State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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August 14, 2000

Eric York
Moab Salt, Inc.
P.O. Box 1208
Moab, Utah 84532

Re: Revised Draft of Reclamation Cost Estimate, Moab Salt, Inc. Cane Creek Mine, M/019/005, Grand County, Utah

Dear Mr. York:

The Division has completed a revised draft of the reclamation cost estimate for the Cane Creek Mine. The revised estimate is based on the previous estimate for building demolition (which was reviewed by Moab Salt), and a revision of the other sections included in the original 1989 estimate for equipment demolition, earthwork, and reclamation preparation. These last three sections have not yet been reviewed by Moab Salt. A hard copy of the revised draft estimate is enclosed for your review and comment. A diskette with the spreadsheet formatted for Corel QuattroPro8 and Excel v5/v7 software is also enclosed for your use. The revised amount is considerably higher than the $13,247,000 surety currently posted, however; this revised draft includes a great deal of unconfirmed items.

Please review the draft estimate and provide us with written comments at your earliest convenience. Please identify any errors such as duplication, or costs allocated for reclamation of features or structures which no longer exist. It may be helpful to meet onsite and discuss this estimate after you have had time to review it. Please contact Tony Gallegos at (801) 538-5267 to coordinate such a meeting. Thank you for your cooperation.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Reclamation Program

jb
Enclosure: draft reclamation estimate, diskette
cc: Will Stokes, SITLA w/draft reclamation estimate
O:\m19-02draft-est.wpd

RECLAMATION SURETY ESTIMATE **DRAFT**
MOAB SALT INCORPORATED
CANE CREEK MINE
M/019/005 GRAND COUNTY, UTAH
PREPARED BY UTAH STATE DIVISION OF OIL, GAS & MINING

last revision 11-Aug-2000
m19-05-2.wb3
page "summary"

THIS PAGE SUMMARIZES THE LINE ITEM COSTS FROM THE 4 OTHER SPREADSHEETS

-Current bond amount held by the Division is $13,247,000.
-Amount of disturbed area which will receive reclamation treatments = 635 acres
-Estimated total disturbed area for this mine = 1,002 acres

BUILDING DEMOLITION SUBTOTAL	**$6,356,777**
EQUIPMENT DEMOLITION SUBTOTAL	**$337,027**
EARTHWORK SUBTOTAL	**$6,786,817**
RECLAMATION PREPARATION SUBTOTAL	**$5,824,104**

Activity	Quantity	Units	$/unit	$	Note
Ripping access roads - unconfirmed acreage	50	acre	271	13,550	(1)
Regrading access roads - unconfirmed acreage	50	acre	243	12,150	(2)
Sidecast mtl replacement on steep roads- unconfirm	3000	LF	1.13	3,390	(3)
Surface drainage restoration or construction	0	LF	0.12	0	(4)
Topsoil replacement - D9 dozer	0	CY	0.33	0	( )
Topsoil replacement - scraper	0	CY	1.05	0	( )
Topsoil replacement - truck & FE loader	0	CY	2.55	0	( )
Mulching (2 ton/acre alfalfa)	635	acre	160	101,600	(00)
Crimping mulch in	635	acre	40	25,400	(00)
Fertilizing (200 lb/acre diammonium phosphate)	635	acre	160	101,600	(00)
Composted manure (10 ton/acre)	0	acre	300	0	(00)
Broadcast seeding (~20 lb/acre)	100	acre	170	17,000	(00)
Drill seeding (~13 lb/acre)	535	acre	150	80,250	(00)
Hydroseeding	0	acre	800	0	(00)
Reseeding (25% of seeded area)	158.75	acre	170	26,988	(00)
General site cleanup & trash removal	635	acre	50	31,750	(00)
Site monitoring (2 yrs during recla + 3 yrs after)	5	yr	5000	25,000	(00)
Equipment mobilization	15	equip	1000	15,000	(00)
Reclamation Supervision	450	days	386	173,700	(15)
		subtotal		**$627,378**	

	OVERALL SUBTOTAL	19,932,102
10% Contingency		1,993,210
	SUBTOTAL - 2000-$	21,925,312
Escalate for 5 years at 3.13% per yr		3,652,941
	TOTAL	25,578,253

Rounded surety amount in yr 2005-$ **$25,578,000**

Average cost per disturbed acre = $25,527

SUMMARY 1/2

RECLAMATION SURETY ESTIMATE DRAFT
MOAB SALT INCORPORATED
CANE CREEK MINE
M/019/005 GRAND COUNTY, UTAH
PREPARED BY UTAH STATE DIVISION OF OIL, GAS & MINING

last revision 11-Aug-2
m19-05-2.wb3
page "summary"

Note

(1)	Means 2000 & Blue Book 3Q/00: Cat D9N, U, multi shank rippers, speed 1.0 mph
(2)	Means 2000 & Blue Book 3Q/00: Cat D9N, U, mtl 2550 lb/CY, 50 ft push, 8 inch depth
(3)	Contractor's actual costs, 1991 at E/053/012, Cat 225 Excavator, 20 ft wide road, escalated to yr 2000 as $1.13/LF
(4)	Means 2000 & Blue Book 3Q/00: Cat D9N, U, mtl 2550 lb/CY, 50 ft push, avg vol 0.5CY/LF-berm assumed
( )	
( )	
( )	
(00)	DOGM general estimate - mulching
(00)	DOGM general estimate - crimping
(00)	DOGM general estimate - fertilizing
(00)	DOGM general estimate - manure $16/ton delivered, $14 ton/acre spreading
(00)	DOGM general estimate - broadcast seeding
(00)	DOGM general estimate - drill seeding
(00)	DOGM general estimate - hydroseeding
(00)	DOGM general estimate - broadcast seeding
(00)	DOGM general estimate - site cleanup & trash removal
(00)	DOGM general estimate - site monitoring, yearly
(00)	DOGM general estimate - equipment mobilization
(15)	Means 2000, 01310-700-0180, project manager, minimum $1,930/wk

SUMMARY 2/2

RECLAMATION SURETY ESTIMATE **DRAFT**
MOAB SALT INCORPORATED
CANE CREEK MINE GRAND COUNTY, UTAH
M/019/005
PREPARED BY UTAH STATE DIVISION OF OIL, GAS & MINING

last revision 11-Aug-2000
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page "bldg_demo"

Original estimate of 6/30/89 Table 14-1 was used as template for this estimate page.

