3000 ft

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PROJECT:	Atlas Minerals Revised NBC Estimate	ESTIMATOR:	CB	SHT 11	OF	SHT 15
CLIENT:	Atlas Minerals					
JOB NO.:	BB-467-10	DATE:	BB-Dec-93	TIME:	11:56 AM	
LOCATION:	Weld Utah					
ITEM DESCRIPTION:	Rip Rap Ditches			JOB QUANTITY:	15,585 cy	

ESTIMATOR NOTES AND ASSUMPTIONS:

-Place material with Cat 966 (1) and spread with small dozer (Cat B6). Assume all material is delivered to the immediate area.

CREW		14.35	8.00	88.67	12.50	18.50	8.00	8.00	8.00	8.00	BURLEY CREW COSTS	168.82
SUBTOTAL	16. BURLES	5.500	8	8.519	822	733	8	8	8	8	17.714	8.76

MATERIALS:
 Rip Rap 28,585 cu ft \$151,996
 Rock Rock 74,380 cu in \$34,414

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R&B	24,588 '18	161,396	161,396
Rock Rock	24,588 '18	38,438	38,438

1990年，中国人口达到11.3亿，占世界人口的22%。同年，中国GDP总量为2,766亿美元，占世界GDP的3.5%。

TOTALS 4,393 8 5,625 872 713 9 151 996 18,478 8 25,148

PROJECT: Kiln Materials Revised DEC 2016
 CLIENT: Kiln Materials
 36 46 18
 208 W.
 LOCATION: Rock Island
 TEL# 253-3117/28
 Attn: Sales, Tech, Slippage

ESTIMATE NOTES AND ASSUMPTIONS:

Price Material with Cat 56 ton and spread with small dozer (Cat 66)
 Assume all material is delivered to the immediate area

DESCRIPTION	QUANTITY	UNIT	LABOR	EQPT	EQPT	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	BURDEN	NET
													HR	HR
CAT 56 TEL	1.00	TL	18.65	46.81	7.00	5.80							6.00	
CAT 66 DOZ	1.00	TL	18.64	34.69	5.39	4.58							6.00	
LOCAL LABORER	2.00	TL	27.07										6.00	

ITEM	QUANTITY	UNIT	LABOR	EQPT	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	BURDEN	NET
												HR	HR
SUPPLIES	44.00000	TL	44.15	4.00	0.67	12.50	0.50	0.00	0.00	0.00	44.00	10.80	54.80
MATERIALS													
Reinforcement	79.858	TL	26.138	0	35.514	5.563	4.621	0	0	0	73.578	56.855	130.433
Dust Buck	79.858	TL											
TOTAL			81.14	0	35.514	5.563	4.621	0	0	0	56.855	23.549	80.404

11-14

Project	Description	Start Date	End Date	Duration	Lead	Team Size	Budget (\$)	Completion (%)	Status
Project Alpha	Software Development Phase 1	2023-01-01	2023-03-31	90 days	John Doe	10	150,000	85%	In Progress
Project Beta	Hardware Assembly Phase 2	2023-02-01	2023-04-30	80 days	Jane Smith	12	200,000	70%	Pending Review
Project Gamma	Market Research Phase 3	2023-03-01	2023-05-31	80 days	Mike Johnson	8	100,000	95%	Completed
Project Delta	Risk Analysis Phase 4	2023-04-01	2023-06-30	80 days	Sarah Lee	6	50,000	100%	On Hold

ESTIMATING BOMES AND ASSUMPTIONS:

- Assume excavation of toe to 12 feet deep vertically
- Assume excavation and soil replacement by scraper spreader
- Assume rock placement by loader and dozer
- Total site area placement @ 10,984 CF
- Total site area placement @ 3780 CF

ITEM	DESCRIPTION	QUANTITY	UNIT	LABOR	INT'	GIFT	SHIP	FREIGHT	SUPPLIES	MATERIALS	SWS	TRAVEL	PERCENT	AMOUNT	COST
(CAT 54) SWS	4000 ft	14.55				487.76	55.46	38.00					0.00		
CAT 54 SWS	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
CAT 55 SWS	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
USFRL LABOR	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
(CAT 54) VIB CMB	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
CAT 54 SWS	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
CAT 55 SWS	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
USFRL LABOR	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
(CAT 54) VIB CMB	1.00 ft	1.00	ft	1.00	1.00	10.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00

PROJECT: Atlas Minerals Revised BBC Estimate
 CLIENT: Atlas Minerals
 JOB NO: 88-867-19
 LOCATION: Moab Utah
 ITEM DESCRIPTION: Clay Cover

ESTIMATOR: _____
 DATE: 08 Dec 93 TIME: 11:58 AM
 JOB QUANTITY: 73,300 cu

ESTIMATOR NOTES AND ASSUMPTIONS:

Clay haul estimated at 10.5 miles
 include equipment to excavate/load/place
 Transport using enddump trailers

DESCRIPTION	QUANTITY	UNIT	LABOR	EQP	KEY	SQECP	SQECP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION:	489 HOURS
															UNIT COST	
CAT 566 PEL	1.00 EA	18.64			66.87	7.00	6.00									\$ 8.00
CAT 86 D8R	2.00 EA	37.28			69.20	11.00	9.00									\$ 8.00
CAT 14 GRR	1.00 EA	18.64			58.65	6.00	6.00									\$ 8.00
LOCAL LABORED	2.00 EA	27.87			686.58	8.00	8.00									\$ 8.00
End Dumps	10.00 EA	186.10			686.58	8.00	8.00									\$ 8.00

CRW	288.81	8.00	852.52	24.00	21.58	8.00	8.00	8.00	8.00	HOURLY CREW COSTS	1,184.83
SUBTOTAL	489 HOURS	140,781	8	416,598	11,728	10,586	8	8	8	579,573	7.81

MATERIALS:

Clay	73,300 cu				58,845		35,345
Seed and Mulch	18 cu				18,000		18,000

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-**QY** is a total of 38,136 cu of 1.3 inch riprap and 16,136 cu of 1 inch riprap.
-Boulders trucks can directly dump in place.

Table 1. Summary of the results of the two experiments.

PROJECT:	Atlas Minerals Revised MRC Estimate	ESTIMATOR:	CBS	SHT 26	OF	SHT 35
CLIENT:	Atlas Minerals					
JOB NO:	88-067-18	DATE:	08-Dec-93	TIME:	11:56 AM	
LOCATION:	Noah Utah					
ITEM DESCRIPTION:	Soil Rock Matrix (Soil)			JOB QUANTITY:	48,000 CY	

ESTIMATES AND ASSUMPTIONS.

- This material will be excavated from the area of the reconfigured channel and ditchlines, assume compacting this material into the previously placed rock using a sheepfoot compactor. Average haul distance = 3000 ft.

CREW		176.18	8.00	677.55	91.00	68.58	8.00	8.00	8.00	8.00	8.00	HOURLY CREW COSTS	1,685.23
SUBTOTAL	56 BOARS	9,882	8	37,696	5,861	3,366	8	8	8	8	8	55,927	1.15

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TOTALS 3,582 8 37,556 5,883 1,185 7 2 3 8 2 55.7

ELIAS MIRALAS Revised ROC Estimate
ELIAS MIRALAS
 B&B 1-16
 B&B 1-16
 B&B 1-16
 B&B 1-16
LOCATION: **RECEIVED BY:**
RECEIVED BY: **RECEIVED BY:**
RECEIVED BY: **RECEIVED BY:**

ESTATE TAXES:	1935	1937	1938	1939
STATE:	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00
LOCAL:	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00

特征	特征值	特征	特征值	特征	特征值	特征	特征值
特征1	特征值1	特征2	特征值2	特征3	特征值3	特征4	特征值4
特征5	特征值5	特征6	特征值6	特征7	特征值7	特征8	特征值8
特征9	特征值9	特征10	特征值10	特征11	特征值11	特征12	特征值12
特征13	特征值13	特征14	特征值14	特征15	特征值15	特征16	特征值16

E5116703 BURGESS AND LESTER 1983

Allison 106

BUSINESS UNIT	QUANTITY	WEIGHT	LARGE	SMALL	UNIT	WEIGHT	WEIGHT	PER	NET	MATERIALS	SUPPLIES	SHIPS	STOCK	YEARLY	UNIT COST
CAT 94, 95L	1,364	18.54	18.54	18.54	PC	46.67	1.00	100	\$1,000	\$1,000	\$1,000	100	100	\$100	\$100

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2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22

PROJECT: Atlas Minerals Revised BBC Estimate
 CLIENT: Atlas Minerals
 JOB NO: 98-067-18
 LOCATION: Heber Utah
 ITEM DESCRIPTION: Fencing

ESTIMATOR NOTES AND ASSUMPTIONS:

- Installation of a total of 18,700 lf of 6 ft chainlink with 4 strand barbwire.
- Installation of a total of 8,000 lf of 4 strand barbwire.

DESCRIPTION	QUANTITY	UNIT	LABOR	INF	KIT	EQUIP	EQUP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SOM	DURATION =		HOURS	
													TRAVEL	TOTAL		
.....

Crew		HOURLY												Crew Costs	\$ per
		\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00		
Subtotal	0 hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MATERIALS:		HOURLY												Crew Costs	\$ per
		\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00		
Chain Link w/Barb Wire	18,700 lf												125,000	125,000	
Barbed Wire (4 strand)	8,000 lf												20,000	20,000	
													0	0	
													0	0	
													0	0	
													0	0	
													0	0	
													0	0	
													0	0	

TOTALS		0	0	0	0	0	0	0	0	145,000	0	145,000	0	0
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PROJECT: Atlas Materials Reused 80' Retain
 CLIENT: Atlas Materials
 JOB #: 99-941-18
 LOCATION: Rock Island
 FROM MATERIALS: Backfill Contaminated Soil Etc.
 TO MATERIALS:
 QUANTITY: 75,000 cu ft

ESTIMATING NOTES AND ASSUMPTIONS:
 Grading of the excavation area.
 Average Rail Distance = 300 ft.

DESCRIPTION	QUANTITY	UNIT	LABOR	TRT	KIT	EQUIP	FUEL	REFRIES	SUPPLIES	MATERIALS	SUS	TRAVEL	TOTAL	NET TOTAL
CAT 90 DSR	1.00	ea	18.54	70.58	11.46	7.58							4.46	4.46
LOCAL LABORERS	1.00	ea	13.54										0.00	0.00

ITEM	QUANTITY	UNIT	LABOR	TRT	KIT	EQUIP	FUEL	REFRIES	SUPPLIES	MATERIALS	SUS	TRAVEL	TOTAL	NET TOTAL
CRANE	1.00	hrs	32.18	8.46	76.39	11.08	7.58	4.46	0.00	0.00	0.00	0.00	121.18	121.18
SUPPLIES	100.0000	ea	4.435	0	14.060	2.040	1.560	0	0	0	0	0	0.00	0.00
MATERIALS													0.00	0.00

TOTAL

0.00

PROJECT: At Las Rosales Revised Job Estimate
 CLIENT: Atlass Materials
 JOB #: 59-60-19
 LOCATION: Rockdale
 ITEM DESCRIPTION: Filter Back

ESTIMATE NOTES AND ASSUMPTIONS:

Chaselt	\$111	(151)
Enhancer	18.75	
W. Debris Pct.	8%	
3' Rock Wall	1412	1412
4' Rock Wall	591	
41768	2085	58756

DESCRIPTION	QUANTITY	UNIT	LABOR	INT' EQUIP	EXT EQUIP	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	UNIT COST
CAT 961 TEL	1.00 EA	EA	18.64	46.07	7.00	5.00					6.00	
CAT D6 SCR	1.00 EA	EA	18.64	34.50	5.50	4.50					6.00	
LOCAL LABORER	2.00 EA	EA	21.43								8.00	

ITEM	QUANTITY	UNIT	LABOR	INT' EQUIP	EXT EQUIP	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	UNIT COST
CHAS	44.35	HR	68.61	12.36	18.36	6.00	6.00	6.00			118.82	
SMOOTH	445 HOURS	HR	36.141	5.661	4.384	0	0	0			75.29	1.41
MATERIALS												
Filter Back	11,266.10										557.888	
Bas. Rock	81,361.16										241.619	

RECEIVED: *Materials Review REC-111111*
CLERK: *BLA Materials*
ITEM: *BB-18*
LOCATION: *BB-18*
ITEM NO.: *REC-111111*
DEPARTMENT: *Industrial Safety*

16. 1995年1月1日，中国加入世界贸易组织。

ITEM	QUANTITY	UNIT	LABOR	LBT	SUPPLIES	MATERIALS	SHRS	TRAVEL	MEAL	HOME	CBB COSTS	DISCOUNT		
												ITEM	QUANTITY	UNIT
LABOR	0.00	HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MATERIALS	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Supplies	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
TRAVEL	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
MEAL	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
HOME	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
CBB COSTS	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
TOTAL	0.00	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00

PROJECT: Atlas Minerals Revised NBC Estimate
 CLIENT: Atlas Minerals
 JOB ID: 88-067-10
 LOCATION: Robt Blab
 ITEM DESCRIPTION: Well Maintenance

ESTIMATOR:	8	SPT 37	OF	8
DATE:	88 Dec-93	TIME:	11:56 AM	
JOB QUANTITY:	10 yr			

ESTIMATOR NOTES AND ASSUMPTIONS:

Assume using 1 operator and 1 truck full time
 Labor = 20000
 Wells #: 175 ft/year
 Pumps #: 3.5 year/year
 1- Inch Extraction Wells
 7 3.75 inch extraction pumps

Wells and pumps need changed every two years
 Assume wells @ 50 feet deep

Period of time = 10 years
 DURATION = 20,000 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	LRT	GRT	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
LOCAL OPERATOR	1.00	EA	19											
Pickup	1.00	EA				5	1.00	1.00						

CREW	18.64	8.00	5.00	1.00	1.00	8.00	8.00	8.00	8.00	8.00	8.00	BORRILY CREW COSTS	25.64
SUBTOTAL	20,000 HOURS	387,677	8	184,000	20,000	20,000	8	8	8	8	8	533,277	53,327.70

MATERIALS:

Buy Pumps and Riser	15 ea					66,750		66,750					
Well Installation	1,750 ft							50,750		50,750			
SRS for Wells	10 yrs					10,000				10,000			
ELECTRICAL	1,390,000 KWH					35,000				35,000			
CONSTRUCT EVAPORATION POND	2 AC						200,000			200,000			

TOTALS	187,577	8	181,000	14,500	20,500	120,000	61,750	250,750	8	15,517	75,327.70	
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PROJEKT	Kids Materials Preprint WEC Berlin
CLIMAT	Kinder Beobachtung
ZUSAMMENFASSUNG	SE 201 - 14
LEHRERINNEN	Ruth Eich
TEILNEHMERINNEN	Kathrin Dierckx (Ed.)

name	a count of 114 deaths per hour	197 hours	three per month at
Year 1		358 hours	twice per month at
Year 2		358 hours	
		348 hours	

19. hours per year
388 hours per year

197 hours per year
388 hours per year

Office per month at 2 days

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Total \$ 0 0 0 0 0 0 415,872 0 415,872 0 415,872

ECONOMIC OUTLOOK

SUBSISTENCE AND TRAVEL COST CALCULATIONS

2000 04 01 15:13:31 04 03 1999 SINNUNG SIEBEN 04 03 1999 15:13:31 04 04 2000

ITEM	GENERAL ADMISSION	TRAVEL BUSES	TRAVEL COST	LOGGING COST	SUBSISTENCE COST	TRAVEL	LOGGING	SUBSISTENCE	TOTALS
1. TRAVEL & COST TRAVEL & LOGGING TRAVEL			\$0.00	\$0.00	\$0.00				\$0.00
2. TRAVEL & LOGGING TRAVEL			\$0.00	\$0.00	\$0.00				\$0.00
3. TRAVEL & LOGGING TRAVEL			\$1.25	\$0.00	\$0.00				\$1.25
4.						ERR	ERR	ERR	ERR
5.						ERR	ERR	ERR	ERR
6.						ERR	ERR	ERR	ERR
7.						ERR	ERR	ERR	ERR
8.						ERR	ERR	ERR	ERR
9.						ERR	ERR	ERR	ERR
10.						ERR	ERR	ERR	ERR
11.						ERR	ERR	ERR	ERR
12.						ERR	ERR	ERR	ERR
13.						ERR	ERR	ERR	ERR
14.						ERR	ERR	ERR	ERR

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Year	Population	Rate
1850	1,000,000	1.00%
1860	1,200,000	1.00%
1870	1,400,000	1.00%
1880	1,600,000	1.00%
1890	1,800,000	1.00%
1900	2,000,000	1.00%
1910	2,200,000	1.00%
1920	2,400,000	1.00%
1930	2,600,000	1.00%
1940	2,800,000	1.00%
1950	3,000,000	1.00%
1960	3,200,000	1.00%
1970	3,400,000	1.00%
1980	3,600,000	1.00%
1990	3,800,000	1.00%
2000	4,000,000	1.00%
2010	4,200,000	1.00%

STANDARD FEE SCALES: APPLIED TO ALL WORK: PAY
RATE VARIES WITH TIME, APPROX. = ALL WORK, EXCEPT
STANDARD GENERAL RATE APPLIED TO ALL OTHERS PAID
WEEKLY BY CRAFT. PER USE RATE TABLE, BASE RATE
WEEKLY, 100% CONTRACT, 100% OF WORKS HAVE 5%
ADDITIONAL FEES ON ALL BASE WORK AND
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ADDITIONAL FEES ON ALL BASE WORK AND

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ESTIMATE
SHEET NO. 1
DATE: 10/16/86
TIME: 01:17 PM
SUBCONTRACTOR: MCGRAW HILL CONSTRUCTION CO., INC.
PROJECT: 1000 N. STATE ST.
CITY: CHICAGO, IL
STATE: IL
ZIP: 60601
PHONE: (312) 443-1000
FAX: (312) 443-1000