Demolition of buildings implies complete demoltion, removal of all structures to the ground surface, on site disposal site for non-hazardous debris.
a Demolition unit costs used in the formulas are from the Means 2000 Heavy Construction Cost Data.
Building demolition, large urban projects incl, 20 Mi. haul, no foundation or dump fees, CF is volume of building standing, Crew B-8.

a	02220-100-0012	steel	**steel**	**0.22**	$/CF
a	02220-100-0050	concrete	**concrete**	**0.32**	$/CF
a	02220-100-0080	masonry	**masonry**	**0.24**	$/CF
a	02220-100-0100	mixture of types, avg.	**mix**	**0.24**	$/CF
a	02220-100-0700	small bldgs, wood, no salv.	**wood**	**0.24**	$/CF

							avg reinf. $/CF	heavy reinf. $/CF
	Concrete removal, footings, concrete							
a	02200-550-1120	1 ft thick, 3ft. wide	15.95 $/LF =>	5.32 $/CF			**$5.85**	**$6.38**
a	02200-550-1140	2 ft thick, 3ft. wide	18.20 $/LF =>	**3.03** $/CF			$3.34	$3.64
a	02200-550-1200	avg. reinforcing add 10%						
a	02200-550-1220	heavy reinforcing add 20%						

This estimate will use the cost for demolition of the 2 ft thick x 3 ft wide footing as the unit cost for demolition of concrete floor slabs.

HVAC demolition, heavy items,
a 15050-300-3600 heavy items **665 $/ton**
This estimate will use the cost for demolition of heavy HVAC items as the unit cost for demolition/removal of steel structures/equip within bldgs.

"a" in the left hand column indicates this line item has been adjusted since the December 9, 1999 version.
"a?" in the left hand column indicates this line item has been adjusted since the December 9, 1999 version, but contains unconfirmed data.
"?" in the left hand column indicates this line item contains unconfirmed data and may need to be adjusted or omitted entirely.
"o" in the left hand column indicates the status of this building or structure is in question.

Concrete slab/floor of 1 ft thickness assumed for each bldg. with area calculated using dimensions from length & width columns.
BUILDING DIMENSIONS USED IN THIS ESTIMATE ARE UNCONFIRMED AS OF 12/9/99.
ALL BUILDINGS ASSUMED TO HAVE A CONCRETE SLAB FOUNDATION, EXCEPT SPECIALTY BUILDINGS HAVING REINFORCED FOUNDATIONS AS INDICATED.

Italicized notes in the right hand column are from the 1989 estimate.
Yellow shading indicates 1989 estimate assumed the salvage value of this feature covered demolition and removal costs
This color in the left hand column indicates information from the 1997 estimate was used in this line item - i.e. description or dimensions or other

	BUILDINGS & STRUCTURES	Building Dimensions L(ft)	W(ft)	H(ft)	bldg vol(CF)	construct. descript.	concrete slab using bldg L & W & ft thickness of 1 calc. vol (CF)	avg. reinf. concrete foundation & ft thickness of 2 calc. vol (CF)	heavily reinf. concrete foundation ft thickness of 3 calc. vol (CF)	concrete demo cost $	bldg demo cost $	combined total cost $	NOTES *post mining use & 1987 means const cost data ref. no. or crew id*
?	concrete orig. const. (110,200 CY)						2975400					0	*2.1-450-2200, 5% removed*
?	concrete later addit. (11,100 CY)						2997000					0	*2.1-450-2200, 20% removed*
													landfill disposal 2.1-450-5600
	AREA 01												
a	change house -A	140	35	15	73,500	steel	4,900	0	0	14,863	16,170	31,033	
a	change house - B	55	35	15	28,875	steel	1,925	0	0	5,839	6,353	12,192	
a	powder magazine	20	20	10	4,000	concrete	0	800	0	4,679	1,280	5,959	*2.2-040-0050*
a	cap magazine	20	20	10	4,000	concrete	0	800	0	4,679	1,280	5,959	*2.2-040-0050*

bldg_demo 1/4

	BUILDINGS & STRUCTURES	Building Dimensions L(ft)	W(ft)	H(ft)	bldg vol(CF)	construct. descript.	concrete slab using bldg L & W & ft thickness of 1 calc. vol (CF)	avg. reinf. concrete foundation & ft thickness of 2 calc. vol (CF)	heavily reinf. concrete foundation ft thickness of 3 calc. vol (CF)	concrete demo cost $	bldg demo cost $	combined total cost $	NOTES *post mining use & 1987 means construction cost data ref. no. or crew id*
	AREA 02												
a?	headframe - concrete	70	70	144	705,600	concrete			14,700	93,786	225,792	319,578	*demolish*
a?	headframe - steel only	100	100	36	360,000	steel				0	79,200	79,200	
a?	headframe hoist house	70	70	20	98,000	concrete	4,900			14,863	31,360	46,223	*demolish*
a?	headframe - airlock-REMOVED?	40	40	40	0	steel				0	0	0	*demolish*
a?	headframe - switch gear building	55	65	15	53,625	steel	3,575			10,844	11,798	22,642	*demolish*
	AREA 03												
a?	headframe-convey. trans.-REMOVE	50	50	50	0	steel	0			0	0	0	*sold for scrap (original estimate)*
	AREA 06												
a	product storage warehouse no. 1	650	150	60	5,850,000	steel	0	195,000		1,140,425	386,100	1,526,525	steel skin, wood arch beams, USE 30% OF MEANS BLDG. DEMO
a	product storage warehouse no. 2	650	150	60	5,850,000	steel	0	195,000		1,140,425	386,100	1,526,525	steel skin, wood arch beams, USE 30% OF MEANS BLDG. DEMO
a	no. 1 transfer tower	25	25	80	50,000	steel	0	1,250		7,310	11,000	18,310	*sold for scrap (original estimate)*
a	no. 2 transfer tower	25	25	80	50,000	steel	0	1,250		7,310	11,000	18,310	*sold for scrap (original estimate)*
	AREA 06 & 07												*sold for scrap (original estimate)*
a	conveyor gallery no. 2	300			30	tons steel		810		4,737	19,950	24,687	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 4	150			60	tons steel		810		4,737	39,900	44,637	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 12	400			150	tons steel		540		3,158	99,750	102,908	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 16-1	625			125	tons steel		0		0	83,125	83,125	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 16-2	625			125	tons steel		0		0	83,125	83,125	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 13				60	tons steel		0		0	39,900	39,900	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 17-1	300			120	tons steel		270		1,579	79,800	81,379	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 17-2	300			120	tons steel		270		1,579	79,800	81,379	*steel tonnage & concrete volume from 1997 EarthFax estimate*
a	conveyor gallery no. 18	150			60	tons steel		0		0	39,900	39,900	*steel tonnage & concrete volume from 1997 EarthFax estimate*
	AREA 07												
a?	reclaim tunnel houses	40	40	20	32,000	steel	1,600			4,853	7,040	11,893	*sold for scrap (original estimate)*
a	no. 1 loadout station	40	30	70	84,000	steel	0	2,400		14,036	18,480	32,516	*sold for scrap (original estimate)*
a	no. 2 loadout station	40	30	70	84,000	steel	0	2,400		14,036	18,480	32,516	*sold for scrap (original estimate)*
a?	switchgear bldg.	80	80	40	256,000	steel	6,400			19,413	56,320	75,733	*sold for scrap (original estimate)*
a	bagging bldg N of loadout-HOLLOW	210	105	24	529,200	steel	0	44,100		257,912	34,927	292,839	hollow bldg., use 30% of Means demolition cost
	AREA 09												
a	salt recovery bldg TAILINGS TREAT	130	75	60	585,000	steel	0	19,500		114,043	128,700	242,743	*LISTED IN 1997 ESTIMATE AS TAILINGS TREATMENT BLDG.*
a?	salt load center	50	50	50	125,000	steel	0			0	27,500	27,500	*sold for scrap (original estimate)*
a?	launders support & plat	20	20	20	8,000	steel	0			0	1,760	1,760	*sold for scrap (original estimate)*
	AREA 11												
a	water reagent addition structure	25	25	10	6,250	steel	625			1,896	1,375	3,271	*sold for scrap (original estimate)*
	AREA 12												
a	sizing bldg	80	80	40	256,000	steel	6,400			19,413	56,320	75,733	*sold for scrap (original estimate)*
a	screening & compaction bldg. - A	85	55	70	327,250	steel	4,675			14,181	71,995	86,176	
a	screening & compaction bldg.- B	45	30	70	94,500	steel	1,350			4,095	20,790	24,885	
	AREA 13												
a?	lab bldg	40	40	20	32,000	mix	1,600			4,853	7,680	12,533	*sold for scrap (original estimate)*
	AREA 14												
a	mill bldg - ALL PORTIONS	230	60	76	1,048,800	steel	0	27,600		161,414	230,736	392,150	
?	mill bldg - crushing	0	80	40	0	steel	0			0	0	0	*sold for scrap (original estimate)*
?	mill bldg - floatation	0	80	40	0	steel	0			0	0	0	*sold for scrap (original estimate)*
?	mill bldg - reagent	0	80	40	0	steel	0			0	0	0	*sold for scrap (original estimate)*
?	mill bldg - crushload	0	80	40	0	steel	0			0	0	0	*sold for scrap (original estimate)*

bldg_demo 2/4

	BUILDINGS & STRUCTURES	Building Dimensions L(ft)	W(ft)	H(ft)	bldg vol(CF)	construct. descript.	concrete slab using bldg L & W & ft thickness of 1 calc. vol (CF)	avg. reinf. concrete foundation & ft thickness of 2 calc. vol (CF)	heavily reinf. concrete foundation ft thickness of 3 calc. vol (CF)	concrete demo cost $	bldg demo cost $	combined total cost $	NOTES *post mining use & 1987 means construction cost data ref. no. or crew id*
	AREA 15												
a	machine shop -EMPTY BLDG	140	60	32	268,800	steel	0	16,800		98,252	17,741	115,993	*empty bldg, use 30% of Means cost*
a	supplies warehouse no. 1-EMPTY	120	60	20	144,000	steel	7,200	0		21,840	9,504	31,344	*empty bldg, use 30% of Means cost*
a	no.2 warehouse	60	90	15	81,000	steel	5,400			16,380	17,820	34,200	*sold for scrap (original estimate)*
a	no.3 warehouse -REMOVED	120	50	30	180,000	steel	6,000			18,200	39,600	0	STRUCTURE HAS BEEN REMOVED
a	instrument shop ELEC BLDG A	40	40	20	32,000	mix	1,600			4,853	7,680	12,533	*1997 ESTIMATE INCLUDED AS ELECTRICAL BLDG A*
a?	lube pit & canopy	60	60	40	144,000	mix	3,600			10,920	34,560	45,480	*sold for scrap (original estimate)*
a	carpenter shop -REMOVED	40	40	20	32,000	mix	1,600			4,853	7,680	0	STRUCTURE HAS BEEN REMOVED
a	electric shop ELEC BLDG B	70	40	20	56,000	mix	2,800			8,493	13,440	21,933	*1997 ESTIMATE INCLUDED AS ELECTRICAL BLDG B*
a?	field maint. shop	50	50	20	50,000	mix	2,500			7,583	12,000	19,583	*sold for scrap (original estimate)*
	AREA 16												
a	lab & plant office - A	50	100	15	75,000	concrete	5,000			15,167	24,000	39,167	*sold for scrap (original estimate)*
a	lab & plant office - B	95	30	15	42,750	concrete	2,850			8,645	13,680	22,325	
	AREA 17												
a	main substation bldg	30	85	15	38,250	steel	2,550			7,735	8,415	16,150	*sold for scrap (original estimate)*
	AREA 18												
a	water intake - A	35	20	15	10,500	concrete	700			2,123	3,360	5,483	*sold for scrap (original estimate)*
a	water intake - B	35	20	15	10,500	concrete	700			2,123	3,360	5,483	
a	water treatment bldg	50	50	20	50,000	steel	2,500			7,583	11,000	18,583	*sold for scrap (original estimate)*
	AREA 23												
a	crystallizer facility - EMPTY BLDG	50	100	50	250,000	steel		10,000		58,483	16,500	74,983	**empty bldg. use 35% of Means cost; 1999BID WAS $46,500**
	AREA 24												
a	lake brine pumping station inlet	15	15	80	18,000	steel	225			683	3,960	4,643	*sold for scrap (original estimate)*
	AREA 26												
a?	salt circuit	20	20	20	8,000	steel				0	1,760	1,760	*sold for scrap (original estimate)*
	AREA 50												
o	pump station no. 4 - STATUS?	20	20	10	4,000	concrete				0	1,280	0	*1997 ESTIMATE INCLUDED UNER SITE 1R*
o	pump station no. 5 - STATUS?	20	20	10	4,000	concrete				0	1,280	0	*1997 ESTIMATE INCLUDED UNDER SITE 2R*
o	pump station no. 6 - STATUS?	20	20	10	4,000	concrete				0	1,280	0	*1997 ESTIMATE INCLUDED UNDER SITE 3R*
?	pump station no. 7 - STATUS?	20	20	10	4,000	concrete				0	1,280	1,280	*2.2-040-0080*
	AREA 50												
o	main slurry pit - STATUS?	40	40	1	1,600	concrete				0	512	0	*1997 ESTIMATE INCLUDED UNDER SITE 1P*
o	three aux pits - STATUS?	20	20	1	400	concrete				0	128	0	*1997 ESTIMATE INCLUDED UNDER SITE 1P*
o	pit bldgs - STATUS?	40	40	20	32,000	steel	SLAB?			0	7,040	0	*1997 ESTIMATE INCLUDED UNDER SITE 1P*
a	site 1-P concrete block bldg - A	15	15	10	2,250	concrete	225			683	720	1,403	
a	site 1-P metal tank	round	40	10	12,568	steel	1,257			3,813	2,765	6,578	
a	site 1-P quonset metal hut	30	10	10	3,000	steel	300			910	660	1,570	
a	site 1-P concrete block bldg - B	20	25	15	7,500	concrete	500			1,517	2,400	3,917	
a	site 1-P steel tower	10	10	30	3,000	steel	100			303	660	963	