SUMMARY OF MATERIAL AND SUBCONTRACT PRICES
USED IN CURRENT ESTIMATE

DESCRIPTION	QUANTITY	UNIT	QUOTED PRICE	SALES TAX	TOTAL PRICE	WITH TAX PRICE
STRUCTURAL MATERIAL PRICES						
1. LUMBER - TUBE (FT.)	127,500	LB.	\$6.37		1.06	\$6.53
2. LUMBER - 4X6 (FT.)	37,500	LB.	\$1.00		1.06	\$1.10
3. LUMBER - 4X8 (FT.)	131,160	LB.	\$0.97		1.06	\$9.51
4. LUMBER - 10X10 (FT.)	120,100	LB.	\$0.90		1.06	\$9.18
5. LUMBER - 10X12 (FT.)	4,400	LB.	\$0.73		1.06	\$0.78
6. LUMBER - 4X6C	600	LB.	\$0.00		1.06	\$0.00
7. LUMBER - 4X8C	70,400	LB.	\$0.48		1.06	\$0.52
8. LUMBER - 4X10C	1,19	EA	\$1,800.00		1.06	\$1,908.00
9. LUMBER - 8X10 (FT.)	10,400	LB.	\$0.00		1.06	\$0.00
10. LUMBER - 8X12 (FT.)	13,100	LB.	\$0.00		1.06	\$0.00
11. LUMBER - 10X12 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
12. LUMBER - 10X14 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
13. LUMBER - 12X14 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
14. LUMBER - 12X16 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
15. LUMBER - 14X16 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
16. LUMBER - 14X18 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
17. LUMBER - 16X16 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
18. LUMBER - 16X18 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
19. LUMBER - 16X20 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
20. LUMBER - 18X20 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
21. LUMBER - 20X20 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
22. LUMBER - 24X24 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
23. LUMBER - 24X30 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
24. LUMBER - 24X36 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
25. LUMBER - 24X42 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
26. LUMBER - 24X48 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
27. LUMBER - 24X54 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
28. LUMBER - 24X60 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
29. LUMBER - 24X66 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
30. LUMBER - 24X72 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
31. LUMBER - 24X78 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
32. LUMBER - 24X84 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
33. LUMBER - 24X90 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
34. LUMBER - 24X96 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
35. LUMBER - 24X102 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
36. LUMBER - 24X108 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
37. LUMBER - 24X114 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
38. LUMBER - 24X120 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
39. LUMBER - 24X126 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
40. LUMBER - 24X132 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
41. LUMBER - 24X138 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
42. LUMBER - 24X144 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
43. LUMBER - 24X150 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
44. LUMBER - 24X156 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
45. LUMBER - 24X162 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
46. LUMBER - 24X168 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
47. LUMBER - 24X174 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
48. LUMBER - 24X180 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
49. LUMBER - 24X186 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
50. LUMBER - 24X192 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
51. LUMBER - 24X198 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
52. LUMBER - 24X204 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
53. LUMBER - 24X210 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
54. LUMBER - 24X216 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
55. LUMBER - 24X222 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
56. LUMBER - 24X228 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
57. LUMBER - 24X234 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
58. LUMBER - 24X240 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
59. LUMBER - 24X246 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
60. LUMBER - 24X252 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
61. LUMBER - 24X258 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
62. LUMBER - 24X264 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
63. LUMBER - 24X270 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
64. LUMBER - 24X276 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
65. LUMBER - 24X282 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
66. LUMBER - 24X288 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
67. LUMBER - 24X294 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
68. LUMBER - 24X300 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
69. LUMBER - 24X306 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
70. LUMBER - 24X312 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
71. LUMBER - 24X318 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
72. LUMBER - 24X324 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
73. LUMBER - 24X330 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
74. LUMBER - 24X336 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
75. LUMBER - 24X342 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
76. LUMBER - 24X348 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
77. LUMBER - 24X354 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
78. LUMBER - 24X360 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
79. LUMBER - 24X366 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
80. LUMBER - 24X372 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
81. LUMBER - 24X378 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
82. LUMBER - 24X384 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
83. LUMBER - 24X390 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
84. LUMBER - 24X396 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
85. LUMBER - 24X402 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
86. LUMBER - 24X408 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
87. LUMBER - 24X414 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
88. LUMBER - 24X420 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
89. LUMBER - 24X426 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
90. LUMBER - 24X432 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
91. LUMBER - 24X438 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
92. LUMBER - 24X444 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
93. LUMBER - 24X450 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
94. LUMBER - 24X456 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
95. LUMBER - 24X462 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
96. LUMBER - 24X468 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
97. LUMBER - 24X474 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
98. LUMBER - 24X480 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
99. LUMBER - 24X486 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
100. LUMBER - 24X492 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
101. LUMBER - 24X498 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
102. LUMBER - 24X504 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
103. LUMBER - 24X510 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
104. LUMBER - 24X516 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
105. LUMBER - 24X522 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
106. LUMBER - 24X528 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
107. LUMBER - 24X534 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
108. LUMBER - 24X540 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
109. LUMBER - 24X546 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
110. LUMBER - 24X552 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
111. LUMBER - 24X558 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
112. LUMBER - 24X564 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
113. LUMBER - 24X570 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
114. LUMBER - 24X576 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
115. LUMBER - 24X582 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
116. LUMBER - 24X588 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
117. LUMBER - 24X594 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
118. LUMBER - 24X600 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
119. LUMBER - 24X606 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
120. LUMBER - 24X612 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
121. LUMBER - 24X618 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
122. LUMBER - 24X624 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
123. LUMBER - 24X630 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
124. LUMBER - 24X636 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
125. LUMBER - 24X642 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
126. LUMBER - 24X648 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
127. LUMBER - 24X654 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
128. LUMBER - 24X660 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
129. LUMBER - 24X666 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
130. LUMBER - 24X672 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
131. LUMBER - 24X678 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
132. LUMBER - 24X684 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
133. LUMBER - 24X690 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
134. LUMBER - 24X696 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
135. LUMBER - 24X702 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
136. LUMBER - 24X708 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
137. LUMBER - 24X714 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
138. LUMBER - 24X720 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
139. LUMBER - 24X726 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
140. LUMBER - 24X732 (FT.)	1,000	LB.	\$0.00		1.06	\$0.00
141. L						

PROJECT: ATLAS Option Alternate Site A DATE: 09-Dec-93
 CLIENT: ATLAS CORP.
 JOB NO.: 00-17-10 TIME: 03:17 PM
 LOCATION: Roan, Utah

VARIABLE COST JOBSITE OVERHEADS ESTIMATOR: AGS PROJECT DURATION = 624.0 WEEKS

DESCRIPTION	REQUIRED Y OR N	REQUIRED QUANTITY	DURATION	UNIT RATE	I TOTAL LABOR	J WEEKLY LABOR	K WEEKLY INT EQUIP	L WEEKLY EXT EQUIP	M WEEKLY FUEL	N WEEKLY REPAIRS	O WEEKLY SUPPLIES	P WEEKLY SUBS	Q WEEKLY TRAVEL	R WEEKLY TOTALS
*****FULL TIME EXEMPT*****														
246 PROJECT MANAGER	Y	1	624	\$1,659	1,035,216	1,659							0	1,659
247 SUPERINTENDENT			624	\$1,413	0	0							0	0
248 PROJ. SUPERVISOR			624	\$1,327	0	0							0	0
249 PROF. ENGINEER	Y	2	624	\$1,188	1,482,624	2,376							100	2,476
250 HSE OFFICER	Y	1	624	\$1,119	698,256	1,119							50	1,169
251 CHEMIST			624	\$1,119	0	0							0	0
252			624										0	0
253			624										0	0
*****FULL TIME NON-EXEMPT*****														
256 HSE TECHNICIAN			624	\$1,292	0	0							0	0
257 ASST. PROF. ENG.			624	\$1,292	0	0							0	0
258 ENGINEER TECH.			624	\$1,177	0	0							0	0
259			624										0	0
260			624										0	0
*****HOURLY SITE HIRE*****														
261 FIELD FOREMAN			624	\$1,247	0	0							0	0
264 MECHANIC			624	\$1,185	0	0							0	0
265 MECHANIC HELPER			624	\$925	0	0							0	0
266 OFFICE MANAGER	Y	1	624	\$697	434,928	697							0	697
267 CLERK			624	\$632	0	0							0	0
268			624										0	0
269			624										0	0
*****INTERNAL EQUIPMENT RENTAL*****														
272 PRESSURE WASHER (INTERNAL RATE)			624	\$30					0				0	0
273 SAFETY EQUIPMENT (AIR SAMPLING/DVA)			624	\$130					0				0	0
274			624						0				0	0
275			624						0				0	0
*****EXTERNAL EQUIPMENT RENTAL*****														
278 OFFICE TRAILER			624	\$100					0				0	0
279 TOOL TRAILER			624	\$75					0				0	0
280 CHARGE TRAILER			624	\$100					0				0	0
281 DECONTAMINATION TRAILER			624	\$225					0				0	0
282 LAB TRAILER			624	\$100					0				0	0
283 FUEL TRUCK			624	\$121					0				0	0
284 GREASE TRUCK			624						0				0	0
285 HAZ. EQUIP.			624	\$75					0				0	0
286 SITE SCALES			624	\$100					0				0	0
287 PROJECT VEHICLES			624	\$150					0				0	0
288 STREET SWEEFER			624	\$150					0				0	0

289

624

0

TRAVEL PER DIEM

233 OFFICE APPLIES	Y	1	624	\$10
234 SURVEY SERVICES	Y	1	624	\$50
235 SAFETY SERVICES	Y	1	624	\$10
236 COTY MACHINE	Y	1	624	\$40
237 PHONE SERVICE	Y	1	624	\$10
239 UTILITY SERVICES	Y	1	624	\$40
240 TOILET WATERS	Y	1	624	\$40
260 SANITARY FACILITIES	Y	1	624	\$10
301 SMALL TOOLS	Y	1	624	\$15
702 JOB SITE PHOTOS	Y	1	624	\$5
703 ON-SITE DRILLING EQUIP.	Y	1	624	\$200
704 ON-SITE LAB SUPPLIES	Y	1	624	15
705 DECONTAMINATION SUPPLIES	Y	1	624	15
706			624	0
707			624	0
708			624	0
709			624	0
710			624	0

TRAVEL CONTRACT

1) ONE VET CREW BASED ON \$140/HHR FOR 40 HRS/5	624	\$5,800
2) 140 HRS/5 (TOTAL TIME AT \$12/HOUR)	624	\$2,016
315	624	0
316	624	0
317	624	0

TRAVEL COSTS

210 TRAVEL, EXECUTIVE	624	\$250
221 KEY OPERATOR ADJUSTMENT	624	0
222 KEY LABORER ADJUSTMENT	624	0
223	624	0

VARIABLE OFF-SITE OVERHEADS (WEEKLY)

5,851	0	0	0	0	0	150	6,001
3,651,024	0	0	0	0	0	93,600	3,744,624
624 WEEKS							

PROJ: Atlas Settin' Altonate Site A
 CUST: ATLAS CORP.
 FOB NO: 58 & 10
 LOCATION: Hob, Utah
 ITEM DESCRIPTION: MOBILIZATION, DEMOLITION, DECONTAMINATION

ESTIMATOR NOTES AND ASSUMPTIONS:

ITEM DESCRIPTION CITY MILE \$/M TOTAL

LOCAL LOADS	206	28	50	10100
REGIONAL LOADS	150	175	600	90000
INTERSTATE LOADS	50	1000	1000	50000
DEMOLITION	406			175100
DRIVE 2 RAIL LINE	356			100300
TOTAL DRIVING	762			275400

ITEM DESCRIPTION QUANTITY UNIT LABOR INTL EQUIP FUEL REPAIRS SUPPLIES MATERIALS SUBS TRAVEL TOTAL

LOCAL LABORERS	1.00 EA										0.00
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ITEM DESCRIPTION QUANTITY UNIT LABOR INTL EQUIP FUEL REPAIRS SUPPLIES MATERIALS SUBS TRAVEL TOTAL

DECONTAMINATION	1.00 EA										0.00
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MOBILIZATION	1.00 EA										0.00
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DEMOLITION	1.00 EA										0.00
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TRAVEL	1.00 EA										0.00
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OVERHEAD	1.00 EA										0.00
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PROFIT	1.00 EA										0.00
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NET	1.00 EA										0.00
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ITEM DESCRIPTION QUANTITY UNIT LABOR INTL EQUIP FUEL REPAIRS SUPPLIES MATERIALS SUBS TRAVEL TOTAL

DECONTAMINATION	1.00 EA										0.00
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MOBILIZATION	1.00 EA										0.00
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DEMOLITION	1.00 EA										0.00
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TRAVEL	1.00 EA										0.00
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OVERHEAD	1.00 EA										0.00
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PROFIT	1.00 EA										0.00
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NET	1.00 EA										0.00
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ITEM DESCRIPTION	QUANTITY	UNIT	LABOR	INTL EQUIP	FUEL EQUIP	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
DECONTAMINATION	1.00 EA										0.00	36.74
MOBILIZATION	1.00 EA										0.00	275.600
DEMOLITION	1.00 EA										0.00	75.000
TRAVEL	1.00 EA										0.00	50.000
OVERHEAD	1.00 EA										0.00	0.00
PROFIT	1.00 EA										0.00	56,374.00
NET	1.00 EA										0.00	56,374.00

ITEM DESCRIPTION	QUANTITY	UNIT	LABOR	INTL EQUIP	FUEL EQUIP	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
DECONTAMINATION	1.00 EA										0.00	36.74
MOBILIZATION	1.00 EA										0.00	275.600
DEMOLITION	1.00 EA										0.00	75.000
TRAVEL	1.00 EA										0.00	50.000
OVERHEAD	1.00 EA										0.00	0.00
PROFIT	1.00 EA										0.00	56,374.00
NET	1.00 EA										0.00	56,374.00

PROJECT: Atlas option alternate site A
 CITY: Atlas Corp
 Job No.: 88-67-10
 LOCATION: Hobbs, NM
 ITEM DESCRIPTION: ROAD REPAIRS

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME THAT THE EIGHT MILE LENGTH OF ROAD WILL REQUIRE PROFILING AND ASPHALT OVERLAY
 AVERAGE 1.0 LAYER OF 1" INCHES ON ASPHALT
 A TOTAL OF 10,000 TONS REQUIRED

DESCRIPTION	QUANTITY	UNIT	LOCN	INT			EXT			SUPPLIES	MATERIALS	CUBS	TRAVEL	TOTAL	DURATION:	0 HOURS
				EQUIP	EQUIP	FUEL	EQUIP	EQUIP	FUEL							
10000 TON	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MATERIAL	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MATERIAL	10,000 TON	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
OVERLAY ASPHALT	10,000 TON	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHOT BLAST	10,000 TON	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
CRIB COSTS	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Total: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

PROJECT: Atla Options Alternate Site A ESTIMATOR: AS5
CLIENT: Atla's Corp. SHI: 40
JOB NO.: 88-07-10 DATE: 09 Dec-93
LOCATION: Wash Utah TIME: 03:16 PM
ITEM DESCRIPTION: CONCRETE LOADING FACILITY JOB QUANTITY: 1 EA

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME CONSTRUCTION OF 2500 LF CONVEYOR SYSTEM TO TRUCK LOADING AREA
ASSUME CONSTRUCTING A FIELD CONCRETE STRUCTURE FOR LOADING BY DOZER
ASSUME USING A FIELD LOADING FACILITY AT THE SIDING WITH 1200 TON CAPACITY

DESCRIPTION	QUANTITY	UNIT	DURATION = HOURS																			
			LABOR	INT ^E T	EXT ^E T	EQUIP	FUEL	REPAIRS	SUPPLIES													
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
ATERIALS																						
CONCRETE LOAD OF CONCRETE LOAD	1 EA																					
TOTAL COVERED CONVEYOR	2,000 LF																					
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	CREW	HOURLY	CREW COSTS
SUBTOTAL	0 HOURS	0.00	0.00
MATERIALS			
CONCRETE LOAD OF CONCRETE LOAD	1 EA	50.000	0
TOTAL COVERED CONVEYOR	2,000 LF	1,390,000	1,390,000
TOTAL	0	0	0

1,390,000.00

0

1,390,000.00

0

PROJ # : ALAT-01
 CLIENT : ALAT-01
 TUE NO : 08-6-10
 ORIGIN : Mab Utah
 ITEM DESCRIPTION: PRIVATE, LAND TAILING

ESTIMATING NOTES AND ASSUMPTIONS:	ASSUME PRODUCTION BASED ON LOADING FACILITY AND TRANSPORTATION CAPACITY ASSUME 40 MINUTE TRUCK CYCLE ASSUME AVERAGE CONVERSION OF TATTLING AT 1.4 TONS PER CY
PRODUCTION:	\$450.00 PER DAY = 348 CY PER DAY
DEVIATION:	780000 CY / 348 CY/DAY = 2234 CY/DAY =
ASSUME USING 1 62' X 20' WATER TRUCK AND 1 GRADER FOR EXCAVATION ASSUME 0.96 CY CONVERSIONS AND LOADING OPERATORS AND 3 LABORERS	

PROJECT:	Atlas Option Alternative Site A
CLIENT:	ATLAS CORP.
JOB NO.:	96-57-10
LOCATION:	Roan Oak
ITEM DESCRIPTION:	OFF LOAD AND DISCHARGE

- ASYM. PAVERS CAN BE PLACED WITHIN 100 FEET OF FILL PLACEMENT
- ASYM. USING A DR. GRADE, WATER TRUCK AND CONTRACTOR AND FORMAN

ATLAS Option Alternative Site A
ATLAS Corp.
Rev 6-10

ESTIMATED
TIME: 31
DATE: 10/10/00
TIME: 01:12 PM
SHT: 13
PCT: 00
SHT: 40
TIME: 01:12 PM

ITEM DESCRIPTION:	WEIGHT	UTILITY RELocation AND INSTALLATION
LOCATION:		
ESTIMATOR NOTES AND ASSUMPTIONS:		
RELocate PAPER PRESS	35000	
SERVICE TO LOADING HOPPER	25000	
SERVICE TO LOADING FACILITY	45000	

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RELOCATE TO OTHER PLACES
SERVICE TO LOADING HOPPER
SERVICE TO LOADING FACILITY
SERVICE TO OFF LOADING FACILITY

JOURNAL OF CLIMATE

DESCRIPTION	QUANTITY	UNIT	Labor	Mat'l	Expt	EQUIP	Fuel	Repairs	Supplies	Materials	Subs	Travel	Total	DURATION:	HOURS	UNIT	COST
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PROJECT: Atlas Option Alternate Site A
CLIENT: Atlas Corp.
JOB NO: 88-67-10
LOCATION: Moab Utah

ITEM DESCRIPTION: SITE RECLAMATION

ESTIMATOR NOTES AND ASSUMPTIONS:

-ASSUME RECLAMATION OF 130 ACRES

-ASSUME PLATEAU OF SILTY SOILS FOR GROUND COVER AT 4 INCHES THICK

-QUANTITY IS ASSUMED TO BE 69212 CY

-USE 2 SPREADERS AT COMBINED PRODUCTION OF 760 CY/HR AT 2000 FT HAIL

DURATION : 192 25555 HOURS

ESTIMATOR: AGS
DATE: 09-Dec-93
TIME: 02:17 PM
JOB QUANTITY: 340 AC

DESCRIPTION	QUANTITY	UNIT	LABOR	INTL EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION :
CAN 627 SCAT.	2.00 EA		49.21		273.20	47.50	15.00				0.00	192 HOURS
CAN DB DRG	1.00 EA		24.61		71.29	11.00	7.50				0.00	
CAN 14 GRS	1.00 EA		24.61		51.73	6.00	6.50				0.00	
WATER TOWER	1.00 EA		24.61		25.22	4.00	3.00				0.00	
LOCAL LABORER	1.00 EA		18.50								0.00	
FIELD FOREMAN	1.00 EA		25.39								0.00	
FLYTRIP	1.00 EA				2.46	1.50	1.00					
CREW												
	166.92	0.00	423.90		70.00	53.00	0.00	0.00	0.00	0.00	113.82	
Subtotal	192 HOURS	32,021	0	81,497	13,458	10,100	0	0	0	0	137,236	403.84
MATERIALS												
HIGHWAY AND MUD	140 AC										204,000	
RECLAMATION	340 AC										136,000	
											0	
											0	
											0	
											0	
											0	
											0	
TOTALS	32,021	0	81,497	13,458	10,100	0	0	340,000	0	377,236	1,403.84	

PRODUCT: At 105' Optima Alternative Site A

ALTA. CODE:

SS 6-10

JOB NO:

LOCATION:

Utah

ITEM DESCRIPTION: EXCAVATE MINEPACIFIC REPOSITORY

ESTIMATOR NOTES AND ASSUMPTIONS:

-ASSUME USING 631 FLEET AT 2000 FOOT HAUL

-ASSUME PRODUCTION AT 1100 CY/HR

-DURATION : 5000 HOURS / 1100 CY/HR

ESTIMATOR: ESTIMATOR: SHOT 15 OF SHOT 40

DATE: 09 Dec 92 TIME: 03:17 PM

JOB QUANTITY: 10000000

5,500.00

DURATION: 5,000 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT 631 SCR	5.00 EA		123.04	534.95	73.75	47.50						0.00	
CAT D3 DOB	2.00 EA		49.21	139.56	32.00	20.00						0.00	
CAT D8 DOB	1.00 EA		24.61	71.29	11.00	7.50						0.00	
CAT 14 DOB	1.00 EA		24.61	51.73	6.00	6.50						0.00	
WATER WAGON	1.00 EA		24.61	38.75	6.75	8.75						0.00	
PICKUP	#		1.00 EA	2.46	1.50	1.00						0.00	
FIELD FOREMAN	1.00 EA		25.39									0.00	
LOCAL LABORER	2 EA		36.93018									0	