bldg_demo 3/4

	BUILDINGS & STRUCTURES	Building Dimensions L(ft)	W(ft)	H(ft)	bldg vol(CF)	construct. descript.	concrete slab using bldg L & W & ft thickness of 1 calc. vol (CF)	avg. reinf. concrete foundation & ft thickness of 2 calc. vol (CF)	heavily reinf. concrete foundation ft thickness of 3 calc. vol (CF)	concrete demo cost $	bldg demo cost $	combined total cost $	NOTES *post mining use & 1987 means construction cost data ref. no. or crew id*
	MISC. BUILDINGS												
	salvage bldg - REMOVED	125	50	30	187,500	steel	6,250			18,958	41,250	0	STRUCTURE HAS BEEN REMOVED
	cement plant - REMOVED	60	60	60	216,000	steel	3,600			10,920	47,520	0	STRUCTURE HAS BEEN REMOVED
a	tailings treatment bldg - DUPLICAT	130	75	60	585,000	steel	0	19,500		114,043	128,700	0	line item from 1997 estimate - DUPLICATE, OMIT T
a?	electrical building - A -?DUPLICAT	40	60	15	36,000	steel	2,400			7,280	7,920	15,200	line item from 1997 estimate - IS THIS A DUPLICAT
a?	electrical building - B -?DUPLICAT	25	25	16	10,000	steel	625			1,896	2,200	4,096	line item from 1997 estimate - IS THIS A DUPLICAT
a	retarder pump building	15	20	10	3,000	steel	300			910	660	1,570	line item from 1997 estimate
a	feed receiving tanks(ore bins - 3)	3 round	30	30	63,626	steel	0	4,242		24,807	13,998	38,804	line item from 1997 estimate
a	concrete tank SW of coarse ore bin	1	4806	0	0	concrete	4,806			14,578	0	14,578	line item from 1997 estimate
a	tailings thickner - HOLLOW	round	250	10	490,938	steel	49,106			14,896	21,601	36,497	hollow tank, asphalt plank floor, use 20% of Means b
a	pre-sedimentation clarifier	round	85	10	56,752	concrete	5,677			17,219	18,161	35,380	line item from 1997 estimate
a	clariflocculator	round	55	10	23,761	concrete	2,377			7,209	7,604	14,813	line item from 1997 estimate
a	water storage tank	round,op	90	15	95,438	steel	6,364			19,305	20,996	40,301	line item from 1997 estimate
a	sewage treatment plant - 2 tanks	round	10	10	1,571	steel	157			477	346	822	line item from 1997 estimate
a	sewage treatment plant - 1 tank	round	20	10	3,142	steel	314			953	691	1,645	line item from 1997 estimate
a	elevated (tank on ground)sanitary	2 round	50	15	58,913	steel	3,928			11,916	12,961	24,877	line item from 1997 estimate
a	tank west of thickner - A	round	15	15	2,651	steel	177			536	583	1,119	line item from 1997 estimate
a	tank west of thickner - B	round	10	10	786	steel	79			238	173	411	line item from 1997 estimate
a	elevated tank(skimmer) NE of cryst	?	?	?	19,840	steel	324			983	4,365	5,348	line item from 1997 estimate
a	furnace (inside crystallizer)	REMOVE	?	?	?	steel	?			0	0	0	VERIFY ITEM REMOVED
a	truck scales ($1,000 + concrete)	?	?	?	4,348	steel	*			0	957	957	line item from 1997 estimate
a	conveyor to truck loadout (80 CY)	?	?	?	10	tons steel		1620		9,474	6,650	16,124	line item from 1997 estimate
a	conveyor galleries - IN OLD ESTIM		0	0	0	0	0			0	0	0	line item from 1997 estimate
a	site 2P - metal building - A	30	60	15	27,000	steel	1,800			5,460	5,940	11,400	line item from 1997 estimate
a	site 2P - metal building - B	15	15	10	2,250	steel	225			683	495	1,178	line item from 1997 estimate
a	site 2P - concrete block bldg - A	15	20	10	3,000	concrete	300			910	960	1,870	line item from 1997 estimate
a	site 2P - metal tank	round	10	25	1,964	steel	79			238	432	670	line item from 1997 estimate
a	site 2P - quonset hut	30	10	10	3,000	steel	300			910	660	1,570	line item from 1997 estimate
a	site 3P - concrete block bldg - A	20	25	10	5,000	concrete	500			1,517	1,600	3,117	line item from 1997 estimate
a	site 3P - concrete pit (116 CY)	50	20	15	NA	concrete	3,132			9,500	0	9,500	line item from 1997 estimate
a	site 3P - steel bridge (49 ton)	20	?	?	0	steel	0			0	0	31,850	1997 estimate - 49 tons steel, Means 020-718-3600
a	site 4P - concrete block bldg - A	10	10	10	1,000	concrete	100			303	320	623	line item from 1997 estimate
a	site 4P - concrete wall - A (30' dia)	94	4	1	NA	concrete	0	376		2,199	0	2,199	adjusted concrete volume by 1/2
a	site 1R - concrete block bldg - A	40	50	15	30,000	concrete	2,000			6,067	9,600	15,667	line item from 1997 estimate
a	site 1-R - horiz. steel tank - A	round	10	35	2,749	steel	79			238	605	843	line item from 1997 estimate
a	site 1-R - horiz. steel tank - B	round	15	20	3,535	steel	177			536	778	1,314	line item from 1997 estimate
a	site 2-R - concrete block bldg - A	40	50	15	30,000	concrete	2,000			6,067	9,600	15,667	line item from 1997 estimate
a	site 3-R - concrete block bldg - A	40	50	15	30,000	concrete	2,000			6,067	9,600	15,667	line item from 1997 estimate

DEMOLITION & REMOVAL OF BUILDINGS AND STRUCTURES - SUBTOTAL last revision 11-Aug-2000 **$6,356,777**

bldg_demo 4/4

RECLAMATION SURETY ESTIMATE DRAFT
MOAB SALT INCORPORATED
CANE CREEK MINE
M/019/005 GRAND COUNTY, UTAH
PREPARED BY UTAH STATE DIVISION OF OIL, GAS & MINING

last revision 11-Aug-2000
m19-05-2.wb3
page "earthwork"

1988	0.0181	$0
1989	0.0177	$0.00
1990	0.0077	$0.00
1991	0.0127	$0.00
1992	0.0221	$0.00
1993	0.0261	$0.00
1994	0.0321	$0.00
1995	0.0193	$0.00
1996	0.0242	$0.00
1997	0.0236	$0.00
1998	0.0502	$0.00
1999	0.0200	$0.00
2000	0.0313	$0.00

-Table 14-2 Earth Moving Costs in the original 6/30/89 estimate was used as template for this page.