CREW: 308.45 0.00 857.74 133.00 91.25 0.00 0.00 0.00 0.00 HOURLY CREW COSTS 1,400.44

TOTAL: 5,000 HOURS 1,542,246 0 4,338,700 665,000 456,250 0 0 0 0 7,002,196 1.27

MATERIALS:

Total: 1,542,246 0 4,338,700 665,000 456,250 0 0 0 0 7,002,196 1.27

PROJECT	RHES Option Alternative Site A
CLIENT	ATLAS OFF
ITEM NO.	38 6 10
LOCATION	Kiab Utah
ITEM DESCRIPTION	Soil Rock Matrix
ESTIMATOR	ASG
DATE	03 Dec 91
TIME	11:45
TEST QUANTITY	100 GRAMS
SHI #0	017 PM

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ITEM NO. 1000 CYD81 ASSUME DELIVERY OF ROCK # 1000 CYD81
QUANTITY IS ASSUMED TO BE 61.4 DAYS OF ROCK

165 of 43009

ECONOMIC OUTLOOK FOR 1990 • 1000 C/DAY

614 DAVIS ON
EDUCATION

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610

PROJECT:
CLIENT:
JOB NO:
LOCATION:
ITEM DESCRIPTION:

Atlas Options Alternative Site A
ATLAS CORP.
88-67-10
Mudab Utah
ROCK ARMOR

ESTIMATOR:
DATE:
JOB QUANTITY:

ESTIMATOR:
TIME:
JOB QUANTITY:

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME CONVECTION AT 1.5 TONS PER CY
- PLACE ROCK BY BOLZER, LOADER AND TRACK LOADER
- ASSUME DELIVERY OF STONE AT 1000 CY/DAY = 1500 TON/DAY
- TOTAL LOADS AT 23 TON PER LOAD = 65 TRUCKS PER DAY

-ASSUME SAME QUANTITY OF FILTER MATERIAL

DESCRIPTION	QUANTITY	UNIT	LABOR	INT'L EQUIP	EXT'L EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST	DURATION:
CAT 948 FTI	1.00 EA	20.61			47.05	7.00	6.00					0.00		520 HOURS
CAT 948 C1B	1.00 EA	24.61			71.29	11.00	7.50					0.00		
CAT 948 FEL1	1.00 EA	24.61			45.45	6.00	7.00					0.00		
LOCAL LABOR	2.00 EA	36.99										0.00		
CREW			110.81	0.00	163.79	24.00	20.50	0.00	0.00	0.00	0.00	0.00		312.10
SUB TOTAL			520 HOURS	\$7,652	0	\$5,171	12,485	10,660	0	0	0	165,333		6.38
MATERIALS:														
ROCK ARMOR (108 PIT)												370,890		
ROCK ARMOR TRANSPORTATION												124,020		
FILTER MATERIAL (108 PIT)												250,068		
FILTER MATERIAL TRANSPORTATION												115,752		
												0		
												0		
												0		
												0		
Total \$			5,652	0	85,171	16,480	10,660	0	216,730	0	0	1,076,667		79.49

PROJECT: Atlas Option Alternate Site A
 CLIENT: Atlas Corp.
 JOB NO: 32-6-10
 LOCATION: Moab Utah
 ITEM DESCRIPTION: RIPRAP PLACEMENT

ESTIMATOR NOTES AND ASSUMPTIONS:
 -ASSUME CONCRETE SLAB AT 1.5 THICK.
 -PLACE ROCK BY DOZER, LADDER AND TRUCK LOADER
 -ASSUME DELIVERY OF STONE AT 1,500 CF/TON = 1500 TON/DAY
 -TOTAL LOADS AT 23 TON/PER LOAD = 65 TRUCKS PER DAY
 -ASSUME PLACING FILTER IS DRAINAGE DITCHES AND CHANNELS
 -ASSUME SAME THICKNESS OF FILTER LAYER

ESTIMATOR: AGS
 DATE: 09-Dec-93
 TIME: 07:17 PM
 JOB QUANTITY: 25,000 CY

DESCRIPTION							QUANTITY UNIT LABOR INT EQUIP FUEL REPAIRS SUPPLIES MATERIALS SUBS TRAVEL TOTAL							DURATION: 500 HOURS		
														HOURLY	UNIT COST	
CAT 946 FEL	1.00 EA	24.61					47.05	7.00	6.00					0.00		
CAT 946 DR	1.00 EA	44.61					71.23	11.00	7.50					0.00		
CAT 946 FEL	1.00 EA	24.61					45.45	6.00	7.00					0.00		
Total Labor		2.00 EA														
CREW							110.81	0.00	163.79	24.00	20.50	0.00	0.00	0.00	0.00	319.10
SUBTOTAL							554.406	0	61,895	12,000	10,250	0	0	0	159,551	6.38
MATERIALS																
RIP RAP (700 FT)																
RIP RAP TRANSFORMATION																
FILTER MATERIAL (700 FT)																
FILTER MATERIAL TRANSFORMATION																
TOTALS							55,406	0	81,875	12,000	10,250	0	163.79	0	275,426	35.02

PROJECT: Atlas option Alternate site A
 CLIENT: ATLAS CORP.
 JOB NO: 29-67-10
 LOCATION: Moab Utah
 ITEM DESCRIPTION: MISC STRUCTURES

ESTIMATOR NOTES AND ASSUMPTIONS:

-CERTAIN ESTIMATE LINE ITEMS WILL BE REQUIRED, FROM BOX CURVET TO HEADWALLS.
-ASSUME AN ALLOWANCE TO 100,000 FOR ENTIRE PROJECT

ESTIMATOR: AG
 DATE: 09-Dec-93
 TIME: 01:17:18
 JOB QUANTITY: 1 LS

DESCRIPTION	QUANTITY	UNIT	LABOR	DURATION = HOURS						HOURLY COST	COST	
				INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL
CREW												
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHIEF	0 HOURS		0	0	0	0	0	0	0	0	0	0
MATERIALS												
MISC STRUCTURES	1 LS											
TOTALS				0	0	0	0	0	0	100,000	0	100,000

PROJECT: Atlas Option Alternative Site A
 LINE: Atlas CCP
 NO: 55-6710
 LOCATION: Mod. Utah
 DESCRIPTION: (ONE) 110KV LONLON/CLAY LINES
 DATE: 09-Dec-93
 TIME: 11:16
 SHI: 20
 OF: SHI 40
 FSI: 100
 QUANTITY: 200,000 ft

- 50 -

- ASSUME DETERGENTING 2' FOOT OF LINER AND RECOMPACTING AND CONDITIONING
USE SCRAPERS TO MOVE THE MATERIALS
INCLUDE AN ADDITIONAL 0' FOR RIPPING OF ROCK
INCLUDE TWO COMPACTOR TO KEEP UP WITH COMPACTION EFFORTS
STOCKPILE AT 1100 CY/HR

DURATION =	425000 CY /	1100 CY/HR =	386 HRS
ASSUME WATER AVAILABLE ON SITE FROM STORAGE TANK FOR DUST CONTROL			
ASSUME HABIT DISTANCE OF 1200 FT			

PROJECT:	Atlas Design Alternative Site A	ESTIMATOR:	ADS	SHI #:	00	SHI AC:	
CLIENT:	ATLAS CORP	DATE:	04 Dec-93	TIME:		03:17 PM	
JOB NO.:	BB 67 10	ITEM DESCRIPTION:		100 QUANTITY:		210,000 CY	
LOCATION:	Mobile, Utah	PLATE RATIO:	1.00				

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- ASSUME STATEMENT OF TO RADDIN CAP AT 1' INCH OF MATERIAL
USE SCRAPERS TO MOVE THE MATERIALS
INCLUDE AN ADDITIONAL 0.9 FOR RIPPLING OF ROCK

PRODUCTION AT 1100 CY/HR
DURATION : 210000 CY /
ASSUME WATER AVAILABLE ON SITE FOR DUST CONTROL AND COOLING
A CONCRETE HABIT DISTANCE OF 1.50 FT

DISCUSSIONS 1103 [8/85]

DUSTCOL = 210000 CY/
ASPHALT WATER AVAILABLE ON SITE FOR DUST CONTROL AND COMPACTION NEEDS
A 10' X 10' HAN DISTANCE OF 1.00 FT

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION =	UNIT COST
CATERPILLAR D7 D2R	1.00	EA	24.61		89.28	16.00	10.00					0.00		
CATERPILLAR D7 D2R	1.00	EA	24.61		71.29	11.00	7.50					0.00		
CATERPILLAR D7 D2R	1.00	EA	24.61		51.73	6.00	6.50					0.00		
CATERPILLAR D7 D2R	1.00	EA	24.61		132.86	20.00	12.00					0.00		
CATERPILLAR D7 D2R	1.00	EA	24.61		524.95	73.75	47.50					0.00		
CATERPILLAR D7 D2R	1.00	EA	24.61		77.50	17.50						0.00		
LOCAL LABOR	3.00	EA	55.49									0.00		
FIELD FORMAN	2 EA		50,746.68									0		

PROJECT: Atlass Excavation Alternative Site A
 CLIENT: Atlass Corp.
 JOB NO.: 88-4-10
 LOCATION: Mead, Wash.
 ITEM DESCRIPTION: PLATE & TROWL CAP

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME PLACEMENT OF FINAL COVER AT 2 FOOT THICK
- USE SCRAPER TO MOVE THE MATERIALS
- INCLUDE AN ADDITIONAL 0.3 FOR TIPPING OF ROCK
- PRODUCTION AT 1100 CY/Hr
- DURATION: 419000 CY / 1100 CY/Hr = 380.909030
- ASSUME WATER AVAILABLE ON SITE FOR DUST CONTROL AND COMPACTION NEEDS
- ASSUME HAUL DISTANCE OF 1.00 ft.

ESTIMATOR: AG2
 DATE: 07-Dec-92
 JOB QUANTITY: 412,000 CY

DURATION: 381 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	EQ#	EQ IP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT D9 DOZ	1.00 EA		24.61			89.28	16.00	10.00				0.00	
CAT D8 DOZ	1.00 EA		24.61			71.29	11.00	7.50				0.00	
CAT 14 GDR	1.00 EA		24.61			51.73	6.00	6.50				0.00	
CAT B7 COMP	1.00 EA		24.61			66.43	10.00	6.00				0.00	
CAT 615 SCR	5.00 EA		123.04			524.95	73.75	47.50				0.00	
WATER WAGON	2.00 EA		49.21			77.50	17.50					0.00	
LOCAL LABORERS	3.00 EA		55.47									0.00	
FIELD FOREMAN	2 EA		50.774628									0.00	
PICKUP	1 EA					4.92		3	2				

ITEM	QUANTITY	UNIT	LABOR	EQ#	EQ IP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	HOURLY	CREW COSTS
CAT D9	376.24	0.00	886.10			137.25	97.00	0.00	0.00	0.00		1,437.29	
CAT D8	381.0000	0	337.524			52.280	36.948	0	0	0		570.332	1.36
GENERAL												0	
-PREDICT COMPACTION	412,000		54,470.00			81,000.00						138,270	
TOTALS	176,050	0	421,324			52,280	6,345	0	0	0		70,102	1.34

PROJECT: ATLAS Option Alternative Site A
 CLIENT: ATLAS CORP.
 JOB NO.: 58-67-10
 LOCATION: Road 05a
 ITEM DESCRIPTION: FENCING

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME FENCING OF PERIMETERS OF REPOSITORY FOR INSTITUTIONAL CONTROL

ESTIMATOR:	AGZ	DATE:	03 Dec 93	TIME:	05:17 PM
JOB NO.:		JOB QUANTITY:			
LOCATION:					
ITEM DESCRIPTION:	FENCING				

JOBSITE FENCING OF PERIMETERS OF REPOSITORY FOR INSTITUTIONAL CONTROL

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	EXT	EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION =		
															UNIT	HOURLY	CREW COSTS
CREW			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
USE TOTAL		HOURS	0	0	0	0	0	0	0	0	0	0	0	0		0	0
MATERIALS																0	0
PIPE INSTALLATION	15,000 LF															180 MIN	0
TOTALS			0	0	0	0	0	0	0	0	0	0	0	0		14,700	14,700

PROJECT:

Atlas Geotech Alternative Site A
Atlas Corp.

88-07-10

CLIENT:

JOB NO:

LOCATION:

Utah

ITEM DESCRIPTION:

MONITORING CONTROL

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME INSTALLATION OF 10 PIROMETERS

ASSUME INSTALLATION OF 20 MONITORING WELLS AT 100 FT DEPTH

ASSUME ALLOWANCE FOR SETTLEMENT MIGRANTS AND SURVEY MONUMENTS

PROJECT:

Atlas Geotech Alternative Site A

88-07-10

CLIENT:

JOB NO:

LOCATION:

Utah

ITEM DESCRIPTION:

MONITORING CONTROL

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME INSTALLATION OF 10 PIROMETERS

ASSUME INSTALLATION OF 20 MONITORING WELLS AT 100 FT DEPTH

ASSUME ALLOWANCE FOR SETTLEMENT MIGRANTS AND SURVEY MONUMENTS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT'L EQUIP	EXT'L EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION:	
													UNIT	COST
CREW	0	HOURS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOPIGRAPH	0	HOURS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MATERIALS														
INITIAL MONITOR WELLS	2,000 LF													
INITIAL PIROMETERS	1,000 LF													
18.75 LF. SETTLEMENT MIGRANT	1 LF													

ITEM	QUANTITY	UNIT	DURATION:		HOURLY COST	COST
			UNIT	COST		
CREW	0	HOURS	0.00	0.00	0.00	0.00
TOPIGRAPH	0	HOURS	0.00	0.00	0.00	0.00
MATERIALS						
INITIAL MONITOR WELLS	2,000 LF				50,000	50,000
INITIAL PIROMETERS	1,000 LF				12,000	12,000
18.75 LF. SETTLEMENT MIGRANT	1 LF				4,500	4,500

PROJECT	ATLAS GLOSSY ALTERNATE SIZE A	ITEM	ESTIMATE	ITEM	ESTIMATE	ITEM	ESTIMATE
LINE	ATLAS CSE	DATE	09 Dec-12	TIME	00 17 TM	ITEM	00 00 00
10B 90	98 67 10	LOCATION	MURK UTAH	ITEM DESCRIPTION	ITEM QUANTITY		
10C 118	98 67 10						

ESTIMATING MORTALITY

ACUITY RECENT ROAD AND NEW REPOSITORY AREA
ACUITY ROAD AT 12 FOOT WIDE AND 4 INCHES THICK
QUANTITY 2 3733-3733 CY

ITEM	QUANTITY	UNIT	PRICE	AMOUNT	DISCOUNT	TAX	NET	SHIP.	AMOUNT	DISCOUNT	TAX	NET
MATERIALS	117.70	ea	0.00	119.70	22.50	18.00	0.00	0.00	0.00	0.00	0.00	108.90
SUPPLIES	47,082	ea	0	60,180	9,000	7,200	0	0	0	0	0	6,18
LABOR	400 HOURS	ea	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
SHIPPING	4,000 LB	ea	0	4,000	0	0	0.00	0.00	0.00	0.00	0.00	0.00
WAREHOUSE FEE	1	ea	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
TRAVEL	32,300	ea	0	32,300	0	0	0.00	0.00	0.00	0.00	0.00	0.00
OVERHEAD	0	ea	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
GENERAL	0	ea	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
NET	108.90	ea	0	108.90	0	0	0.00	0	0	0.00	0.00	0.00

PROJECT: Abitac Option Alternate Site A
 (LINE) ATLAS OFF.
 JOE NO.: 06-5-10
 LOCATION: Moab Utah
 ITEM DESCRIPTION: HILL SITE SOILS EXCAVATION

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME PRODUCTION BASED ON LOADING FACILITY AND TRANSPORTATION CAPACITY

ASSUME AVERAGE CONVERSION OF TAILING AT 1.4 TONS PER CY

PRODUCTION : 4500 TONS PER DAY = 360 CY PER DAY

DURATION : 30000 CY /

1461 CY/DAY = 86.6801502 DAYS OR = 0.23747986 YEARS AT 7 DAYS PER WEEK ALL YEAR ROUND

0.33338513 YEARS AT 5 DAYS PER WEEK ALL YEAR ROUND

ESTIMATOR: 365 DATE: 07 Dec 93 TIME: 07:17 PM
 ATLAS OFF. 06-5-10
 Moab Utah
 HILL SITE SOILS EXCAVATION

JOB QUANTITY: 300,000 CY

FUEL COST OF 0.8 TEE/GAL

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT 637 DOZER	2.00 EA		\$9.21		273.20	47.50	35.00					0.00	
CAT 14 GDB	1.00 EA		24.61		51.23	6.00	6.50					0.00	
CAT DO DKB	2.00 EA		69.21		142.58	22.00	15.00					0.00	
PICKUP	1.00 EA				7.38	4.50	3.00						
CAT 34F FEL	1.00 EA		24.61		47.05	7.00	6.00					0.00	
LOADER OPERATOR	3.00 EA		73.92									0.00	
LOADER	4.00 EA		73.98									0.00	
WATER TRUCK	1 EA		24.607104		25.22	4	3					0	
CREW													
	320.05	0.00	\$47.16		91.00	68.50	0.00	0.00	0.00	0.00			
SUBTOTAL													
	867 HOURS	277.422	0	474,279	78,879	59,376	0	0	0	0	889,356	2.97	
MATERIALS													
HILL TAILINGS											472,000	0	
TOTALS											0	0	0
											0	0	0
											0	0	0
											0	0	0
											0	0	0
											0	0	0

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CREW													
	320.05	0.00	\$47.16		91.00	68.50	0.00	0.00	0.00	0.00			
SUBTOTAL													
	867 HOURS	277.422	0	474,279	78,879	59,376	0	0	0	0	889,356	2.97	
MATERIALS													
HILL TAILINGS											472,000	0	
TOTALS											0	0	0
											0	0	0
											0	0	0
											0	0	0
											0	0	0

TOTALS 277.422 0 474,279 78,879 59,376 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0

PROJECT: Atidah Option Alternative Site A
 CLIENT: Atidah Corp.
 JOB NO: 82-1-10
 LOCATION: Moab, Utah
 ITEM DESCRIPTION: PLACEMENT OF HILL SOILS

ESTIMATOR NOTES AND ASSUMPTIONS:

ACTUAL DUMPING WITH TRUCKS AND SPREADING WITH DOZER SPREAD.

ESTIMATOR: AS5
 DATE: 09-Dec-93
 TIME: 07:17 AM
 JOB QUANTITY: 300,000 CY

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT D8 DTS	1.00 EA	24.61		71.29	11.00	7.50						0.00	
CAT 905 CDR	1.00 EA	24.61		66.43	10.00	6.00						0.00	
WAIVED TRUCK	1.00 EA	24.61		25.22	4.00	3.00						0.00	
CAT 14 GDS	1.00 EA	24.61		51.73	6.00	6.50						0.00	
FIELD FOREMAN	1.00 EA	25.39										0.00	
PICKUP	1.00 EA	24.61		2.46	1.50	1.00						0.00	
LOCAL OPERATOR	1 EA	24.60104										0	
LOCAL LABORER	2 EA	36.96918										0	
Crew													
				210.02	0.00	217.13	32.50	24.00	0.00	0.00	0.00	0.00	403.65
TOTAL													
		867 HOURS		182,088	0	188,252	28,178	20,808	0	0	0	0	419,726
Materials													
												0	
Total:													
				182,088	0	188,252	28,178	20,808	0	0	0	0	419,726

PROJECT: Atlas Option Alternate Site A
 CLIENT: ATLAS COPCO
 JOB NO: 70-4-10
 LOCATION: Mid Utah
 ITEM DESCRIPTION: TAILING REMOVAL SOILS EXCAVATION

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME EQUIPMENT BASED ON LOADING FACILITY AND TRANSPORTATION CAPACITY

ASSUME AVAILABILITY OF TAILING AT 1.4 TONS PER CY

PRODUCTION: 4500 TNS PER DAY = 3661 CY PER DAY

DURATION: 100000 CY / 3661 CY/DAY = 26.83334 DAYS OR = 0.0791593 YEARS AT 7 DAYS PER WEEK ALL YEAR ROUND

0.11112833 YEARS AT 5 DAYS PER WEEK ALL YEAR ROUND

ASSUME WORKING 2 CONCRETE AND LOADING OPERATORS AND 3 LABORERS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT' L EQUIP	EXT' L EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHBS	TRAVEL	TOTAL	UNIT COST
CAT 14 GOF	1.00 EA		26.61		51.73	6.00	6.50						0.00
CAT 90 DPF	1.00 EA		43.21		142.58	22.00	15.00						0.00
FLYING	1.00 EA		3.00		7.38	4.50	3.00						
CAT 96 FCL	1.00 EA		26.61		47.05	7.00	6.00						0.00
LOCAL OFFSALE	3.00 EA		73.82										0.00
LOCAL LABORER	4.00 EA		73.98										0.00
WATER TOWER	1 EA		24.60704		25.22	4	3						0

ITEM	QUANTITY	UNIT	289 HOURS	HOURLY COST	289 HOURS	HOURLY COST
LABOR	289 HOURS					
MATERIALS	144,000	IN. MILE				
HIRE TAHLING	144,000	0				
TOTAL	16,541	0	79,176	11,557	1,415,700	151,500

TOTAL: 16,541 0 79,176 11,557 1,415,700 151,500

PROJECT: Atlas Option Alternate Site A
 CLIENT: ATLAS CORP.
 JOB NO: 85-5-10
 LOCATION: Moab, Utah
 ITEM DESCRIPTION: FLATBED TRANSPORTMENT SOILS

ESTIMATOR NOTES AND ASSUMPTIONS:

ASUME DUMPING STOKE'S AND SPREADING WITH DB SPREADER.

ESTIMATOR: KG. SH. 24 OF SH. 40
 DATE: 03-Dec-93 TIME: 03:17 PM
 JOE QUANTITY: 100,000 CY

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	HOURLY COSTS
CAT DB DBR	1.00 EA	24.61		71.29	11.00	7.50						0.00	
CAT B35 COMP	1.00 EA	24.61		66.43	10.00	6.00						0.00	
WATER TRUCK	1.00 EA	24.61		25.42	4.00	3.00						0.00	
CAT 14 GOS	1.00 EA	24.61		51.73	6.00	6.50						0.00	
FIELD FOREMAN	1.00 EA	25.39										0.00	
PICKUP	1.00 EA	24.61		2.46	1.50	1.00						0.00	
LOCAL OPERATOR	1 EA	24.60104										0	
LOCAL LABOR	2 EA	26.97012										0	

DURATION: 189 HOURS

ITEM	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	HOURLY COSTS
FUEL	210.02	0.00	217.13	32.50	24.00	0.00	0.00	0.00	0.00	0.00	0.00	483.65	
SHOVELS	60.696	0	62.751	3.393	6.936	0	0	0	0	0	0	0	
MATERIALS												0	
TOTAL:	60.696	0	62.751	3.393	6.936	0	0	0	0	0	0	179.772	

1.40

PROJECT: 6118 Option Alternate Site A
 CLIENT: AT&T DEP.
 TIME NO: 85-170
 LOCATION: Moab, Utah
 ITEM DESCRIPTION: TRASH TRAIL MILL DEMO DEBRIS

ESTIMATOR NOTES AND ASSUMPTIONS:

- WITH DEMO DEBRIS ASSUME IN CY PES 15 CY END DUMP
- ASSUME TRANSPORTING BY TRUCKENDUMP # 2 HR ROUND TRIP
- ONE TO TRUCK AT 10 HOURS/Trip DAY = 50 LOAD PER DAY
- DURATION = 35000 CY / 500 CY PER DAY = 70 DAYS
- 700 HOURS

ESTIMATOR: AGS
 DATE: 09-Dec-93
 TIME: 03:17 PM
 JOB QUANTITY: 35,000 CY

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REFRAIS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT 235 PH	1.00 EA		24.61		55.36	6.50	6.00					0.00	
CAT 746 FLL	1.00 EA		24.61		47.05	7.00	6.00					0.00	
TRUCK DUMP TRUCK	10.00 EA		246.07		581.70	0.00	5.00					0.00	

DURATION = 700 HOURS

ITEM	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REFRAIS	SUPPLIES	MATERIALS	SUBS	TRAVEL	HOURLY	CREW COST/H	UNIT COST
CREW	700 HOURS		235.79	0.00	643.71	13.50	17.00	0.00	0.00	0.00		969.50		
SUBTOTAL			206,700	0	450,597	9,450	11,900	0	0	0		13.37		
MATERIALS												0	0	
TOTALS			206,700	0	450,597	9,450	11,900	0	0	0		13.37		

17.37

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PROJECT	Atlas Option Alternative Site A
CUST.	ATLAC (UP)
ITEM NO.	SC-8-10
LOCATION	North Utah
ITEM DESCRIPTION	00511 LOW ROLL WATER TRANSPORT
ITEM QUANTITY	11 YEAR
JOB TIME	03:15:58
JOB DATE	09 Dec 92
ESTIMATOR	AG
OF	20140

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME DAY 1 CONTROL IS HELD OVER CERTAIN AREA OF TERRAIN AND ACCESS ROAD OVER COURSE OF PROJECT USE ONE WATER TOWER, PUMPS AND DRIVER

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ITEM	QUANTITY	UNIT PRICE	AMOUNT	ITEM	QUANTITY	UNIT PRICE	AMOUNT
HOPE CREEK WATER LINE (SDE 2)	111,336 LF			HOPE CREEK	1,231,296		1,231,296
FURN.	1 EA						15,000
TIME LAT.	1 EA						135,000
SURGE TANK	100,000 GAL						200,000
SURGE TANK	464,116	0	0	WATER COSTS	464,116	0	464,116
SURGE TANK	22,000 HOURS	21.10	464,116	WATER COSTS	21.10	464,116	464,116

PROJECT: Atlas Option Alleviate Site A
CUST: AT&T
SBS NO.: BE 510
LOCATION: Moab, Utah
ITEM DESCRIPTION: PERMITTING AND ACCESS AGREEMENT

ESTIMATOR NOTES AND ASSUMPTIONS:

ASSUME 3 ENGINEERS FOR 1 YEAR
ENVIRONMENTAL IMPACT STATEMENT
ASSUME PERMIT FEES
\$750,000
\$15,000
\$825,000

PROJECT: Atlas Option Alleviate Site A
CUST: AT&T
SBS NO.: BE 510
LOCATION: Moab, Utah
ITEM DESCRIPTION: PERMITTING AND ACCESS AGREEMENT
JOB QUANTITY: 1 EA

ESTIMATOR: 465
DATE: 01-Dec-93
TIME: 03:17 PM
DURATION: 2,080 HOURS
QUANTITY: 1 EA
UNIT COST: 2.00
DESCRIPTION: PROJ. ENGINEER
PROJ. ENGINEER
47.53
2.00 EA
47.53

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CREW	47.53		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	95,060	2.00
SHB TOTAL	2,080 HOURS		98,863	0	0	0	0	0	0	0	103,023	103,023	103,023
MATERIALS											0	0	0
PERMITTING			1 EA								825,000	825,000	825,000
NET TOTAL	78,863		0	0	0	0	0	0	0	0	4,100	4,100	4,100
GRAND TOTAL											102,225	102,225	102,225

PROJECT: 61185 Service Alternative Site A
 CLIENT: AEGI COST
 JOE NO: 26-6-10
 LOCATION: Nabulah
 ITEM DESCRIPTION: DESIGN COST
 ESTIMATOR NOTES AND ASSUMPTIONS:
 ASSUME DESIGN COST OF \$00000

ESTIMATOR: AEGI

DATE: 23 Dec 82

JOB QUANTITY: 1 EA

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION:		HOURS	
													UNIT COST	CREW COSTS		
CREW													0.00	0.00	0.00	0.00
SUBTOTAL	0 HOURS		0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
MATERIALS													0	0	0	0
DESIGN AND SUPPORT	1 EA												500.000	0.00	0	0
TOTAL:													500.000	0.00	0	0

PROJECT	Atlas Optical Alignment: Site A
CLIENT	ATLAS OPT.
JOB NO.	9R-110
LOCATION	Nofo Utah
ITEM DESCRIPTION	Surcharge Lane
CONTAINER	AG-1
DATE	09-Dec-12
TIME	02:17 PM
JOE ID#	100-000001
OFF	00:00
ON	00:00

ESTIMATOR NOTES AND ASSUMPTIONS:

2005, 5, 334-344 DOI: 10.1007/s00339-005-0033-2

DESCRIPTION	QUANTITY	UNIT	LABOR	INT'L EQUIP		EXT'L EQUIP		FUEL		REPAIRS		SUPPLIES		MATERIALS		SUBS		TRAVEL		TOTAL		DURATION:	HOURS	UNIT COST
				ITEM	QTY	ITEM	QTY	FUEL	GALLONS	REPAIRS	ITEM	SUPPLY	ITEM	MATERIAL	ITEM	QTY	TRAVEL	ITEM	QTY	TRAVEL	ITEM	QTY		

PROJECT: Alias Option alternate Site A
 CLIENT: AT&T
 DATE: 15-12-10
 LOCATION: Head Office
 ITEM DESCRIPTION: New office costs
 ESTIMATE: \$65
 DATE: 03-Dec-93
 TIME: 01:15 PM
 JOB QUANTITY: 11 YR

ADULT SURVEY (1951) 70000
ADULT MONITORING 15454
ADULT MONITORING 40000
ADULT MONITORING 20000
ADULT SURVEY (1951)
ADULT MONITORING
ADULT MONITORING
ADULT MONITORING

ESTIMATING NOTES AND ACCUMULATIONS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DISBURSEMENT:	UNIT COST	HOURS
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PROJECT: Alias option alternate site A
 CLIENT: Alias Off
 JOB NO.: 36-1-10
 LOCATION: Kankakee
 ITEM DESCRIPTION: Well maintenance

ESTIMATOR NOTES AND ASSUMPTIONS:

- Assume wells only operate for 5 years
- Assume one operator and truck full time
- 7 inch extraction wells
- 7 1/2 inch extraction pumps
- Wells and pumps need changed every two years
- Assume wells & 50 feet deep

Time off line: 5 years

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
LOCAL OPERATOR	1.00 EA	EA	24.61									0.00	
PIPEUP	1.00 EA	EA					2.46	1.50	1.00				

ITEM	QUANTITY	UNIT	UNIT COST
Labor	10400	HRS	\$11.40
Wells & Pumps	175 EA/Year	EA	\$11.40
	3.5 EA/Year	EA	\$11.40

ITEM	QUANTITY	UNIT	UNIT COST
Crew	24.61	HRS	\$29.57
CREW TOTAL	10,400 HOURS	HRS	\$29,575
Materials			
Buy Pumps and Riser	16 EA	EA	\$27.30
Well Installation	275 LF	LF	\$25,375
Cost for Wells	5 YRS	YRS	\$5,000
ELECTRICAL	600,000 KWH	KWH	\$49,000
Total	253,714	EA	\$71,524.00

ESTIMATE	DATE	REG.	PER	STATE
1000000000	09 Dec-12	1100000000	100%	0000000000
		1000000000	100%	1000000000

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Year 1 Year 2
1.00 1.00

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PROJECT: Atlas option alternate site A
 CLIENT: ATLAS INC.
 JOB NO.: 88-6-10
 LOCATION: High Utah
 ITEM DESCRIPTION: Log Test Monitoring

ESTIMATOR NOTES AND ASSUMPTIONS:

- Assume quarterly samples of 5 wells for 10 years

Cost per sampling event approximately \$1,000
Cost location at \$100 per year.

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION:		HOURS	UNIT COST
													COST	HOURS		
SUPPLIES	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
MATERIAL																
Long term rental fee	30 year												120,000	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	4,800.00

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PROJECT: Atlas Option 1 RR Transportation ESTIMATOR: AGS
CLIENT: ATLAS CORP.
JOB NO.: 88-67-10
LOCATION: Moab Utah DATE: 9

FILE NAME: Atlas

SHT 1 OF SHT 4

ESTIMATE SUMMARY

ITEM DESCRIPTION	DETAIL SHEET	QUANTITY	UNIT	LABOR	INT EQUIP	BIT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIAL	SUBS	TRAVEL	UNIT COSTS	TOTAL COSTS	UNIT BID	TOTAL BID		
TOTAL FIXED OVERHEADS	SHT 6	1 LS		0	0	0	0	0	175,625		0	0	179,625.00	179,625	217,325.50	217,326		
VARIABLE JOBSITE OVERHEADS	SHT 7	624 WEEKS		3,651,026	0	0	0	0	0		0	93,500	5,901.00	3,744,624	12,020.02	7,500,092		
MOBILIZATION, DEMOBILIZATION, DECOCKIT	SHT 8	1 EA		56,376	0	0	0	50,000	0	0	0	456,974.00	456,974	582,628	582,628			
CONSTRUCT NEW RAIL AND EMBANKMENT	SHT 9	18,500 LF		51,318	0	114,772	17,625	12,338	0	0	0	350,600	0	456,974.00	582,628.19	582,628		
RAILROAD EQUIPMENT RENTAL	SHT 10	132 MO		0	0	10,910,625	0	0	0	0	0	0	82,656.25	10,910,625	100,339.58	13,244,838		
CONSTRUCT LOADING FACILITY	SHT 11	1 EA		0	0	0	0	0	0	0	0	0	2,050,000	2,050,000	2,384,885.10	2,384,885		
EXCAVATE, LOAD TAILINGS	SHT 12	7,000,000 CY		5,132,452	0	8,628,905	2,112,829	1,059,231	0	0	0	0	0	2,17	16,933,417	3.17	26,726,068	
OFF-LOAD AND DISPOSAL	SHT 13	7,000,000 CY		4,733,248	0	9,625,778	1,397,294	969,091	0	0	0	0	0	2.14	16,725,403	3.09	28,182,000	
UTILITY RELOCATION AND INSTALLATION	SHT 14	1 EA		0	0	0	0	0	1,000,000	0	0	140,000	0	1,140,000.00	1,140,000	1,376,889.60	1,376,818	
SITE RECLAMATION	SHT 15	340 AC		32,091	0	81,497	13,458	10,190	0	0	0	348,000	0	1,403.64	477,236	1,729.73	588,108	
EXCAVATE OVERBURDEN REPOSITORY	SHT 16	5,500,000 CY		1,542,246	0	4,338,700	665,000	456,250	0	0	0	0	0	1.27	7,002,195	1.77	9,735,000	
SOIL ROCK MATRIX	SHT 17	122,000 CY		170,047	0	383,787	57,256	40,217	0	1,168,749	0	0	0	14.82	1,828,056	18.63	2,287,764	
ROCK ARMOR	SHT 18	26,000 CY		57,622	0	85,171	12,488	10,666	0	860,730	0	0	0	39.49	1,026,663	48.05	1,249,300	
RIVRAPP PLACEMENT	SHT 19	25,000 CY		55,086	0	81,895	12,886	10,250	0	715,875	0	0	0	35.02	875,426	42.85	1,871,250	
MISC STRUCTURES	SHT 20	1 LS		0	0	0	0	0	0	0	0	100,000	0	100,000.00	100,000	116,335.86	116,336	
COMPACT CONDITION CLAY LINER	SHT 21	425,000 CY		219,906	0	487,518	63,074	63,659	0	0	0	0	0	1.52	814,151	2.74	1,164,500	
PLACE RADON CAP	SHT 22	210,000 CY		103,959	0	223,847	28,111	19,664	0	0	0	0	0	1.79	375,581	2.57	539,700	
PLACE FINAL CAP	SHT 23	419,000 CY		198,058	0	421,324	52,286	36,948	0	0	0	0	0	1.69	708,682	2.44	1,022,360	
FENCING	SHT 24	15,000 LF		0	0	0	0	0	0	0	0	0	0	12.00	180,000	13.96	289,400	
MONITORING CONTROL	SHT 25	1 EA		0	0	0	0	0	0	0	0	0	0	0	180,000	0	180,000	
ACCESS ROADS	SHT 26	20,000 LF		47,082	0	68,200	9,000	7,200	0	32,340	0	0	0	66,500	66,500	77,363.35	77,363	
HILL SITE SOILS EXCAVATION	SHT 27	300,000 CY		277,424	0	474,275	106,617	55,376	0	0	0	0	0	7.00	155,982	11.29	225,800	
OFFLOAD HILL SOILS	SHT 28	300,000 CY		224,757	0	370,304	53,754	37,281	0	0	0	0	0	3.06	917,694	4.46	1,338,000	
TAILING EMBANKMENT SOILS EXCAVATION	SHT 29	100,000 CY		92,474	0	158,893	35,539	19,792	0	0	0	0	0	2.29	686,096	3.38	1,014,000	
OFFLOAD EMBANKMENT SOILS	SHT 30	100,000 CY		74,919	0	123,435	17,918	12,427	0	0	0	0	0	3.06	385,898	4.46	446,000	
TRANSPORT HILL DEMO DEBRIS	SHT 31	35,000 CT		206,700	0	450,597	9,650	11,300	0	0	0	0	0	2.29	228,699	3.38	338,000	
DUST CONTROL/WATER TRANSPORT	SHT 32	11 YEAR		466,116	15,000	125,000	45,300	52,800	0	0	0	0	0	19.39	678,647	28.32	991,200	
PERMITTING AND ACCESS AGREEMENT	SHT 33	1 EA		98,863	0	0	0	0	0	0	0	0	0	0	206,155.64	2,267,712	277,204.28	3,049,246
DESIGN COSTS	SHT 34	1 EA		500,000	0	0	0	0	0	0	0	0	0	0	500,000	1,164,843.64	1,164,844	1,164,844
AIR MONITORING/HEALTH AND SAFETY	SHT 35	11 YR		1,152,637	321,000	0	0	0	0	0	0	0	0	0	44,600	138,021.55	1,518,237	2,775,869
PURCHASE LAND	SHT 36	640 AC		0	0	0	0	0	0	339,200	0	0	0	538.00	339,200	616.58	394,611	
ANALYTICAL COSTS	SHT 37	11 YR		0	0	0	0	0	0	0	0	0	0	0	26,286.73	289,154	30,588.09	336,390
Well Maintenance	SHT 38	5 yr		255,914	0	25,584	15,600	10,400	53,000	33,390	25,375	0	0	0	83,852.60	419,263	142,619.38	713,097
HRC Surveillance	SHT 39	10 yr		0	0	0	0	0	0	0	0	0	0	0	41,587.20	415,872	48,388.83	483,888
Long Term Monitoring	SHT 40	30 year		0	4	0	0	0	0	0	0	0	0	0	120,000	0	1,563.43	139,683
Environmental Impact Statement	SHT 41	1 ea		0	0	0	0	0	0	0	0	0	0	0	1,500,000	1,745,037.88	1,745,037	1,745,037

SUBTOTAL

19,398,605 336,000 37,171,391 4,724,584 2,928,874 1,232,025 3,158,284 8,881,297 142,360 37,885,428

PROJECT: Atlas Option 1 w/ Transportation DATA: 01 Dec-93
 CLIENT: ATLAS CORP.
 JOB NO.: 88-47-18
 LOCATION: Rockford
 WORKS W/IN OUR BASIS:

 1) PROJECT BASED ON WORKING 50 HOURS PER WEEK.
 2) RATES ARE BASED ON PERTAINING RATE RATES FOR 1993

STMT 3a OF Stmt 41

BESTS AND OTHER COST CALCULATIONS:

AMOUNTS APPLIED TO THE FIRST 40 HOURS OF WORK

CAT CLASS	GENERAL DESCRIPTION	TRAVEL BASIS	TRAVEL COST (\$15/HR) / (PER TRIP) (PER NIGHT) (PER WEEK)	LIVING COST (\$125/HR)	SUBSISTENCE COST (\$125/HR)	MONTHLY COSTS		
						TRAVEL	LIVING	SUBSISTENCE
<u>TRAVEL PERSONNEL:</u>								
51	TRAVEL BY AIR	2		\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
52	TRAVEL BY AUTO (DISTANT)	2		\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
53	TRAVEL BY AUTO (LOCAL)	1	\$50	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
54								
55								
<u>SUPERVISOR PERSONNEL:</u>								
61	TRAVEL BY AIR	3		\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
62	TRAVEL BY AUTO (DISTANT)	3		\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
63	TRAVEL BY AUTO (LOCAL)	1		\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
64								
65								

TRAVEL INSURANCE CALCULATIONS:

DESCRIPTION	PER DAY	SALARY	EMBARKS
PHL	\$ 0.00	\$ 0.00	STANDARD FEDERAL RATE APPLIED TO ALL RATES PAID
SOU	2.60%	2.60%	RATES VARY WITH STATE, APPLIES TO ALL SALARIES PAID
PICA	7.65%	7.65%	STANDARD FEDERAL RATE APPLIED TO ALL RATES PAID
W.	7.88%	7.88%	VARIES BY CRAFT SEE WAGE RATE TABLE, BASIC RATE ONLY
HEALTH (HOTEL*)	\$150	\$150	MONTHLY COST COVERAGE, FIRST 40 HOURS (INC \$150)
LTL	\$0.00	\$0.00	SALARY EMPLOYERS ONLY, BASIC RATE ONLY
SRAIGHT	10.93%	20.11%	
OVERTIME	11.05%	21.05%	

PROJECT: CLIENT: JOB NO.: LOCATION:							A/C 100 Option 1 W Transportation DRY:			88 Dec 21			USF PAY RATE			8.25%			SEPT 4 OF SEPT 41		
STYLAS CORP. 88-67-18 Reed Beach							TIME: 04:35 PM			HOURLY FUEL RATE IS BASED UPON PAYING \$1.00 PER GALLON.											
EQUIPMENT RENTAL RATES							ESTIMATOR: 662			MONTHLY RENTAL TAX			ADJUSTMENT FACTOR APPLIED			EQUIPMENT ADJUSTMENT FACTORS:					
BASED ON OPERATING	176 HOURS PER MONTH						T	C	S	MONTHLY RENTAL	MONTHLY RENTAL TAX	MONTHLY REPAIRS	PERIOD	ADJUSTMENT FACTOR	MONTHLY RENTAL	MONTHLY REPAIRS	DAILY	MONTHLY RENTAL	MONTHLY REPAIRS	DAILY	
DESCRIPTION	TYPE																				
***** INTERNAL EQUIPMENT *****																					
121							1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
122							1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
123							1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
124							1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
***** INTERNAL EQUIPMENT *****																					
125 CASE 540 LDR/BIN	LDR/BIN/CRANE						\$12,000	1.00	\$12.00	\$12.00	\$12.00	\$12.00	1	1	1	1	1	1	1		
126 CAT 215 D/E	BACTOR	{1.25 LCT}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
127 CAT 225 D/E W/THIN BACTOR	BACTOR	{1.62 LCT}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
128 CAT 225 D/E B	BACTOR	{2.15 LCT}					1.00	55.56	55.56	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
129 CAT 225 D/E B	BACTOR	{2.15 LCT}					1.00	55.56	55.56	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
130 CAT 245 D/E B	BACTOR	{3.75 LCT}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
131																					
132 CAT 916 PEL	PEL	{2.75 LCT}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
133 CAT 900 PEL	PEL	{1.0 LCT}					1.00	100.00	100.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
134 CAT 946 PEL	PEL	{4.50 LCT}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
135 CAT 963 PEL	PEL/TRUCK	{2.50 LCT}					1.00	95.00	95.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
136																					
137 CAT D5 D/E	D/DR						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
138 CAT D6 D/E	D/DR						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
139 CAT D6 SUR/LG	D/DR/LG						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
140 CAT D7 D/E	D/DR						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
141 CAT D8 D/E	D/DR						\$11,500	1.00	\$71.25	\$11,500	\$11,500	\$11,500	1	1	1	1	1	1	1		
142 CAT D9 D/E	D/DR						\$14,515	1.00	\$85.25	\$14,515	\$14,515	\$14,515	1	1	1	1	1	1	1		
143																					
144 CAT 14 GRN	GRADER						\$8,410	1.00	\$51.73	\$8,410	\$8,410	\$8,410	1	1	1	1	1	1	1		
145 CAT 16 GRN	GRADER						\$13,730	1.00	\$84.45	\$13,730	\$13,730	\$13,730	1	1	1	1	1	1	1		
146																					
147 CAT 563 W/E COMP	COMPACTOR						\$4,150	1.00	\$25.52	\$4,150	\$4,150	\$4,150	1	1	1	1	1	1	1		
148 BOMAG WLL 8000D COMPACTOR	COMPACTOR	{48 INCH}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
149																					
150																					
151 CAT 615 SCRB	SCRAPER/FLY	{16 LCT}					1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
152 CAT 631 SCRB	SCRAPER/FLY	{31 LCT}					1.00	104.99	104.99	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
153 CAT 617 SCRB/FLY	SCRAPER/FLY	{78 LCT}					1.00	56.11	56.11	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
154 CAT 617 SCRB/FLY	SCRAPER/FLY	{31 LCT}					1.00	116.60	116.60	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
155																					
156 WATER TRUCK	MISC. EQUIPMENT						\$4,169	1.00	\$25.22	\$4,169	\$4,169	\$4,169	1	1	1	1	1	1	1		
157 YANMAR DUMP TRUCK	MISC. EQUIPMENT						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
158 RED DUMP TRUCK	MISC. EQUIPMENT						\$8,360	1.00	\$54.13	\$8,360	\$8,360	\$8,360	1	1	1	1	1	1	1		
159 350 CWT COMPRESSOR	MISC. EQUIPMENT						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
160 65 TON CRANE	MISC. EQUIPMENT						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
161 BAKER TANK RENTAL	MISC. EQUIPMENT						1.00	50.00	50.00	\$0.00	\$0.00	\$0.00	1	1	1	1	1	1	1		
162 BAKER TRAILER	MISC. EQUIPMENT						6,300	1.00	\$18.75	6,300	\$18.75	\$18.75	1	1	1	1	1	1	1		
163 PICKUP	MISC. EQUIPMENT						600	1.00	\$2.46	600	\$2.46	\$2.46	1	1	1	1	1	1	1		

PROJECT: Alcan Option 1 NB Transportation Date: 08 Dec 91

C.L. #99:

JOB NO.: 88-47-18

LOCATION: Rock Hatch

SMT 5 OF SMT 41

Sales Tax Rates: 6.00%

**SUMMARY OF MATERIAL AND SUBCONTRACT PRICES
BASED ON CURRENT ESTIMATES**

DESCRIPTION	QUANTITY	UNIT	QUOTED UNIT PRICE	SALES TAX RATE	TOTAL PRICE
365 RIP RAP (PER FT)	317,500	FT	\$6.15	1.06	\$36,531 \$244,875.00
358 RIP RAP TRANSPORTATION	317,500	FT	\$1.00	1.06	\$31.10 \$119,259.00
351 ROCK ARMOR (PER FT)	131,100	FT	\$8.97	1.06	\$9.51 *****
352 ROCK ARMOR TRANSPORTATION	131,100	FT	\$1.00	1.06	\$13.18 \$105,878.00
353 CRUSHED STONES (PER 50MT)	4,400	FT	\$6.91	1.06	\$47.35 \$32,348.00
354 PURCHASE LAND	640	AC	\$500.00	1.06	\$30.00 \$19,200.00
355 FILTER MATERIAL (PER FT)	71,400	FT	\$1.48	1.06	\$26.87 \$100,513.00
356 Bay Pages and Ties	18 ea		\$1,000.00	1.06	\$1,000.00 \$33,390.00
351 FILTER MATERIAL TRANSPORTATION	71,400	FT	\$1.00	1.06	\$31.10 \$227,652.00

PERMANENT MATERIAL PRICES

365 INSTALL TRACK AND BALLAST	10,500	LT	\$15.00	1.06	\$15.00 *****
366 CONSTRUCTION OF CONCRETE LOAD HOPPER	1 EA		\$50,000.00	1.06	\$50,000.00 *****
367 INSTALL COVERED CONVEYOR	2,000	LT	\$550.00	1.06	\$550.00 *****
368 CONCRETE BAIL LOADING FACILITY	1 EA		\$300,000.00	1.06	\$300,000.00 *****
369 CONCRETE BAIL UNLOADING FACILITY	1 EA		\$100,000.00	1.06	\$100,000.00 *****
370 FENCE INSTALLATION	15,000	LT	\$112.00	1.06	\$112.00 \$152,320.00
371 REINFORCED AND WELDED	340	AC	\$500.00	1.06	\$500.00 \$195,000.00
372 INSTALL MONITOR WALLS	2,000	LT	\$25.00	1.06	\$25.00 \$50,000.00
373 INSTALL PILEDRIVERS	1,000	LT	\$112.00	1.06	\$112.00 \$112,000.00
374 INSTALL SUPPLEMENTARIES	15 EA		\$100.00	1.06	\$100.00 \$5,500.00
375 IRRIGATION	346	AC	\$100.00	1.06	\$100.00 \$34,600.00
376 ROPE 5/16 INCH WATERS LINE (500 FT)	111,936	FT	\$11.00	1.06	\$11.00 *****
377 PUMP STATIONS	3 EA		\$45,000.00	1.06	\$45,000.00 \$135,000.00
378 SURGE PUMPS	200,000	GAL	\$1.00	1.06	\$1.00 \$200,000.00
379 Well Installation	875	FT	\$25.00	1.06	\$25.00 \$21,875.00

SUBCONTRACT PRICES

365 INSTALL TRACK AND BALLAST	10,500	LT	\$15.00	1.06	\$15.00 *****
366 CONSTRUCTION OF CONCRETE LOAD HOPPER	1 EA		\$50,000.00	1.06	\$50,000.00 *****
367 INSTALL COVERED CONVEYOR	2,000	LT	\$550.00	1.06	\$550.00 *****
368 CONCRETE BAIL LOADING FACILITY	1 EA		\$300,000.00	1.06	\$300,000.00 *****
369 CONCRETE BAIL UNLOADING FACILITY	1 EA		\$100,000.00	1.06	\$100,000.00 *****
370 FENCE INSTALLATION	15,000	LT	\$112.00	1.06	\$112.00 \$152,320.00
371 REINFORCED AND WELDED	340	AC	\$500.00	1.06	\$500.00 \$195,000.00
372 INSTALL MONITOR WALLS	2,000	LT	\$25.00	1.06	\$25.00 \$50,000.00
373 INSTALL PILEDRIVERS	1,000	LT	\$112.00	1.06	\$112.00 \$112,000.00
374 INSTALL SUPPLEMENTARIES	15 EA		\$100.00	1.06	\$100.00 \$5,500.00
375 IRRIGATION	346	AC	\$100.00	1.06	\$100.00 \$34,600.00
376 ROPE 5/16 INCH WATERS LINE (500 FT)	111,936	FT	\$11.00	1.06	\$11.00 *****
377 PUMP STATIONS	3 EA		\$45,000.00	1.06	\$45,000.00 \$135,000.00
378 SURGE PUMPS	200,000	GAL	\$1.00	1.06	\$1.00 \$200,000.00
379 Well Installation	875	FT	\$25.00	1.06	\$25.00 \$21,875.00

PROJECT: Atlas Option 1 RR Transportation DATE: 08-Dec-93
 CLIENT: ATLAS CORP.
 JOB NO.: 88-67-10 TIME: 04:35 PM
 LOCATION: Moab Utah
 FIXED COST JOBSITE OVERHEADS ESTIMATOR: AGS

DESCRIPTION	REQUIRED Y OR N	REQUIRED QUANTITY	UNIT RATE	I LABOR	J INT EQUIP	K EXT EQUIP	L FUEL	M REPAIRS	N SUPPLIES	O SUBS	P TRAVEL	Q TOTALS
*****SITE UTILITY MONITORS*****												
185 ELECTRIC			1200									
186 WATER (NO METER VLT OR BEYOND PREVNT)			500									
187 SEWER												
188 GAS												
189 TELEPHONE												
190			350									
*****INITIAL HEALTH AND SAFETY COSTS*****												
192 PHYSICALS	Y	300	500									
193 H & S TRAINING-OPERATORS			1,422						150000			150000
194 H & S TRAINING-LABORERS			1,198									
195 TRAINING CLASS COSTS-EXTERNAL			700									
196 TRAINING CLASS COSTS-INTERNAL			450									
197 INITIAL H & S PURCHASES			350									
198												
199												
200												
*****INSURANCE AND TAXES*****												
202 CLIENT NAMED AS ADDITIONAL INSURED												
203 BUILDERS RISK INSURANCE (.0.60 % OF REV.)			8750									
204 POLLUTION LIABILITY INSURANCE												
205 SPECIAL TAXES												
206												
207												
*****SITE OFFICE EQUIPMENT*****												
209 OFFICE FURNITURE (PER UNIT)	Y	15	75									
210 FAX MACHINE	Y	1	400						1125			1125
211 COMPUTER	Y	1	3000						400			400
212 COMPUTER SOFTWARE	Y	1	4500						3000			3000
213 OPTICS BUILDING (COMPLETE)	Y	1	20000						4500			4500
214									20000			20000
*****MISCELLANEOUS COSTS*****												
216 PERMITS												
217 ROTATIONALS OR PROCESSES			100						6			6
218 TEMPORARY FENCING									6			6
219 MOVING EXPENSES (LONG TERM PROJECT)			1.5						6			6
220 PROJECT SIGN			150						6			6
221									6			6
222									6			6
223									6			6
224									6			6
225									6			6
TOTAL FIXED OVERHEADS									0	179,825		179,825

PROJECT: Atlas Option 1 RR Transportation DATA
CLIENT: ATLAS CORP.
JOB NO.: 88-67-10 TIME
LOCATION: Roan Etah

VARIABLE COST / ASSET OVERHEADS

ESTIMATED: 863 PROJECT DURATION: 624.8 WEEKS

SHT 7 OF 589 41

DESCRIPTION

REQUIRED Y OR N	REQUIRED QUANTITY	DURATION	UNIT RATES	I TOTAL LABOR	J WEEKLY LABOR	K WEEKLY INT EQUIP	L WEEKLY EXT EQUIP	M WEEKLY FUEL	N WEEKLY REPAIRS	O WEEKLY SUPPLIES	P WEEKLY SUS	Q WEEKLY TRAVEL	Q WEEKLY TOTALS
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2025 RELEASE UNDER E.O. 14176

246 PROJECT MANAGER	T	1	624	\$1,659	1,635,216	1,659		1,659
247 SUPERVISOR			624	\$1,413	0	0		0
248 PROJ. SUPERVISOR			624	\$1,327	0	0		0
249 PROJ. ENGINEER	T	2	624	\$1,188	1,482,624	2,376		2,476
250 HHS OFFICER	T	1	624	\$1,119	698,256	1,119	58	1,169
251 CHEMIST			624	\$1,119	0	0		0
252			624					0
253			624					0

PRINTED IN U.S.A. FULL TIME BOB STENHOUSE

256 B&S TECHNICIAN \$1,292
257 AST. PROJ. ENGR. \$1,292
258 ENGINEER TSCH. \$1,177
259
260

• 66 • MODERN STYLING STARS • 67

263 FIELD FORKAR		\$24	\$1,269	8	8			
264 MECHANIC		\$24	\$1,185	8	8			
265 MECHANIC HELPER		\$24	\$925	8	8			
266 OFFICE MANAGER	Y	\$24	\$697	434,928	657			
267 CLERK		\$24	\$632	8	8			
268		\$24						
269		\$24						

本办法由市监察委员会、市司法局和市财政局负责解释。本办法自发布之日起施行。

272 PRESSURE WASHER (INTERNAL RATES) 624 \$36
273 SAFETY EQUIPMENT (AIR SAMPLING/OVA) 624 \$138
274
275

*****ESTATE EQUIPMENT RENTAL*****

278 OFFICE TRAILER	624	\$100				
279 TOOL TRAILER	624	\$75				
280 CHANGE TRAILER	624	\$100				
281 DECONTAMINATION TRAILER	624	\$225				
282 LAB TRAILER	624	\$100				
283 FUEL TRUCK	624	\$221				
284 G-FRASH TRUCK	624					
285 MISC. EQUIP.	624	\$75				
286 SITE SCALERS	624	\$500				
287 PROJECT VEHICLES	624	\$150			0	0
288 STREET SWEEPER	624	\$390				

289			624								
290			624								

*****SUPPLIES*****

293 OFFICE SUPPLIES	T	1	624	\$38							
294 SURVEY SUPPLIES	T	1	624	\$58							
295 SAFETY SUPPLIES			624	\$38							
296 COPY MACHINE	T	1	624	\$48							
297 PHONE SERVICE	T	1	624	\$58							
298 UTILITY SERVICES			624	\$48							
299 POTABLE WATER			624	\$48							
300 SANITARY FACILITIES			624	\$38							
301 SMALL TOOLS			624	\$158							
302 JOBSITE PHOTOS	T	1	624	\$5							
303 ON-SITE QC TESTING EQUIP.			624	\$200							
304 ON SITE LAB SUPPLIES			624								
305 DECONTAMINATION SUPPLIES	T	1	624	15							
306			624								
307			624								
308			624								
309			624								
310			624								

*****SUBCONTRACTS*****

313 SURVEY CREW (BASED ON \$140/HR FOR 40 HRS)		624	\$5,600								
314 SECURITY (FULL TIME AT \$12/HOUR)		624	\$1,406								
315		624									
316		624									
317		624									

*****TRAVEL COSTS*****

320 TRAVEL, EXECUTIVE		624	\$258								
321 KEY OPERATOR ADJUSTMENT		624	\$6								
322 KEY LABORER ADJUSTMENT		624	\$8								
323		624									

VARIABLE JOBSITE OVERHEADS (WEEKLY)			5,851	0	0	0	0	0	150	6,001	
VARIABLE JOBSITE OVERHEADS (TOTAL)	624 WEEKS		3,651,024	0	0	0	0	0	93,600	3,744,624	

PROJECT: Atlas Option I RR Transportation
 CLIENT: ATLAS CORP.
 JOB #: 88-67-18
 LOCATION: Noah Beach
 ITEM DESCRIPTION: MOBILIZATION, DEMOBILIZATION, DECONTAMINATION

ESTIMATOR: AGS DATE: 08-Dec-93 TIME: 08:35 PM
 JOB QUANTITY: 1 EA

ESTIMATION NOTES AND ASSUMPTIONS:

ITEM DESCRIPTION	QTY	MELES	SEA	TOTAL	DECONTAMINATION, ASSUMING TWO LABORERS AT 2 HOURS PER BACH							
LOCAL LOADS	246	28	58	18300								
REGIONAL LOADS	158	175	680	94400								
SPECIAL LOADS	58	1200	1500	75000								
MOBILIZATION	486			175300								
DEMOP - RAIL CARS	356			100300								
TOTAL MOB/DEMOP	762			275600								
					DURATION X							1,524 HOURS
DESCRIPTION	QUANTITY	UNIT	LABOR	BRY	EST							BRY COST
				EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SURS	TRAVEL	
LOCAL LABORER	2.00 EA		36.99									8.00