-The "Rough Grading, Etc." section of the 3/4/97 EarthFax estimate included removal of the RR tracks, ties, & RR ballast, plant site regrading, lined pond east of lab, tailings dam, excavation at evaporation ponds, filling at evaporation ponds (342 acres) and hauling evaporation pond liner to the plant.
-The EarthFax estimate also included line items for: soil sampling, evaluation, & lab work for the plant area and evaporation ponds; surveying for rough grading; seed mix, seeding, straw mulch for the plant area and evaporation pond; and site maintenance.

"a" in left hand column indicates this line item was adjusted July 2000.
"a?" in left hand column indicates this line item was adjusted July 2000, with uncertainties

This color indicates the 1989 unit cost was escalated to the year 2000 cost shown here.

	EARTH MOVING COSTS	volume CY	haul distance FT	swell factor %	adjusted volume CY	man hrs per unit	unit cost $/CY	total cost $	NOTES & Means Heavy Construction Cost Data 2000 reference codes & Crew ID
	LANDFILL								
a	remove base soil & stockpile	10,700	350	20%	12,840	0.0190	1.88	24,139	02315-120-4420 - backfill, structural dozer or FE loader, from existing stockpile, no compacti
a	spread rubbish	80,000	local	0%	80,000	0.0100	1.26	100,800	02315-120-4220 - backfill, structural dozer or FE loader, from existing stockpile, no compacti
a	compact rubbish	80,000	local	0%	80,000	0.0006	0.76	60,800	02315-300-6020 - compaction, towed sheepsfoot or wobbly wheel roller, 6 inch lifts, 3 passe
a	landfill cover	16,000	1,200	20%	19,200	0.0400	3.52	67,584	02315-430-2300 excavation, bulk, scrapers, self propelled scraper, 21 CY, 1/4 push dozer, c
									+ 02315-120-4020 backfill, structural dozer of FE loader, 200 hp, 50ft haul, common earth $
	SOLAR PONDS								
a	base harvest - self loading scraper	273,000	3,000	20%	327,600	0.0190	3.29	1,077,804	02315-430-2100 - excavation, bulk, scrapers, self propelled scraper, 21 CY, 1/4 push dozer,
a	salt residue cleanup	30,000	3,000	30%	39,000	0.1600	14.99	584,610	Crew B-17, $56.27/hr + (0.5)Crew B-11L, $74.88/hr, all at 0.16 hr/CY
a	liner pickup & haul to landfill	60,000	15,840	25%	75,000	0.1800	27.82	2,086,500	Crew B-11M $58.18/hr + Crew B-34B $96.40/hr; all at 0.18 hr/cy - CHANGED FROM 1989 N
a	berm & perimeter road recontour (SY)	314,300	local	0%	314,300	0.0009	0.60	188,580	02310-440-0100 earthwork, grading, fine grading, large area, $0.60/SY
a	temporary drainage control	1,200	local	25%	1,500	0.0400	3.00	4,500	Crew B-11L, $75.59/hr at 0.04 hrs/unit
a	salt storage area(solid salt removal) VOLUME?	41,700	15,840	30%	54,210	0.2000	11.25	609,863	Crew B-17, $56.27/hr at 0.2 hrs/unit
	PLANT SITE								
a	solid salt removal	2,800	18,480	25%	3,500	0.2000	11.25	39,375	Crew B-17, $56.27/hr at 0.2 hrs/unit
a	saline soil removal	1,000	5,000	25%	1,250	0.1600	11.25	14,063	Crew B-17, $56.27/hr at 0.2 hrs/unit
a	contaminated soil removal	400	5,000	25%	500	0.1600	11.25	5,625	Crew B-17, $56.27/hr at 0.2 hrs/unit
a	leach brine collection trench - excavate	400	local	25%	500	0.0800	3.14	1,570	02315-900-0120 earthwork, excavation & fill, excavating trench 1 CY hydraulic backhoe
a	leach brine collection trench - backfill	400	local	25%	500	0.0170	3.14	1,570	02315-900-0120 earthwork, excavation & fill, excavating trench 1 CY hydraulic backhoe
a?	foundation backfill & recontour 1989 LINE ITEM	500	local	0%	500	0.0150	0.88	LOW VOL?	02315-120-5220 backfill, structural, dozer or FE loader, 300 hp, 150 ft haul, common earth
a	plant site regrading - cut EARTHFAX 97 VOLUME	146,500					2.13	312,045	02315-410-5220 excavating, bulk, dozer, 300 hp, 150 ft haul, common earth
a	plant site regrading - fill EARTHFAX 97 VOLUME	170,000					0.88	149,600	02315-120-5220 backfill, structural, dozer or FE loader, 300 hp, 150 ft haul, common earth

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	EARTH MOVING COSTS	volume CY	haul distance FT	swell factor %	adjusted volume CY	man hrs per unit	unit cost $/CY	total cost $	NOTES & Means Heavy Construction Cost Data 2000 reference codes & Crew ID
	DAMS & CATCH PONDS								
a	tailings lake dam removal	246,200	1,500	25%	307,750	0.0290	2.62	806,305	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY +
									+ 50% of 02315-400-1650 excavating, bulk, bank measure, common earth, 5 CY cap $0.97/CY => $2.62
a	tailings dam - excavating EARTHFAX 97 VOLUME	142,000					4.17	+H55*C55	02315-410-5420 excavating, bulk, dozer, 300 hp, 300 ft haul, common earth
a	tailings dam-filling over debris EARTHFAX 97 VOLU	142,000					1.26	+H56*C56	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove 3 existing dams -salt storage	14,000	local	25%	17,500	0.0100	2.13	37,275	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a	construct 7 reclamation dams around brine lake	24,000	350	25%	30,000	0.0300	2.85	85,500	02315-505-0190 fill, spread dumped material by dozer, no compaction, 300 hp, 300 ft haul
a	remove 7 reclamation dams	20,000	local	25%	25,000	0.0100	2.13	53,250	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a	remove 3 dams north of plant site	7,500	local	25%	9,375	0.0100	2.13	19,969	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a	remove 5 test well catch ponds - liner removal	250	local	25%	313	0.1000	5.62	1,756	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	remove 5 test well catch ponds -refill & contour	1,250	local	25%	1,563	0.0100	1.26	1,969	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove lined catch ponds-between RR & road- liner	140	local	25%	175	0.1000	5.62	984	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	remove lined catch ponds-between RR & road -refill	1,100	local	25%	1,375	0.0100	1.26	1,733	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove pump sta. no. 4 catch pond - liner removal	750	local	25%	938	0.1000	5.62	5,269	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	remove pump sta. no. 4 catch pond - refill & contour	1,900	local	25%	2,375	0.0100	1.26	2,993	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove dam below pump sta. no.4 catch pond	500	local	25%	625	0.0100	2.13	1,331	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a?	remove well no. 2 catch pond - liner removal	5,600	local	25%	7,000	0.1000	5.62	39,340	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a?	remove well no. 2 catch pond - refill & contour	2,320	local	25%	2,900	0.0100	1.26	3,654	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove 2 drainage collection dams -pump sta. no.5	4,300	local	25%	5,375	0.0100	2.13	11,449	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a	remove 2 drainage collection dams -pump sta. no.6	1,200	local	25%	1,500	0.0100	2.13	3,195	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a	remove well no. 8 catch dam	400	local	25%	500	0.0100	1.26	630	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove well no. 10 catch dam	800	local	25%	1,000	0.0100	1.26	1,260	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove well no. 16 catch basin	900	local	25%	1,125	0.0100	1.26	1,418	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove well no. 12 catch basin	300	local	25%	375	0.0100	1.26	473	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove well no. 4 catch basin	500	local	25%	625	0.0100	1.26	788	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove pump sta. no. 7 catch pond - liner	115	local	25%	144	0.1000	5.62	808	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	remove pump sta. no. 7 catch pond - refill & contour	390	local	25%	488	0.0100	1.26	614	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove 2 lined ponds in cyn below main slurry pit - l	950	local	25%	1,188	0.1000	5.62	6,674	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	remove 2 lined ponds in cyn below main slurry pit -r	6,400	local	25%	8,000	0.0100	1.26	10,080	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove 4 dams in drainage below pump sta. no. 7	5,900	local	25%	7,375	0.0100	2.13	15,709	02315-410-5220 excavating, bulk, dozer 300 hp, 150 ft haul, common earth $2.13/CY
a	remove cyn collect sys below no. 3 pond area - liner	300	local	25%	375	0.1000	5.62	2,108	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	(4 dams & collection trenches) - refill & contour	23,200	local	25%	29,000	0.0100	1.26	36,540	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove lined holding pond at no. 3 aux	310	local	25%	388	0.1000	5.62	2,178	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	slurry pit	1,600	local	25%	2,000	0.0100	1.26	2,520	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove collection sump below ponds 2J &2L	800	local	25%	1,000	0.0100	1.26	1,260	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	remove lined holding pond at Main	715	local	25%	894	0.1000	5.62	5,023	crew B-17, $56.27/hr at 0.1 hrs/unit => $5.62/CY; CHANGED FROM 1989 NOTES
a	slurry pit	2,700	local	25%	3,375	0.0100	1.26	4,253	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	miscellaneous earth work	20,000	local	0%	20,000	0.0100	1.26	25,200	02315-120-5420 backfill, structural, dozer or FE loader from existing stockpile, no compaction, 300 hp, 300 ft haul, common
a	loading & transporting PVC liner & saline soil to land	10,000	15,840	0%	10,000	0.1500	8.44	84,400	crew B-17, $56.27/hr at 0.15 hrs/unit => $8.44/CY; CHANGED FROM 1989 NOTES
a	railroad track removal (2 sets, 1 mi ea)EARTHFAX 9	10,560	LF	0%	10,560		8.20	86,592	02220-875-3500 site demolition, no hauling, railroad track removal, ties & track
a	railroad ballast removal (3'x40'x1mi)EARTHFAX 97	23,500	CY	0%	23,500		3.97	93,295	02220-875-3600 site demolition, no hauling, ballast

EARTH MOVING COST - SUBTOTAL

$6,786,817 EARTH MOVING COST - SUBTOTAL

last revision 11-Aug-2000

earthwork 2/2

RECLAMATION SURETY ESTIMATE
MOAB SALT INCORPORATED
CANE CREEK MINE GRAND COUNTY, UTAH
M/019/005
PREPARED BY UTAH STATE DIVISION OF OIL, GAS & MINING

DRAFT

last revision 11-Aug-2000
m19-05-2.wb3
page "equipdemo"

Table 14-1 of the original estimate of 6/30/89 was used as template for this page.
The number of units from the 6/30/89 estimate are used in each line item unless stated otherwise.
"a" in the left hand column indicates this line item has been adjusted July 19, 2000.
"?" in the left hand column indicates information in this line item is unconfirmed.
"a?" in the left hand column indicates this line item has been adjusted 7/19/00, but weights or volumes are unconfirmed.

THIS PAGE USES THE FIGURES FROM THE 1989 ESTIMATE FOR MATERIAL TABULATION (VOLUMES. WEIGHTS, ETC.).
THIS PAGE ESCALATES THE 1989 UNIT COSTS TO YEAR 2000 UNIT COSTS FOR SOME ITEMS.
YELLOW SHADING INDICATES THE 1989 ESTIMATE SAID THESE ITEMS SOLD FOR SCRAP.
TOTAL VOLUMES, WEIGHTS, OR #UNITS USED IN THIS ESTIMATE HAVE NOT BEEN CONFIRMED AS OF 7/20/00.

UNIT COSTS FOR EQUIPMENT REMOVAL BASED ON MEANS UNIT COSTS FOR DISPOSAL OF BUILDING DEBRIS.

a	Means Heavy Construction Cost Data 2000, Selective Demolition			
	Disposal only, urban buildings with salvage value allowed, including loading & 5mi. haul to dump			
a	02225-720-0200	steel frame	8.40	$/CY
a	02225-720-0300	concrete frame	9.90	$/CY
a	02225-720-0400	masonry construction	8.15	$/CY
a	02225-720-0500	wood frame	14.70	$/CY

ESCALATION CALCULATIONS

year	factor	amount
1988	0.0181	$0
1989	0.0177	0.00
1990	0.0077	0.00
1991	0.0127	0.00
1992	0.0221	0.00
1993	0.0261	0.00
1994	0.0321	0.00
1995	0.0193	0.00
1996	0.0242	0.00
1997	0.0236	0.00
1998	0.0502	0.00
1999	0.0200	0.00
2000	0.0313	0.00

FOR SHELVING MATERIALS USE CONVERSION OF 1CY = 1 TON.
FOR EQUIPMENT USE CONVERSION OF 1CY = 3 TON, 3X$8.40/CY = $25.20/CY.
FOR PLANT EQUIPMENT USE CONVERSION OF 1CY = 3 TON, 3X$8.40/CY = $25.20/CY.
FOR ELECTRIC EQUIPMENT USE CONVERSION OF 1CY = 1 TON.