CREW		36.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	BHOULY CRBB COSTS	36.99
SUBTOTAL	1,524 HOURS	56,374	0	0	0	0	0	0	0	0	0	56,374	56,374.00
MATERIALS:													
-MOBILIZATION/DEMOP	762 EA								275,600			275,600	
-PERSONNEL MOBILISATION	15 EA								75,000			75,000	
-DECONTAMINATION SUPPLIES	1 EA								50,000			50,000	
									0			0	
									0			0	
									0			0	
									0			0	
									0			0	
									0			0	
TOTALS		56,374	0	0	0	50,000	0	0	350,600	0	56,374	456,974	456,974.00

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: Moab Utah
 ITEM DESCRIPTION: CONSTRUCT NEW RAIL AND EMBANKMENT

ESTIMATOR:	AGS	SET 9	02	SET 41
DATE:	88-Dec-93	TIME:	04:35 PM	
		JOB QUANTITY:	18,500 LF	

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME CONSTRUCTION OF 3.5 MILES OF RAILWAY = 18400 LF
- ASSUME CROSS SECTION OF EMBANKMENT AT 51 SF PER FOOT
- QUANTITY = 35,000 CY
- ASSUME 50,000 CY IN GRADE LEVELING
- TOTAL ASSUMED QUANTITY = 85000 CY
- USE SCRAPER FLEET OF 3 AT AVERAGE HAUL OF 1200 FT
- PRODUCTION = 650 CY/HR = 65000 CY / 650 CY/HR = 100.769230 HOURS
- ADD MOBILIZATION SETUP AND TEARDOWN OF 1 HOUR
- 50 HOURS
- RAIL AND BALLAST PLACEMENT TO BE DONE BY RIO GRANDE

DESCRIPTION	QUANTITY	UNIT	LABOR	100.769230 HOURS						DURATION *	181 HOURS			
				TRY	EXIT	EQUP	EQUP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	UNIT COST
CAT 621 SCPR	3.00 EA		73.82			314.97		64.25	28.58					0.00
CAT 99 DZB	1.00 EA		28.61			89.28		16.00	10.00					0.00
CAT DB DZB	1.00 EA		28.61			71.29		11.00	7.58					0.00
CAT 14 GDR	1.00 EA		28.61			51.73		6.00	6.58					0.00
CAT 825 COMP	1.00 EA		28.61			66.43		10.00	6.00					0.00
WATER WAGON	1.00 EA		28.61			38.75		8.75	8.75					0.00
PICKUP	1.00 EA		28.61			2.46		1.58	1.00					0.00
FIELD FOREMAN	1 EA		25.387318											0
LOCAL LABORER	2 EA		36.990918											0

CREW		283.84	0.00	634.91	97.50	68.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL	181 HOURS	51,310	0	114,772	17,625	12,338	0	0	0	0	196,045	0	18.68

MATERIALS:

INSTALL TRACK AND BALLAST 18,500 LF

832,500

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

TOTALS		51,310	0	114,772	17,625	12,338	0	0	0	832,500	0	1,028,545	55.68
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PROJECT:
Atlas Option 1 BB Transportation

CLIENT:
ATLAS CORP.
JOB NO:
BB-67-16
LOCATION:
Mohr Ranch
ITEM DESCRIPTION:
CONSTRUCT LOADING FACILITY

EST.

DATE:

DESCRIPTION:

08 Dec-93

DESCRIPTION:

TIME:

DESCRIPTION:

04:35:26

DESCRIPTION:

JOB QUANTITY:

DESCRIPTION:

1 EA

NOTES AND ASSUMPTIONS:

ASSUME CONSTRUCTION OF 2500 LF CONCRETE SYSTEM TO SILEO TRACTS.

ASSUME CONSTRUCTING A FEED HOPPER STRUCTURE FOR LOADING BY DOZER.

ASSUME USING A SILO LOADING FACILITY AT THE SILEO WITH 1500 TON CAPACITY

DESCRIPTION	QUANTITY	UNIT	LABOR	BTU	GROUT	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHHS	TRAVEL	TOTAL	DURATION:		
													HOURS	MINUT	HR COST
SUBTOTAL	0 HOURS	0	0	0	0	0	0	0							

COST	HOURS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	HOURLY		
														COSTS	CRW COSTS	0.00
MATERIALS																
CONSTRUCTION OF CONCRETE LOA	1 EA															
INSTALL COVERED CONCRETE	2,000 LF															
CONSTRUCT WALL LOADING FACIL	1 EA															
CONSTRUCT RAIL UNLOADING FAC	1 EA															
TOTALS	0	0														
														2,859.000	0	
														2,859.000	0	

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: Rock Utah
 ITEM DESCRIPTION: EXCAVATE, LOAD TAILINGS

ESTIMATOR: ACS
 SMT 12 OF SMT 41
 DATE: 08-Dec-93 TIME: 04:35 PM
 JOB QUANTITY: *****CY

ESTIMATOR NOTES AND ASSUMPTIONS:

-ASSUME PRODUCTION BASED ON LOADING FACILITY AND TRANSPORTATION CAPACITY
 -ASSUME 25 CONVOYS AT 90 TONS PER EACH & TWO TRIPS PER DAY
 -ASSUME AVERAGE CONVERSION OF TAILING AT 1.4 TONS PER CY
 -PRODUCTION = 4500 TONS PER DAY = 3461 CY PER DAY

FUEL FOR LOCOMOTIVE & 5 GPM IDLE AND 50 GPM UNDER LOAD & AVG 7,000,000
 20 GAL PER HOUR PER EACH
 -FUEL COSTS FOR DIESEL AT 8.8

DURATION = 7800000 CY / 3461 CY/DAY = 2253.68398 DAYS OR = 6.17847645 YEARS AT 7 DAYS PER WEEK ALL YEAR ROUND
 3,66881582 YEARS AT 5 DAYS PER WEEK ALL YEAR ROUND
 -ASSUME USING 1-637, 2-88, 1-WATER TRUCK AND 1 GRADER FOR EXCAVATION
 -ASSUME USING 3 CONVEYOR AND LOADING OPERATORS AND 3-LABORERS

3640 HR/yr
 2600 HR/yr

DURATION = 22,537 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	EXT	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT 637 SCPR?*	1.00 EA		24.61		136.68	23.75	17.58						0.00	
CAT 14 GOB	1.00 EA				51.73	6.00	6.58						0.00	
CAT DB HBR	2.00 EA		49.21		142.58	22.00	15.00						0.00	
PICKUP	2.00 EA				4.92	3.00	2.00						0.00	
CAT 966 ZEL	1.00 EA		24.61		47.05	7.00	6.00						0.00	
LOCAL OPERATOR	3.00 EA		73.82										0.00	
LOCAL LABORER	3.00 EA		55.49										0.00	

CREW	227.74	8.00	382.88	61.75	47.00	8.00	8.00	8.00	8.00	CREW COSTS	HOURLY	719.37
SUBTOTAL	22,537 HOURS	5,132,452	8 8,628,905	1,391,650	1,059,231	0	0	0	0	8 16,212,238	2.00	

MATERIALS:

-FUEL	901,678 GAL	721,179	721,179	0	0	0	0	0	0	0	0	0	0
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TOTALS	5,132,452	8 8,628,905	2,112,629	1,059,231	0	0	0	0	0	8 16,933,617	2.17
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PROJECT:
CLIENT:
ATLAS CORP.
JOB NO:
88-67-19
LOCATION:
Nobah Brak

ITEM DESCRIPTION:
OFF LOAD AND DISPOSE.

ESTIMATE NOTES AND ASSUMPTIONS:

-ASSUME OFF-LONGIC OVER TOP GONDOLAS WITH MOVED BACKING

-ASSUME MATERIALS LOADED OUT OF STOCKPILE BY SCRAPER WITH DODGER ASSISTANCE

-ASSUME USING 2-631, 1-08, GRABBER, HOPPER TRUCK AND COMPACTOR, BACKHOE OPERATOR AND FOREMAN

ITEM DESCRIPTION:
ATLAS Option 1 80' Transportation

ITEM DESCRIPTION:
CAT DR DR

ITEM DESCRIPTION:
CAT 631 SCR

ITEM DESCRIPTION:
CAT 835 COMP

ITEM DESCRIPTION:
HOPPER TRUCK

ITEM DESCRIPTION:
CAT 14 GOR

ITEM DESCRIPTION:
FIELD FORKTRUCK

ITEM DESCRIPTION:
PICKUP

ITEM DESCRIPTION:
LOCAL OPERATOR

ITEM DESCRIPTION:
LOCAL LABORER

DURATION =

22,531 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	KIT EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	UNIT COST
CAT DR DR	1.00 EA	26.61	71.29	11.86	7.50							0.00	
CAT 631 SCR	2.00 EA	49.21	289.98	29.98	13.80							0.00	
CAT 835 COMP	1.00 EA	24.51	66.43	10.00	6.00							0.00	
HOPPER TRUCK	1.00 EA	33	25.22	4.00	3.00								
CAT 14 GOR	1.00 EA	51	51.73	5.89	6.50							0.00	
FIELD FORKTRUCK	1.00 EA	25.39										0.00	
PICKUP	1.00 EA	24.51	1.46	1.56	1.00							0.00	
LOCAL OPERATOR	1 EA	24.687186										0	
LOCAL LABORER	2 EA	36.798918										0	

ITEM	QUANTITY	UNIT	LABOR	KIT EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	UNIT COST
CROW	216.82	0.00	477.11	62.80	43.00	0.00	0.00	0.00	0.00			742.13	
SHUTTLE	22,531 HOURS	0	9,625,778	1,397,294	569,001	0	0	0	0	0		0	
MATERIALS												2.14	

MATERIALS:

ITEM	QUANTITY	UNIT	LABOR	KIT EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	UNIT COST
TOTALS	4,733,246	0	9,625,778	1,397,294	569,001	0	0	0	0	0		0	

ITEM	QUANTITY	UNIT	LABOR	KIT EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHIPS	TRAVEL	TOTAL	UNIT COST
TOTALS	4,733,246	0	9,625,778	1,397,294	569,001	0	0	0	0	0		0	

2.14

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: Moab Utah
 ITEM DESCRIPTION: UTILITY RELOCATION AND INSTALLATION

ESTIMATOR: AGS DATE: 08-Dec-93 TIME: 04:35 PM
 JOB QUANTITY: 1 EA

ESTIMATOR NOTES AND ASSUMPTIONS:

-RELOCATE POWER POLES 25000
 -SERVICE TO LOADING HOPPER 25000
 -SERVICE TO LOADING FACILITY 45000
 -SERVICE TO OFF LOADING FACILITY 35000

145000

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	DURATION *	HOURS	
														UNIT COST

CREW	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	BORING	8.00	
SUBTOTAL	8 HOURS	0	0	0	0	0	0	0	0	0	0	CREW COSTS	0.00	
MATERIALS:														
ELECTRICAL	*****KWH											1,000.000		
-UTILITY SERVICES	1 EA											100.000		
												0		
												0		
												0		
												0		
												0		
												0		
TOTALS		0	0	0	0	0	0	0	1,000.000	0	100.000	0	1,100.000	1,100.000

PROJECT: Atlas Option 1 HR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-47-18
 LOCATION: Moab Utah
 ITEM DESCRIPTION: SITE RECLAMATION

ESTIMATOR: AGS
 SHT 15 OF SHT 41
 DATE: 08-Dec-93 TIME: 08:35 PM
 JOB QUANTITY: 340 AC

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME RECLAMATION OF 130 ACRES
- ASSUME PLACEMENT OF SILTY SOILS FOR GROUND COVER AT 4 INCHES THICK
- QUANTITY IS ASSUMED TO BE 69212 CY
- USE 2 SCRAPERS AT COMBINED PRODUCTION OF 340 CY/HR AT 2000 FT Haul
- DURATION = 192.25555 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	DURATION *		UNIT COST
												DURATION *		
CAT 637 SCRPT	2.00 EA		49.21		273.28	47.50	35.00					0.00		
CAT DR DSR	1.00 EA		24.61		71.29	11.00	7.50					0.00		
CAT 14 GDR	1.00 EA		24.61		51.73	6.00	6.50					0.00		
WATER TRUCK	1.00 EA		24.61		25.22	4.00	3.00					0.00		
LOCAL LABORER	1.00 EA		18.50									0.00		
FIELD FOREMAN	1.00 EA		25.39									0.00		
PICKUP	1.00 EA				2.46	1.50	1.00							

CREW	166.92	\$ 0.00	423.98	70.00	53.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	CREW COSTS	713.82
SUBTOTAL	192 HOURS	\$ 32,891	\$ 0	\$ 81,497	\$ 13,458	\$ 10,190	\$ 0	\$ 0	\$ 0	137,236	\$ 683.64

MATERIALS:

LOGS&BD ABD MULCH	340 AC			284,000	284,000
IRRIGATION	340 AC			136,000	136,000

TOTALS	32,891	\$ 0	\$ 81,497	\$ 13,458	\$ 10,190	\$ 0	\$ 0	\$ 340,000	\$ 0	\$ 137,236	\$ 1,483.64
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PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 95-67-18
 LOCATION: Moab Utah
 ITEM DESCRIPTION: EXCAVATE OVERBURDEN REPOSITORY

ESTIMATOR: AM
 DATE: 08 Dec-93
 TIME: 04:35 PM
 JOB QUANTITY: *****CY

ESTIMATOR NOTES AND ASSUMPTIONS:

-ASSUMES USING 631 FLEET AT 2000 FOOT BAUL
 -ASSUME PRODUCTION AT 1100 CY/HR
 DURATION = 5500000 / 1100 CY/HR = 5000 HOURS

5,500.00

DURATION = 5,000 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	IRY	EXT	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT 631 SCPR	5.00 EA		123.04		524.95	73.75	47.50						0.00	
CAT D9 RER	2.00 EA		49.23		178.56	32.00	20.00						0.00	
CAT D8 DSR	1.00 EA		24.61		71.29	11.00	7.50						0.00	
CAT 14 GDR	1.00 EA		24.61		51.73	6.00	6.50						0.00	
WATER WAGON	1.00 EA		24.61		38.75	8.75	8.75						0.00	
PICKUP	1.00 EA				2.46	1.50	1.00						0.00	
FIELD FOREMAN	1.00 EA		25.39										0.00	
LOCAL LABORER	2 EA		36.594918										0	

CREW		300.05	0.00	867.74	133.00	31.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	HOURLY CREW COSTS
SUBTOTAL	5,000 HOURS	1,542,246	0	4,338,700	667,000	856,250	0	0	0	0	0	0	0	1,000.44

MATERIALS:

0
0
0
0
0
0
0
0
0
0

TOTALS		1,542,246	0	4,338,700	667,000	856,250	0	0	0	0	0	0	0	7,002,196	1.27
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PROJECT: Atlat Option I RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-6718
 LOCATION: Heber Utah
 ITEM DESCRIPTION: SOIL ROCK MATRIX

ESTIMATOR:	AGS	SHT 11	OF	SHT 41
DATE:	88-Dec-93	TIME:	06:35 PM	
JOB QUANTITY:	122,000 CY			

ESTIMATOR NOTES AND ASSUMPTIONS:

- QUANTITY IS ASSUMED TO BE 61400 CY OF ROCK AND 61400 CY OF SOIL
- ASSUMING DELIVERY OF ROCK @ 1000 CY/DAY
- DURATION = 614 HOURS OR 614 HOURS
- INCLUDE CREW TO PLACE SOILS

DESCRIPTION	QUANTITY	UNIT	LABOR	TBT	BTY	EQUIP	EQUP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DURATION = 614 HOURS		
															UNIT COST		
CAT 631 SCPR	3.00 EA		73.82		314.97	46.25	28.50									8.00	
CAT 14 GDR	1.00 EA		24.61		51.73	6.00	6.50									8.00	
CAT 563 VIB CORP	1.00 EA		24.61		25.52	5.00	6.00									8.00	
CAT 99 DSR	1.00 EA		28.61		89.28	16.00	10.00									8.00	
LOCAL LABORER	3.00 EA		55.49													8.00	
CAT 966 PEL	1.00 EA		28.61		47.05	7.00	6.00									8.00	
CAT 98 DSR	1 EA	24.60704			71.29	11	7.5									8	
WATER TRUCK	1 EA	24.60704			25.22	4	3									8	
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CREW			276.95	8.00	625.06	93.25	65.50	8.00	8.00	8.00	8.00	8.00	8.00	8.00	HOURLY CREW COSTS	1,060.76	
SUBTOTAL	614.00000	EA	170,647	0	383,787	57,256	48,217	0	0	0	0	0	0	0	651,387	5.38	
<hr/>																	
MATERIALS:																	
ROCK ARMOR (FOB PIT)	92,100 TB								875,871		875,871						
ROCK ARMOR TRANSPORTATION	92,100 TB								292,878		292,878						
																8	
																8	
																8	
																8	
																8	
																8	
																8	
TOTALS	170,647	0	383,787	57,256	48,217	0	1,168,789	0	0	0	1,828,856					14.82	

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: Hobbs Utah
 ITEM DESCRIPTION: ROCK ARMOR

ESTIMATOR:	AGS	SMT 18	OF	SMT 41
DATE:	88-Dec-93	TIME:	08:35 PM	
JOB QUANTITY:	26,000 CY			

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME CONVERSION AT 1.5 TONS PER CY
- PLACE ROCK BY DOZER, LOADER AND TRUCK LOADER
- ASSUME DELIVERY OF STONE AT 1000 CY/DAY * 1500 TON/DAY
- TOTAL LOADS AT 23 TONS PER LOAD * 65 TRUCKS PER DAY

-ASSUME SAME QUANTITY OF FILTER MATERIAL

DESCRIPTION	QUANTITY	UNIT	LABOR	INT'L	EXP' EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	DURATION	520 HOURS	
														UNIT COST	
CAT 966 PEL	1.00 EA	28.61			47.85	7.00	6.12							8.00	
CAT D8 DLR	1.00 EA	28.61			71.29	11.00	7.50							8.00	
CAT 963 PEL/T	1.00 EA	28.61			45.45	6.00	7.00							8.00	
LOCAL LABORER	2.00 EA	36.99												8.00	

CREW	110.81	0.00	163.75	26.00	28.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL	520 HOURS	57,622	0	85,171	12,480	10,660	0	0	0	0	0	165,933	0	6.38	

MATERIALS:

ROCK ARMOR (FOR PIT)	39,000 TON			370,898	370,898
ROCK ARMOR TRANSPORTATION	39,000 TON			124,828	124,828
FILTER MATERIAL (FOR PIT)	36,400 TON			258,868	258,868
FILTER MATERIAL TRANSPORTATION	36,400 TON			115,752	115,752

TOTALS	57,622	0	85,171	12,480	10,660	0	858,738	0	0	1,026,663	39.89
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PROJECT: Atlan Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 ZOB NO: 08-67-18
 LOCATION: Wash Utah
 ITEM DESCRIPTION: RIPRAP PLACEMENT

ESTIMATOR:	AGS	SET 15	OF	SET 41
DATE:	08-Dec-93	TIME:	04:35 PM	
JOB QUANTITY:	25,000 CY			

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME CONVERSION BY 1.5 TONS PER CY
- PLACE ROCK BY DOZER, LOADER AND TRUCK LOADER
- ASSUME DELIVER OF STONE AT 1000 CY/DAY • 1500 TON/DAY
- TOTAL LOADS AT 25 TON PER LOAD • 65 TRUCKS PER DAY
- ASSUME PLACING RIPRAP IS DRAINAGE DITCHES AND CHANNELS
- ASSUME SAME THICKNESS OF FILTER LAYER

DURATION = 500 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	KEY	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT 966 PEL	1.00 EA		26.61		47.85	7.00	6.00						0.00	
CAT 98 DCR	1.00 EA		26.61		71.29	11.00	7.50						0.00	
CAT 963 PEL/T	1.00 EA		26.61		45.45	6.00	7.00						0.00	
LOCAL LABORER	2.00 EA		36.99										0.00	

CREW	110.81	0.00	163.79	24.00	28.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	319.16
SUBTOTAL	500 HOURS	55,406	0	81,895	12,000	10,258	0	0	0	0	0	159,551	6.38

MATERIALS:

RIP RAP (ZOB PIT)	37,500 TON	264,875	268,875
RIP RAP TRANSPORTATION	37,500 TON	119,250	119,250
FILTER MATERIAL (ZOB PIT)	35,000 TON	240,450	240,450
FILTER MATERIAL TRANSPORT	35,000 TON	111,300	111,300

TOTALS	55,406	0	81,895	12,000	10,258	0	715,875	0	0	875,026	35.82
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PROJECT: Atlas Option I RR Transportation
CLIENT: ATLAS CORP.
JOB NO: 88-67-18
LOCATION: Moab Utah
ITEM DESCRIPTION: MISC STRUCTURES

ESTIMATOR: AGS
DATE: 08-Dec-93
TIME: 04:35 PM
JOB QUANTITY: 1 LS

ESTIMATOR NOTES AND ASSUMPTIONS:

- CERTAIN DRAINAGE STRUCTURES WILL BE REQUIRED, FROM BOI CULVERT TO HEADWALLS.
- ASSUME AN ALLOWANCE TO 100,000 FOR ENTIRE PROJECT.

DESCRIPTION	QUANTITY	UNIT	LABOR	DURATION *								HOURS	UNIT COST
				INT EQUIP	EXT EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL		
CRBN				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL	0 HOURS			0	0	0	0	0	0	0	0	0	0.00
MATERIALS:													
-MISC STRUCTURES	1 LS								100,000		100,000		
											0		
											0		
											0		
											0		
											0		
											0		
TOTALS				0	0	0	0	0	0	0	0	100,000	100,000.00

PROJECT:	Atlas Option I RR Transportation	ESTIMATOR:	AGS	SBT 21	OF	SBT 41
CLIENT:	ATLAS CORP.					
JOB NO:	88-67-18	DAYS:	88-Dec-93	TIME:	04:35 PM	
LOCATION:	NoeB Utah					
ITEM DESCRIPTION:	COMPACT CONDITION CLAY LIBER			JOB QUANTITY:	425,000 CT	

ESTIMATOR BIAS AND ASSUMPTIONS

- ASSUME OVERBURDENING 1 FOOT OF LIMER AND RECOMPACTING AND CONDITIONING.
 - USE SCRAPERS TO MOVE THE MATERIALS
 - INCLUDE AN ADDITIONAL D-9 FOR RIPPING OF ROCK
 - INCLUDE TWO COMPACTOR TO KEEP UP WITH COMPACTION EFFORTS
 - PRODUCTION AT 1100 CY/HR
 - DURATION = 425000 CY / 1100 CY/HR = 386.363636
 - ASSUME WATER AVAILABLE ON SITE FROM STORAGE SURGE TANK FOR DUST CONTROL AND COMPACTION NEEDS
 - ASSUME HAUL DISTANCE OF 1200 FT

DURATION =

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	EXT							UNIT COST
				GHRP	GHRP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SURS	TRAVEL	TOTAL
CAT D9 DSR	2.00	EA	49.21		178.56	32.00	28.00					8.00
CAT D8 DSR	1.00	EA	24.61		71.29	11.00	7.50					8.00
CAT 14 GDR	1.00	EA	24.61		51.73	6.00	6.50					8.00
CAT B25 COMP	2.00	EA	49.21		132.86	20.00	12.00					8.00
CAT 631 SCPR	5.00	EA	123.00		524.95	73.75	47.50					8.00
WATER WAGON	2.00	EA	49.21		77.56	17.50	17.50					8.00
LOCAL LABORER	3.00	EA	55.49									8.00
FIELD FORKAR	2	EA	58.1774628									8
PICKUP	2	EA			6.92	3	2					

CREW		426.15	0.00	1041.81	163.25	113.00	0.00	0.00	0.00	0.00	BONUITY CREW COSTS	1,744.21
SUBTOTAL	386 ROOMS	164,658	0	482,518	63,878	43,659	0	0	0	0	673.981	1,551,876.15

附录7 财务比率

-PRENET COMPACTOR 425,000 55,250.98 85,000.98 168,750

TOTALS 219,900 0 487,518 63,874 63,659 0 0 0 0 816,151 3,92

PROJECT: Atlas Optics I RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: Moab Utah
 ITEM DESCRIPTION: PLACE RADON CAP

ESTIMATOR:	AGS	SRP 22	OF	SRP 41
DATE:	88-Dec-93	TIME:	06:35 PM	
JOB /QANTITY:	210,000 CT			

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME PLACEMENT OF TO RADON CAP AT 1 FOOT OF MATERIAL
- USE SCRAPERS TO MOVE THE MATERIALS
- INCLUDE AN ADDITIONAL D-9 FOR RIPPING OF ROCK

-PRODUCTION AT 1100 CT/HR

DURATION = 210000 CT / 1100 CT/HR = 190.909090

-ASSUME WATER AVAILABLE ON SITE FOR DUST CONTROL AND COMPACTION NEEDS

-ASSUME HAUL DISTANCE OF 1200 FT

DURATION = 191 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	EQUIP	RATE	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
CAT D9 DSR	1.00	HR	24.61			89.28	16.00	10.00					0.00	
CAT D8 DSR	1.00	HR	24.61			71.29	11.00	7.50					0.00	
CAT 14 GDR	1.00	HR	24.61			51.73	6.00	6.00					0.00	
CAT 825 COMP	2.00	HR	49.21			132.06	26.00	12.00					0.00	
CAT 631 SCPR	5.00	HR	123.04			524.95	73.75	47.50					0.00	
WATER WAGON	2.00	HR	49.21			77.50	17.50	17.50					0.00	
LOCAL LABORER	3.00	HR	55.49										0.00	
FIELD FORMER	2 HR		58.774628										0	
PICKUP	2 HR					4.92	3	2					0	

CREW	481.55	0.00	952.53	147.25	183.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	HOURLY CARR COSTS	1,684.33
SUBTOTAL	191 HOURS	76,659	0	181,847	28,111	19,666	0	0	0	0	0	0	386,281	1.46

MATERIALS:

-PREVENT COMPACTION 210,000 27,300.00 42,000.00 0 69,300

TOTALS 183,959 0 223,847 28,111 19,666 0 0 0 0 0 0 0 375,581 1.79

PROJECT:	Atlas Option 1 RR Transportation	ESTIMATOR:	AGS	SHT 23	OF	SHT 41
CLIENT:	ATLAS CORP					
JOB NO:	88-67-19	DATE:	88-Dec-93	TIME:	04:35 PM	
LOCATION:	Noah Utah					
ITEM DESCRIPTION:	PLACE FINAL CAP				JOB QUANTITY:	415,000 CT

ESTIMATOR BOOTS AND ASSUMPTIONS.

- ASSUME PLACEMENT OF FINAL COVER AT 2 FOOT THICK
- USE SCRAPERS TO MOVE THE MATERIALS
- INCLUDE AS ADDITIONAL 0-3 FOR RIPPLING OF ROCK

-PRODUCTION AT 1100 CT/HR

DURATI 08 - 419999 CT/ 1199 CT/BK - 388 99999

-ASSUME WATER AVAILABLE ON SITE FOR DUST CONTROL AND COMPACTION NEEDS

-ASSUMED TOTAL DISTANCE OF 1200 FT

DESCRIPTION	QUANTITY	UNIT	LABOR	IRT	EXT	DURATION =							UNIT COST	
						EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SRBS	TRAVEL	
CAT D9 DZR	1.00	EA	24.61			89.28	16.00	10.00						0.00
CAT D8 DZR	1.00	EA	24.61			71.29	11.00	7.58						0.00
CAT 14 GDR	1.00	EA	24.61			51.73	6.00	6.58						0.00
CAT 825 COMP	1.00	EA	24.61			66.43	10.00	6.00						0.00
CAT 631 SCPR	5.00	EA	123.04			328.95	73.75	47.58						0.00
WATER WAGON	2.00	EA	49.21			77.58	17.58	17.58						0.00
LOCAL LABORER	3.00	EA	55.49											0.00
FIELD FORMAN	2	EA	50.774628											0
PTCAMP	2	EA				4.92	3	2						

CREW		376.94	\$.00	886.18	137.25	\$7.00	\$.00	\$.00	\$.00	BIGGY! CREW COSTS	1,457.25
SUBTOTAL	381 HOURS	143,508	0	337,524	52,289	36,948	0	0	0	570,332	1,36

TESTIMONIALS.

-FRENET COMPACTOR 415,800 56,470.96 \$1,889.86 129,224

TOTALS 198,058 8 421,324 52,288 36,948 8 8 8 8 782,687 1,520

PROT:	ATLAS Option 1	Transportation
CLINIC:	ATLAS CDR	
JOB #:	007-47-3	
LOCATION:	Bob's Back	
		Office

ESTIMATED RATES AND SUGGESTIONS FOR ASSESSMENT OF PROBLEMS OF HOMOSEXUALITY AND HOMOPHILY

ESTATE SETS AND LIQUIDATIONS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT'L EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SOSS	PAVERS	TOTAL	DURATION	HOURS	COST		
															CUBS	SHRT'DL	WHT COST
MATERIALS															0	0	0
STAKE INSTALLATION	15,000 LF														0	0	0
TOTALS															0	0	0

Project: Atlas Option 1 RS Transportation
 Client: ATLAS CORP.
 Job No.: 88-47-18
 Location: Wash D.C.
 Task: INSTALLATION, MONITORING CONTROL

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASUME INSTALLATION OF 16 PILOTBOTTLES
- ASUME INSTALLATION OF 16 MONITORING WELLS AT 100 FT DEPTHS
- ASUME ALLOWANCE FOR SETTLEMENT MASTERS AND SURVEY MASTERS

ESTIMATOR: RCS
 DATE: 01 Dec 91
 TIME: 04:35 PM
 Job Quantity: 1 EA

DESCRIPTION	QUANTITY	UNIT	LABOR	BTU	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	ESTIMATION		
													HRS	WHS	CAB COSTS
STAFFING	1 HRS												0.00	0.00	0.00
MATERIALS															
INSTALL. MONITOR WELLS	2,000 LF												50,000	50,000	
INSTLL. PILOTBOTTLES	1,000 LF												12,000	12,000	
INSTLL. SETTLEMENT MASTERS	15 EA												4,500	4,500	
TOTALS													66,500	66,500	66,500

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DESCRIPTION	QUANTITY	UNIT	LINE	ITEM	UNIT	ITEM	REPAIRS	SUPPLIES	MATERIALS	TRAVEL	TOTAL	UNIT COST
REFL 14 GSB	1.00	EA		28.51		51.73	6.88	6.58			8.48	
REFL 48 GSB	1.00	EA		24.61		71.29	11.76	7.98			9.84	
REFL 50 GSB	1.00	EA		24.51		25.22	4.04	3.88			6.90	
REFL LARNS	1.00	EA		18.50							6.00	
REFL PLEP	1.00	EA					2.46	1.58	1.58		5.62	
REFL FORM	1.00	EA					25.39					

	2009	2010	2011	2012	2013	2014	2015	BEST	CBS COSTS	NET
REVENUE	\$117.76	\$146.76	\$22.56	\$46	\$46	\$46	\$46	\$46	\$46	\$46
ADVERTISING	\$46.90K	\$47.00K	\$68.75K	\$9.00K	\$7.25K	\$0	\$0	\$0	\$0	\$123.5K
NET PROFIT	\$11.85K	\$11.55K	\$11.55K	\$1.55K	\$1.55K	\$0	\$0	\$0	\$0	\$11.55K
NET LOSS	\$11.85K	\$11.55K	\$11.55K	\$1.55K	\$1.55K	\$0	\$0	\$0	\$0	\$11.55K

TOTALS	47,002	0	44,736	3,666	1,206	0	12,346	0	155,962	744
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PROJECT:	Atlas Option 1 RR Transportation	ESTIMATOR:	AGS	SBT 27	OF	SBT 41
CLIENT:	ATLAS CORP.					
JOB ID:	RR 67-18	DATE:	88 Dec-93	TIME:		84:35 PM
LOCATION:	Moab Utah					
ITEM DESCRIPTION:	HILL SITE SOILS EXCAVATION			JOB QUANTITY:		180,000 CF

ESTIMATES NOTES AND ASSUMPTIONS.

- ASSUME PRODUCTION BASED ON LOADING FACILITY AND TRANSPORTATION CAPACITY
 - ASSUME 25 GONDOLA'S AT 10 TONS PER EACH # TWO TRIPS PER DAY
 - ASSUME AVERAGE CONVERSION OF TRAILING AT 1.4 TONS PER CT
 - PRODUCTION = 1500 TONS PER DAY = 3461 CT PER DAY
 - DURATION = 3000000 CT / 3461 CT/DAY = 86.6881582 DAYS OR = 0.23747986 YEARS AT 7 DAYS PER WEEK ALL YEAR
0.33338519 YEARS AT 5 DAYS PER WEEK ALL YEAR
 - ASSUME USING 2-637, 2-08, 1-BATTER TRUCK AND 1 GRADER FOR EXCAVATION
 - ASSUME USING 3 CONVEYOR AND LOADING OPERATORS AND 3 LABORERS

8 QUARTS 300.00 CT

DESCRIPTION	QUANTITY	UNIT	LABOR	BTU	EST	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SBS	TRAVEL	DURATION *	867 HOURS
													UNIT	COST
CAT 617 SCPRYT	2.00	EA	49.21		273.28		47.58	35.00					0.00	
CAT 14 GDR	1.00	EA	28.61		51.73		6.00	6.58					0.00	
CAT 9B BDR	2.00	EA	49.21		142.58		22.00	15.00					0.00	
PICKUP	3.00	EA			7.38		4.58	3.00						
CAT 766 FEL	1.00	EA	28.61		67.05		7.00	6.00					0.00	
LOCAL OPERATOR	3.00	EA	73.92										0.00	
LOCAL LABORER	4.00	EA	73.98										0.00	
WATER TRUCK	1 EA		24.687100		25.22		6	3					0	

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-FUEL 34,672 GAL 27,738 27,738

TOTALS 277,422 8 476,279 196,617 59,376 8 8 8 8 917,698 3,861

PROJECT: **Atlas Option 1 RR Transportation**
 CLIENT: **ATLAS CORP.**
 JOB NO: **RR-67-18**
 LOCATION: **Moab Utah**
 ITEM DESCRIPTION: **OFFLOAD MILL SOILS**

ESTIMATOR: **AGS** DATE: **08-Dec-93** TIME: **05:54 PM**
 JOB QUANTITY: **300,000 CY**

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME OFF-LOADING OPEN TOP GONDOLAS WITH MOUNTED BACKHOE
- ASSUME MATERIALS LOADED OUT OF STOCKPILE BY SCRAPER WITH DOZER ASSISTANCE
- ASSUME USING 2-631, 1-DB, GRADER, WATER TRUCK AND COMPACTOR, BACKHOE OPERATOR AND FOREMAN

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	EXP	DURATION =						UNIT COST	
						EQUIP	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	
CAT 7B DSR	1.00	EA	24.61		71.29	11.00	7.50						0.00
CAT 631 SCPR	2.00	EA	49.21		209.98	29.58	19.00						0.00
CAT 825 COMP	1.00	EA	24.61		66.43	10.00	6.00						0.00
WATER TRUCK	1.00	EA	24.61		4.22	4.00	3.00						0.00
CAT 14 GDR	1.00	EA	24.61		51.73	6.00	6.50						0.00
FIELD FORMER	1.00	EA	25.39										0.00
PICKUP	1.00	EA	24.61		2.46	1.50	1.00						0.00
LOCAL OPERATOR	1 EA		24.607184										0
LOCAL LABORER	2 EA		36.398918										0

CRSR	259.24	0.00	427.11	62.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	HOURLY CREW COSTS
SUBTOTAL	867 HOURS	224,757	0	378,304	53,754	37,281	0	0	0	0	686,896	2.29	

MATERIALS:

TOTALS	224,757	0	378,304	53,754	37,281	0	0	0	0	0	686,896	2.29	

PROJECT: Atlas Option 3 RR Transportation
CLIENT: APLAS CORP.
JOB NO: 88-67-18
LOCATION: West Utah
ITEM DESCRIPTION: TAILING ENRICHMENT SOILS EXCAVATION

ESTIMATOR:	AGS	SBT 29	08	SBT 41
DATE:	08-Dec-93	TIME:	04:35 PM	
			JOB QUANTITY:	100,000 CT

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- ASSUME PRODUCTION BASED ON LOADING FACILITY AND TRANSPORTATION CAPACITY
 - ASSUME 25 GONDOLA'S AT 50 TRS PER EACH # TWO TRIPS PER DAY
 - ASSUME AVERAGE CONVERSION OF TRAILING AT 1.4 TONS PER CY
 - PRODUCTION = 4500 TRS PER DAY = 3461 CY PER DAY
 - DURATION = 1000000 CY / 3461 CY/DAY = 28.8933834 DAYS OR = 0.07915995 YEARS AT 7 DAYS PER WEEK ALL YEAR ROUND
 - ASSUME USING 2-637, 2-DB, 1-WATER TRUCK AND 1 GRADER FOR EXCAVATION
 - ASSUME USING 3 CONVEYOR AND LOADING OPERATORS AND 3 LABORERS
 - 0.11112835 YEARS AT 5 DAYS PER WEEK ALL YEAR ROUND
 - 3640 HR/YR
 - 2600 HR/TR

CASE		328.85	8.88	587.16	91.00	68.58	8.88	8.88	8.88	8.88	BORLIT CRED COSTS	1,826.71
SUBTOTAL	289 HOURS	92,474	8	158,093	26,293	19,792	8	8	8	8	296,652	2,91

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-TUE 11,557 GAL 9,246 9,246
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TOTALS 92,676 8 158,093 35,539 19,792 8 8 8 8 395,895 3,6

PROJECT: K-138 Option 1 RR Tramwayization
 CLIENT: RTAS Corp.
 JOB #: 88-47-18
 LOCATION: Rock Bluff
 ITEM DESCRIPTION: OFFLOAD MANAGEMENT SKILLS

NOTES AND ASSUMPTIONS:
 -ASSUME OFF-LADING OPEN TOP GRADIAS WITH HIJUTED BACKHOE
 -ASSUME MATERIALS LOADED OUT BY STOOLER 20 cu YD DODGE ASSISTANCE
 ASSUME RTAC (2-61), 1-90, GRADE, WATER TOWER AND COMPACTOR, DUSTING OPERATORS AND EQUIPMENT

ITEM NUMBER: 665
 DATE: Oct Dec 93
 TIME: 84.35 hr
 JOB QUANTITY: 160,000 CT

DESCRIPTION	QUANTITY	WEIGHT	LABOR	HRT	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SBHS	TRAVEL	TOTAL	DURATION = 269 WORKS	
													UNIT	COST
CAT 90 DTH	1.00 EA	24.51		71.73	11.40	7.59								\$ 84
CAT 911 SC7A	2.00 EA	49.71		289.98	29.50	15.40								\$ 84
CAT 925 CDFP	1.00 EA	24.61		66.43	10.40	6.40								\$ 84
MAYER TRACT	1.00 EA	24.51		25.22	4.40	3.40								\$ 84
CAT 14 GDB	1.00 EA	24.51		51.73	6.40	6.50								\$ 84
FIELD FORKERS	1.00 EA	25.39												\$ 84
FICKEY	1.00 EA	24.51		2.46	1.30	1.00								\$ 84
LOCAL OPERATOR	1 EA	24.50	21,607.004											
LOCAL LABORER	2 EA	36.99992												

ITEM	QUANTITY	WEIGHT	LABOR	HRT	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SBHS	TRAVEL	TOTAL	DURATION = 269 WORKS	
													UNIT	COST
CBB	259.24	6.00	427.11	61.40	43.00	9.00	0.00	0.00	0.00	0.00	0.00			
SUBTOTAL	269 WORKS	74.93	0	123,435	17,918	12,427	0	0	0	0	0	238,599		791.35
NET TOTALS:														2.29
TOTALS				123,435	17,918	12,427	0	0	0	0	0	238,599		2.29

Atlas Option 1 DR transcription
ATLAS CORP.