DEMOLITION OR REMOVAL OF
EQUIPMENT WITHIN OR ASSOCIATED WITH BUILDINGS

	item description	concrete	steel	wood	other	equipment	total	units	$/unit	total costs	NOTES & Means 2000 Heavy Construction Cost Data reference codes
a	office furniture & equip		3	27	10	83	123	ton	83.58	10,280	1989 unit cost of $64.09 escalated to 2000 unit cost
a	site fencing	215	270				485	LF	2.00	970	02200-875-0650 site demolition, fencing, barbed wire, 5 strand
?	fire fighting equip					20	20		100.00	2,000	DOGM rough estimate of unit cost
a	No. 1 & 2 warehouse shelving	0	43.1	32.5	10	40	125.6	ton	8.40	1,055	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
	machine & maint. shop equip					80	80	ton	25.20	2,016	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
	Plant Equip Summary by Area										
a	Area 02-hoisting					234	234	ton	25.20	5,897	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 03-crushing, feed, receiving					764	764	ton	25.20	19,253	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 04-flotation					304.6	304.6	ton	25.20	7,676	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 05-drying & sizing					806	806	ton	25.20	20,311	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 06-product storage					387	387	ton	25.20	9,752	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 07-load & shipping					844	844	ton	25.20	21,269	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 09-salt treatment					974.4	974.4	ton	25.20	24,555	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 10-brine circuit					181.2	181.2	ton	25.20	4,566	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 11-reagent prep.					35.8	35.8	ton	25.20	902	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 15-shop cranes					38	38	ton	25.20	958	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 18-water system					317.8	317.8	ton	25.20	8,009	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 19-fuel distribution					130.6	130.6	ton	25.20	3,291	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 20-sewage system					42.2	42.2	ton	25.20	1,063	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 22-compactor circ.					331.4	331.4	ton	25.20	8,351	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 23-crystallizer					1032	1032	ton	25.20	26,006	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 24-salt disposal					126.2	126.2	ton	25.20	3,180	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 26-salt circuit					99.2	99.2	ton	25.20	2,500	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Area 50-52 field					341	341	ton	25.20	8,593	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	Misc. equipment					200	200	ton	25.20	5,040	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY

equipdemo 1/2

DEMOLITION OR REMOVAL OF
EQUIPMENT WITHIN OR ASSOCIATED WITH BUILDINGS

	item description	concrete	steel	wood	other	equipment	total	units	$/unit	total costs	NOTES & Means 2000 Heavy Construction Cost Data reference codes
	Field Piping Summary										
a	steel pipe (avg dia 8")		5048				5048	LF?	3.22	16,255	15055-600-2100 plumbing demo, piping, metal, 4" to 8" @ $8.05/LF; USE 40% => $3.22/LF
a	plastic pipe (avg dia 8")				412.8		50000	LF	0.67	33,500	1989 unit cost of $0.51 escalated to 2000 unit cost
a	valves & fittings					56	56	LF?	0.00	0	this cost included in1989 estimate with pipe removal
a	insulation				60.5		60.5	LF?	0.00	0	this cost included in1989 estimate with pipe removal
a	wood supports			286.5			286.5	LF?	0.00	0	this cost included in1989 estimate with pipe removal
	Plant Piping Summary										
a	steel pipe (avg dia 4")		742.9				742.9	LF?	3.22	2,392	15055-600-2100 plumbing demo, piping, metal, 4" to 8" @ $8.05/LF; USE 40% => $3.22/LF
a	asbestos cement (dia 8")	250.7					250.7	LF?	2.56	642	02220-875-3200 site demo, pipe removal, sewer/water, no excavation, 12" dia: USE 40% OF $6.40/
a	cement (avg dia 5.3")	72.6					72.6	LF?	3.20	232	02220-875-3200 site demo, pipe removal, sewer/water, no excavation, 12" dia: USE 50% OF $6.40/
a	plastic & hose (dia 4.6")				36.1		11860	LF	3.22	38,189	1989 unit cost of $2.47 escalated to 2000 unit cost => $3.22/LF
a	valves & fittings					150	150		0.00	0	this cost included in1989 estimate with pipe removal
a	insulation				11.5		11.5		0.00	0	this cost included in1989 estimate with pipe removal
	Field Electrical Summary										
a	equipment					532.4	532.4		8.40	4,472	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	cable, conduit, etc.				368.2		368.2		8.40	3,093	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
	Plant Electrical Summary										
a	equipment					477	477		8.40	4,007	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	cable, conduit, fixtures, instrumentation				185		185		8.40	1,554	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	PCB transformers						18	each	410.00	7,380	02100-300-1120 haz waste cleanup/pickup/disposal, solid pickup, bulk mtl, min $150/ton; USE 1 T
											add to above: 02100-300-1200 haz waste transport to disposal site, min $2.30/mile; USE 200 MI. =>
	Salvage Yard										
a	equipment					300	300		25.20	7,560	02225-720-0200 bldg demo, disposal only, incl loading & 5 mi haul, steel frame, $8.40/CY
a	pipe		271		4.7		275.7	LF??	2.56	706	02220-875-3200 site demo, pipe removal, sewer/water, no excavation, 12" dia: USE 40% OF $6.40/
a	wood			9.2			9.2	ton	41.79	384	1989 unit cost of $32.05 escalated to 2000 unit cost
a	cable spools				55		55	ton	57.22	3,147	1989 unit cost of $43.88 escalated to 2000 unit cost
	Bone Yard (pond area)										
a	pipe	6	839		5.9		850.9	LF??	2.56	2,178	02220-875-3200 site demo, pipe removal, sewer/water, no excavation, 12" dia: USE 40% OF $6.40/
a	hypalon				4.5		4.5	ton	41.79	188	1989 unit cost of $32.05 escalated to 2000 unit cost
a	equipment					15	15	ton	57.22	858	1989 unit cost of $43.88 escalated to 2000 unit cost
	Building Equipment										
a	plant wide bathroom fixtures, indoor pl					0	1	sum	2000.00	2,000	DOGM LUMP SUM ASSUMED
a	**Plant Wide HVAC**					85	85	ton	127.00	10,795	15055-300-0150 HVAC demolition, air conditioner, package unit, 3 ton $380/ea => $127/ton
NA?	**Total Weight**	544.3	7217	355.2	1164.2	9027.8	79738.6				
NA?	compaction factors used in 1989 est.	0.26	0.08	0.93	0.74	0.15	0.18				
NA?	**Compacted Volume (CY)**	141.518	577.36	330.336	861.508	1354.17	14352.95	CY			
	Transport to landfill -not used in this revision of the estimate							2(CY)	5.96	0	unit cost from 1989 estimate - NOT USED, MEANS COSTS INCLUDE LOADING & HAULING 5 MI

TOTAL COST - DEMOLITION OR REMOVAL OF EQUIPMENT ASSOCIATED WITH BUILDINGS = **$337,027**

note - figures carried to 2 decimal places & rounded

last revision **11-Aug-2000**

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RECLAMATION SURETY ESTIMATE
MOAB SALT INCORPORATED
CANE CREEK MINE GRAND COUNTY
M/019/005
PREPARED BY UTAH STATE DIVISION OF OIL, GAS & MINING

DRAFT
last revision 11-Aug-2000
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Table 14-3 of the original 6/30/89 estimate was used as a template for this page.
ALL TASK DESCRIPTIONS, UNITS & NUMBER OF UNITS IN THIS SPREADSHEET WERE TAKEN FROM TABLE 14-3 OF THE 6/30/89 ESTIMATE.
Unit costs from the 6/30/89 estimate were escalated to year 2000 costs using actual escalation factors from years 1989 - 1999.
Unit costs from the 6/30/89 estimate are included in the "NOTES" column in italicized print.
Revegetation tasks from Table 14-3 of the 6/30/89 estimate are shown here, but no revegetation costs were included on this page.
Revegetation costs are estimated on the SUMMARY page.
Means Heavy Construction Cost Data 2000 codes may be referenced in the "NOTES" column.