ESTIMATED TIME:	0655	SET 31	07	SET 41
DATA:	88 Sec-31	TIME:		35.75 PH
		108.9561199		35.8000 CT

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ITEM	QUANTITY	UNIT	AMOUNT	ITEM	UNIT	AMOUNT	ITEM	UNIT	AMOUNT	ITEM	UNIT	AMOUNT	ITEM	UNIT	AMOUNT	
1000' 215' RER	1	ROLL	24.61				55.36		6.59				6.46			6.46
1000' 945' RER	1	ROLL	24.61				61.95						6.46			6.46
1000' 689' TRICE	1	ROLL	245.87				161.38		6.46				5.46			5.46

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709715.3	2865.1946	0	4360.597	9,438	11,3669	0	0	0	678,647

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-19
 LOCATION: Boab Blab
 WORK DESCRIPTION: DUST CONTROL/WATER TRANSPORT

ESTIMATOR: AGS DATE: 08-Dec-93 TIME: 04:35 PM
 JOB QUANTITY: 11 YEAR

ESTIMATOR NOTES AND ASSUMPTIONS:

- ASSUME DUST CONTROL IS NEEDED OVER CERTAIN AREA OF BAUL AND ACCESS ROAD OVER COURSE OF PROJECT.
- USE ONE WATER TRUCK, PUMP AND DRIVER

- ASSUME INSTALLATION OF 6 INCH HDPE WATER LINE

DESCRIPTION	QUANTITY	UNIT	LABOR	DURATION = 22,000 HOURS								UNIT COST	
				INV EQUIP	KEY EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL		TOTAL
TRANSPORTS	1.00 EA	21.10										8.00	

CREW	21.10	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ROBBLT	
												CREW COSTS	
												21.10	
SUBTOTAL	22,000 HOURS	464,116	8	8	8	8	8	8	8	8	8	464,116	42,192.36

MATERIALS:

HDPE 6INCH WATER LINE (SDR 2 111,936 LF)													
-PUMP	1 EA												1,231,296
PUMP STATIONS	3 EA												37,000
SURGE TANK	200,000 GAL												135,000
-DUST WATER TRUCK	1 EA												200,000
													222,300
													0
													0
													0
													0
													0
													0

TOTALS	464,116	15,000	125,000	45,300	52,000	8	8	1,566,296	8	2,267,712	206,155.64
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PROJECT: Atlas Option 1 RR Transportation
CLIENT: ATLAS CORP.
JOB NO: 88-67-18
LOCATION: Utah
ITEM DESCRIPTION: PERMITTING AND ACCESS AGREEMENT

ESTIMATE: AGS 58% '93 OF 58% '91
 DATE: 08-Dec-93 BY: 04-35 PM
 JOB: CHARITY: 1 RA

RESULTS AND DISCUSSIONS

ASSUME 3 ENGINEERS FOR 1 YEAR	2000 HOURS
ENVIRONMENTAL IMPACT STATEMENT	\$750,000
ASSUME PERMIT FEES	\$75,000

	\$825,000

CBW		47.53	8.86	8.86	8.86	8.86	8.86	8.86	8.86	2.86	BURLY CBW COSTS	49.53	
SUBTOTAL	2,888 HOURS	98,863	8	8	8	8	8	8	8	4,168	183,823	183,823.86	
MATERIALS:													
-PERMITTING	1 BA									825,000	825,000	8	
												8	
												8	
												8	
												8	
												8	
												8	
												8	
												8	
TOTALS		98,863	8	8	8	8	8	8	8	825,000	4,168	928,823	928,823.86

PROJECT: Atlas Option i RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: Boxb Stab
 ITEM DESCRIPTION: DESIGN COSTS

ESTIMATOR: AGS DATE: 88-DEC-31 JOB QUANTITY: 1 EA

TIME: 84.35 HRS

ESTIMATOR NOTES AND ASSUMPTIONS:

-ASSUME DESIGN COST OF \$600,000

\$600,000

DESCRIPTION	QUANTITY	RATE*	LABOR	EQP	ETY	EQTP	EQTP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	DEURATION =		HOURS	
															UNIT	COST		
CREW			8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	HOURLY CREW COSTS	
SUBTOTAL	8 HOURS		8	8	8	8	8	8	8	8	8	8	8	8	8	8.00		
MATERIALS:																		
DESIGN AND SUPPORT	1 EA	\$60,000																
TOTALS		500,000	8	8	8	8	8	8	8	8	8	8	8	8	500,000	700,000.00		

PROJECT: Kilan Option 1 RR Transportation
 C.I.C.P.T. ATLAS Corp.
 JOB NO.: 88-67-18
 LOCATION: Rock Ranch
 ITEM DESCRIPTION: AIR MONITORING HEATH AND SAFETY

ESTIMATE NOTES AND ASSUMPTIONS:

-ASSUME MONITORING FOR AMBIENT DUST PH-14

ASSUME 4 STATIONS IN THE RECREATION AND 3 AT THE DEPOSITORY

-ASSUME ONE TRUCK TO RUN SYSTEM ALONG WITH RAIL CARS/STEPS AND RAIL RACK AND PERSONAL MONITORS.

-ASSUME THAT TRUCK ONLY PER YEAR MONITORS QA/QC

ITEM DESCRIPTION: ESTIMATOR: 863
 DATE: 01 Dec 91 TIME: 04:35 PM
 QOH QUANTITY: 11.78

DESCRIPTION	QUANTITY	UNIT	LABOR	INTL EQUIP	INTL EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHRS	TRAVEL	TOTAL	DURATION *	UNIT COST
865 TRUCK/CAB	2.00	EA	51.69									2.00	22,380 HOURS	

ITEM	QUANTITY	UNIT	LABOR	INTL EQUIP	INTL EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHRS	TRAVEL	TOTAL	DURATION *	UNIT COST
865 TRUCK/CAB	2.00	EA	51.69									2.00	22,380 HOURS	

ITEM	QUANTITY	UNIT	LABOR	INTL EQUIP	INTL EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SHRS	TRAVEL	TOTAL	DURATION *	UNIT COST
CAB	51.69	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.69	51.69	
SUBTOTAL	22,380 HOURS		1,152,637	0	0	0	0	0	0	0	0	44,640	1,197,237	188,839.73
MATERIALS:														
-AIR MONITORING EQUIPMENT	1 EA		169,000									169,000		
-BLU ASSY'S	11 TR		40,000									40,000		
-BLD BACKS	11 TR		5,000									5,000		
-BLD SUPPLIES	11 TR		132,000									132,000		
-DAT	11 TR		44,000									44,000		
NOTES	1,152,637		321,000	0	0	0	0	0	0	0	0	44,640	1,510,237	138,831.55

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: 6640 12th
 ITEM DESCRIPTION: PURCHASE LABS

ESTIMATOR SHEETS AND ASSUMPTIONS:

ASSUMED PURCHASE OF LAND FOR DEPOSITORY AND ACCESS ROADS

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-18
 LOCATION: 6640 12th
 ITEM DESCRIPTION: PURCHASE LABS

JOBS

DATE: 08 Dec 93

JOB QUANTITY: 640 AC

TIME: 04.25 PH

SET 41

DESCRIPTION	QUANTITY	MATERIAL	LABOR	TRAVEL	EQUIP	EQUIP	REPAIRS	SUPPLIES	MATERIALS	SHRS	TRAVEL	TOTAL	DURATION = HOURS		
													UNIT	UNIT	UNIT COST
CBS													0.00	0.00	0.00
SURVEY	8 HOURS		0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00
MATERIALS:															
PURCHASE LABS															
TOTALS													339,200	339,200	536.00

PROJECT: *Klaus Optics 188 Transportation*
 CLIENT: *ATLAS CORP.*
 JOB #: *88-617-16*
 LOCATION: *Rockville*
 JOB DESCRIPTION: *ANALYTICAL COSTS*

ESTIMATES, BUDGETS AND ASSUMPTIONS:

SANITIZING SURVEY (POST)	16000	ESTIMATOR:	ADS	DATE:	Sept 17	OF	SHRT 41
ATL BUDGETING	154154				08-Dec-93	TIME:	08:35 PM
REGULAR BUDGETING	438460						
GRATZ, SHUTTLE	268840						
		JOB QUANTITY:	11.78				

SANITIZING SURVEY (POST)	16000	ASSUME 100% TIME PER WEEK & 7 LOCATIONS FOR 11 WEEKS = 4444 SANITIZING PLUS 1444 ANALYTICAL
ATL BUDGETING	154154	PER WEEK = 4444 SANITIZING PLUS 1444 ANALYTICAL
REGULAR BUDGETING	438460	
GRATZ, SHUTTLE	268840	

		289154

DESCRIPTION	QUANTITY	UNIT	LABOR	EQUP	ETD	TRAVEL	SUPPLIES	MATERIALS	SURS	TRAVEL	TOTAL	HOURLY	DAILY	WEEKS	
CRATE			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SUBTOTAL:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MATERIALS:															
ANALYSIS	11.78														
TOTALS			0	0	0	0	0	0	0	0	0	289,154	0	289,154	26,286.73

PROJECT: Atlas Option i RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO.: 88-67-18
 LOCATION: Roan Utah
 ITEM DESCRIPTION: Well Maintenance

ESTIMATOR: AGS SMT 30 OF SMT 41

DATE: 88-Dec-93 TIME: 04:35 PM

JOB QUANTITY: 5 yr

ESTIMATOR NOTES AND ASSUMPTIONS:

- Assume Wells only operate for 5 years
- Assume using 1 operator and 1 truck full time
- 7- Black Extraction Wells
- 7 3.75 inch extraction pumps

- Wells and pumps need changed every two years
- Assume wells # 50 feet deep

Period of time = 5 years

DURATION = 18,000 HOURS

DESCRIPTION	QUANTITY	UNIT	LABOR	INT	KEY	EQUIP	FUEL	REPAIRS	SUPPLIES	MATERIALS	SUBS	TRAVEL	TOTAL	UNIT COST
LOCAL OPERATOR	1.00 EA		24.61											8.00
PICKUP	1.00 EA					2.46	1.50	1.00						

CREW													BORLY	
													CREW COSTS	
SUBTOTAL	18,000 HOURS	255,914	8	25,584	15,600	10,000	0	0	0	0	0	0	29.57	
MATERIALS:														
Buy Pumps and Riser	18 ea												33,390	33,390
Well Installation	875 12												25,375	25,375
-STS for Wells	5 yrs												5,000	5,000
ELECTRICAL	600,000 KWH												48,000	48,000
													0	0
													0	0
													0	0
													0	0
													0	0
													0	0
TOTALS		255,914	8	25,584	15,600	10,000	53,000	33,390	25,375	0	419,263		83,852.68	

PROJECT: Atlas Option 1 NB Transportation
 CLIENT: ATLAS CORP.
 JOB NO.: 88-67-18
 LOCATION: Rabiah
 TIME DURATION: NBC Surveillance

ESTIMATION NOTES AND ASSUMPTIONS:

Assume 18 hours per month

Total : 114 \$ per hour

Year 1 192 hours/year
 Year 2-18 384 hours/year

DESCRIPTION	QUANTITY	UNIT	LABOR	INV	NET EQUIP.	FUEL	REPAIRS	SUPPLIES	MATERIALS	SBS	TRAVEL	TOTAL	DURATION :		# HOURS	UNIT COST
													MONTHS	WEEKS		
Subtotal													0.00	0.00	0.00	0.00
MATERIALS													0.00	0.00	0.00	0.00
NBC Surveillance													0.00	0.00	0.00	0.00
TOTALS													0	0	0	0

PROJECT: Atlas Option 1 RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO: 88-67-14
 LOCATION: Roab Stab
 ITEM DESCRIPTION: Long Term Monitoring

ESTIMATOR: ACS DATE: 88-Dec-93 TIME: 88:35 PM
 JOB QUANTITY: 30 year

ESTIMATOR NOTES AND ASSUMPTIONS:

-Assume quarterly samples of 3 wells for 10 years

-Cost per sampling event approximately \$1,000

-Cost assumption at \$4,000 per year.

DESCRIPTION	QUANTITY	DRTY	LABOR	INT	KIT	DURATION X						HOURS	UNIT COST
						EQUIP	SQUP	FUEL	REPAIRS	SUPPLIES	MATERIALS		

CREW		8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
SUBTOTAL	# HOURS	8	8	8	8	8	8	8	8	8	8	8	8	8.00

MATERIALS:

-Long term monitoring	30 year	120,000	120,000	0
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		0	0	0	0	0	0	0	0	0	0	0	0	0
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TOTALS		8	8	8	8	8	8	8	120,000	8	120,000	4,000.00		
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PROJECT: ATLAS Option I RR Transportation
CLIENT: ATLAS CORP.
JOB NO.: 88-67-18
LOCATION: Moab Utah
ITEM DESCRIPTION: Environmental Impact Statement

ESTIMATOR: ACS SBT 41 OF SHT 41
DATE: 88 Dec-93 TIME: 08:35 PM
JOB QUANTITY: 1 ea

ESTIMATES AND ASSUMPTIONS.

-Assume cost of BIS at 1.5 million

PROJECT: Atlas Option I RR Transportation
 CLIENT: ATLAS CORP.
 JOB NO.: 88-67-10
 LOCATION: Utah

LABOR BASED ON

56 HOURS/WEEK

EQUIPMENT BASED ON

176 HOURS/WEEKS

CHECK OR JOB TOTAL: ****FROM RECAP
 *****FROM TOTAL SHEET

DATE: 08-Dec-93

TIME: 04:35 PM

ESTIMATOR: ACS

RECAP SHEET:

LABOR	TOTAL				EQUIPMENT	TOTAL				SUPPLIES	QTY	UNIT	TOTAL
	LABOR HOURS	LABOR WEEKS	TOTAL LABOR	SUB & TRAVEL		HOURS	EQUIP WEEKS	FUEL & REPAIR	RENTAL COST				
LOCAL LABORER	148,378	2,807.6	2,596,352	0	- DECONTAMINATION SUPPLIES				50,000	ELECTRICAL	1,048,000		
LOCAL OPERATOR	486,463	8,129.3	10,081,879	0	CAT 631 SCPR	79,561	1,957.4	1,929,368	2,353,132	-STS for Wells	5 yrs	5,000	
FIELD PUMPER	31,382	627.6	796,715	0	CAT 99 DSR	12,135	298.7	315,622	1,083,798				
- PREMIX COMPACTOR			137,828	0	CAT 98 DSR	79,443	1,954.5	1,469,782	5,663,517				
TRANSFERS	22,500	448.8	464,116	0	CAT 14 GDR	54,731	1,346.5	684,135	2,831,223				
PROJ. ENGINEER	4,168	83.2	98,863	4,168	CAT 825 COMP	25,489	625.1	406,548	1,687,935				
- DESIGN AND SUPPORT			508,988	0	WATER WAGON	7,097	174.6	120,290	275,014				
B&S TECHNICIAN	44,600	892.8	1,152,637	44,600	PICKUP	98,323	2,222.2	225,888	222,195				
					- RR EQUI/MKT RENTAL				10,910,625				
					CAT 637 SCPR/T	25,233	620.8	1,046,056	3,046,983				
					CAT 966 PBL	26,827	648.3	338,345	1,224,558				
					- FUEL				758,162				
					WATER TRUCK	26,055	641.8	182,385	657,187				
					CAT 963 VIB COMP	616	15.1	5,526	15,669				
					CAT 963 PBL/T	1,020	25.1	13,240	46,359				
					CAT 235 DRR	760	17.2	8,750	38,752				
					KHD DUMP TRUCK	7,000	172.2	3,500	370,910				
					- PUMP				15,000				
					- BUY WATER TRUCK				222,300				
					- AIR MONITORING EQUIPMENT				100,000				
					- BIO ASSAYS				40,000				
					- TLD BADGES				5,000				
					- B&S SUPPLIES				132,000				
					- TOAT				44,000				
RECAP SUBTOTAL	648,983	12,979.7	15,747,581	48,768		635,353	10,710.7	6,747,994	38,202,052			1,053,000	
ADMIN SUBTOTALS			3,651,024	93,600		0		0				179,825	
JOB TOTAL			19,398,605	142,368		6,747,994	38,202,052					1,232,025	

PROJECT: Atlas Option 1 RR Transportation
CLIENT: ATLAS CORP.
JOB NO.: 88-67-18
LOCATION: West Utah

LABOR BASED ON 58 HOURS/WEEK

EQUIPMENT BASED ON 176 HOURS/MONTH

CHECK ON JOB TOTAL: ----- FROM RECAP
----- FROM TOTAL SHEET

DATE: 08-Dec-93

TIME: 04:35 PM

ESTIMATOR: AGS

RECAP SHEET:

MATERIAL	QTY	UNIT	TOTAL	SUBS	QTY	UNIT	TOTAL
ROCK ARMOR (FOB PIT)	131,100	TR	1,246,761	-MOBILIZATION/DEMOL	762	EA	275,000
ROCK ARMOR TRANSPORTATION	131,100	TR	416,898	-PERSONNEL MOBILIZATION	15	EA	75,000
FILTER MATERIAL (FOB PIT)	71,400	TR	456,518	-INSTALL TRACK AND BALLAST	18,500	LF	832,500
FILTER MATERIAL TRANSPORT	71,400	TR	227,052	-CONSTRUCTION OF CONCRETE	1	EA	50,000
RIP RAP (FOB PIT)	37,500	TR	244,875	-INSTALL COVERED CONVEYOR	2,000	LF	1,000,000
RIP RAP TRANSPORTATION	37,500	TR	119,250	-CONSTRUCT RAIL LOADING FA	1	EA	300,000
CROSSED STONE (FOB SITE)	4,000	TR	32,348	-CONSTRUCT RAIL UNLOADING	1	EA	400,000
PURCHASE LAND	640	AC	339,200	-UTILITY SERVICES	1	EA	140,000
Buy Pumps and Riser	18	ea	33,396	-HYDROSEED AND NOLC	340	AC	204,000
				-IRRIGATION	340	AC	135,000
				-MISC STRUCTURES	1	LS	100,000
				-FORCE INSTALLATION	15,000	LF	180,000
				-INSTALL MONITOR BELLS	2,000	LF	50,000
				-INSTALL PERIMETERS	1,000	LF	12,000
				-INSTALL SETTLEMENT MARKER	15	EA	4,500
				-HOPE GLEN WATER LINE (SD 111,936 LF)	1,231,296		
				-PUMP STATIONS	3	EA	135,000
				-SURGE TANK	200,000	GAL	200,000
				-PERMITTING	1	EA	825,000
				-ANALYSIS	11	TR	289,154
				-Well Installation	675	LF	25,375
				-WRC Surveillance	3,648	hour	415,872
				-Long term monitoring	30	year	120,000
				-Environmental Impact Sta	1	ea	1,500,000
				3,158,284		8,881,297	
						0	
				3,158,284		8,881,297	