	ITEM DESCRIPTION	UNIT	UNIT COST	NO. UNITS	TOTAL COS		NOTES	
							1989-$	Means #
	PREPARATIONS TO BEGIN RECLAMATIO							
a	repair & maintenance of pumping system	lot		1	$206,138		*135,501.00*	
	pipelines, equipment, electrical, instruments,							
a	relocate 8" slurry line	ft	5.22	6,400	$33,408		*4.00*	
a	relocate 4" flush water line	ft	2.39	2,000	$4,780		*2.39*	
a	relocate maint. equip. to field shop	lot		1	$5,832		*4,472.00*	
a	relocate lab to main office bldg.	lot		1	$5,832		*4,472.00*	
a	injection well prep (2 workovers)	lot		1	$97,185		*74,526.00*	
a	miscellaneous preparations	lot		1	$88,350		*67,751.00*	
	LEACH EQUIPMENT PURCHASE							
a	6" header pipe	ft	2.20	17,000	$37,400		*1.69*	
a	wheel-line motor units	each	13,112.00	8	$104,896		*1,006.00*	
a	4" dia wheel-line with sprinklers	ft	3.17	4,300	$13,631		*2.43*	
a	2" PVC pipe	ft	0.48	6,000	$2,880		*0.37*	
a	3" PVC pipe	ft	0.89	1,000	$890		*0.68*	
a	T's & fittings	lot			$884		*678.00*	
a	sprinklers for tails & landfill	each	22.09	25	$552		*16.94*	
	OPERATING COSTS							
a	utilities - pumping electric power	KW	0.05	31,200,000	$1,560,000		*0.04*	
a	utilities - office bldg. electric power	KW	0.05	1,400,000	$70,000		*0.04*	
a	utilities - miscellaneous electric power	KW	0.05	3,260,000	$163,000		*0.04*	
a	utilities - office bldg. natural gas	Thrm	0.48	110,000	$52,800		*0.37*	
	HARVEST OF SOLAR POND EVAPORATIO							
a	22 CY scraper rental	wk	2,465.00	24	$59,160		*1,890.00*	
a	scraper operation & maintenance	hr	44.18	2,870	$126,797		*33.88*	
a	operating labor	Mhr	26.81	2,870	$76,945		*20.56*	
a	misc. equip operation (add 10%)	lot			$26,289		*20,160.00*	
a	slurry pit operation	Mhr	26.81	6,420	$172,120		*20.56*	
	POND & PLANT AREA LEACH SYSTEM							
a	installation & resetting labor	hr	23.39	2,022	$47,295		*17.94*	
a	operation labor	Mhr	20.89	2,422	$50,596		*16.02*	
a	repair & maintenance wheel-line system	lot		1	$17,670		*13,550.00*	
a	pumping systems operating labor	Mhr	25.31	51,100	$1,293,341		*19.41*	
a	repair & maintenance field pumping system	lot			$176,699		*135,501.00*	
a	pipelines, equipment, electrical, instruments,							
a	repair & maintenance water plant	lot			$151,078		*115,854.00*	
a	repair & maintenance injection wells	lot			$150,194		*115,176.00*	
a	evaporation dye (blue)	lot			$35,340		*27,100.00*	
a	installation of used 10" drain pipe	ft	13.12	3,500	$45,920		*10.16*	

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	ITEM DESCRIPTION	UNIT	UNIT COST	NO. UNITS	TOTAL COST		NOTES 1989-$	Means #
a	**SALT STORAGE AREA LEACH**							
a	rent pumper truck w/spray nozzles	wk	17,676.00	6	$106,056		13,555.00	
a	pumper truck operation & maintenance	hr	26.51	930	$24,654		20.33	
a	truck crew (3 man)	Mhr	25.31	2,790	$70,615		19.41	
a	firehose crew (3 man)	Mhr	20.89	2,230	$46,585		16.02	
a	sprinkling system installation & removal	Mhr	21.73	450	$9,779		16.66	
a	resetting labor	Mhr	20.89	300	$6,267		16.02	
a	sprinkling system repair & maintenance	lot			$795		610.00	
	LANDFILL LEACH							
a	sprinkler system installation (crew A-5)	Mhr	21.73	60	$1,304		16.66	
a	resetting & removal labor	Mhr	20.89	80	$1,671		16.02	
a	installation of used transfer pump	lot			$1,414		1,084.00	
	HIGH PRESSURE MINE INJECTION							
a	triplex pump rent	wk	1,591.00	8	$12,728		1,220.00	
a	pump operation & maintenance	hr	17.67	1,248	$22,052		13.55	
a	hook up & removal	Mhr	32.39	20	$648		24.84	
a	well preparation (set packer)	lot			$17,670		13,550.00	
a	pickup trucks rental	MO	335.73	540	$181,294		257.45	
a	pickup trucks operation & maintenance	lot			$88,350		67,751.00	
a	welding trucks rental	MO	530.09	180	$95,416		406.50	
a	self propelled 12.5 ton capacity crane	MO	1,935.00	60	$116,100		1,484.00	
a	flatbed truck rental	MO	531.00	36	$19,116		407.00	
a	miscellaneous equipment rental	lot			$44,174		33,875.00	
a	maintenance equipment operation & maint.	lot			$79,515		60,976.00	
	REVEGETATION COSTS							
a-0	evaporation ponds	acre	0.00	461	$0		135.50	
a-0	salt storage area	acre	0.00	45	$0		135.50	
a-0	miscellaneous disturbed areas	acre	0.00	29	$0		135.50	
a-0	reseeding	acre	0.00	100	$0		135.50	
a-0	fertilizer	acre	0.00	635	$0		24.25	
a	monitoring after year 11	lot			$0		6,098.00	

RECLAMATION PREPARATION SUBTOTAL **$5,824,104**

last revision 11-Aug-2000

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