

MOAB MILL RECLAMATION TRUST

c/o PricewaterhouseCoopers LLP
1100 Louisiana Street
Suite 4100
Houston, Texas 77002

December 19, 2000

Mr. Philip Ting, Chief
United States Nuclear Regulatory Commission
High-Level Waste and Uranium Project Branch
Division of Waste Management
Office of Nuclear Safety and Safeguards
Washington, D.C. 20555-0001

Re: Moab Mill Reclamation Trust – License Condition SVA-1999
Corrective Action Program Review

Dear Mr. Ting:

This report is submitted in accordance with License Condition #17C of our source Material No. SVA-917. This Corrective Action Program (CAP) review summarizes Moab Reclamation Trust's progress toward attaining groundwater protection standards.

Included herein is discussion on the following:

- Dewatering wells (ALARA Demonstration)
- Seepage collection from toe drains
- Installation of wicks on the impoundment

Moab Reclamation Trust's primary effort has been directed at drying the tailings impoundment, thus reducing the hydraulic head upon the groundwater immediately below the tailings facility. Water evaporation has been occurring through (a) natural evaporation, (b) evaporation from seepage collection from existing toe drains, and (c) evaporation from entrained solution recovered by the dewatering wells installed prior to July 1, 1990. The enhanced evaporation system was disconnected in 1992 and removed from the impoundment.

Dewatering Wells

During 2000 approximately 672,357 gallons (see Table 1) of solution were recovered from the tailings via the recovery well system (6 wells). This compares to the estimated 762,536 gallons reported for 1999. During the summer of 1999, number 8 dewatering well went dry and was dry in 2000, so only 6 wells were pumping in 2000.

Based on constituent analysis (see Exhibit) performed by Energy Laboratories on a composite sample collected by Moab Reclamation Trust personnel during July 2000, the constituent mass recovered from the tailings was calculated. Table 2 "Constituent Mass Recovered," shows the calculated results. Calculations are shown in Exhibit 2. The total dissolved mass recovered in 2000 are calculated to be 336,176 pounds, or approximately 48,025 pounds per month (compared to 61,771 pounds per month for 1999.) All dewatering wells were turned off November 1, 2000, and may be turned on in early spring when freezing conditions no longer exist.

Seepage Collected from Toe Drains

There are no drain collection sumps remaining on the embankment. The sump on the south side was removed in August 1992. There was no detectable solution in the north sump during 1996 and it was removed.

Natural Evaporation

In 1995, all of the solution in the surface pond evaporated for the first time. During October and November of 1996, the interim cover was applied to the remaining uncovered central portion of the tailings pond. The pond was dry during the summer months of 1997, 1998, 1999 and 2000.

Installation of Wicks on the Impoundment

In September of this year SRK started installing approximately 17,000 wicks to enhance the dewatering of the tailing impoundment. As of this date (December 19, 2000) all of the wicks have been installed and are being covered with soil.

Summary

This review indicates that activities conducted by Moab Reclamation Trust to recover solution from within the tailings continues to decrease the hydraulic head and constituent mass from the mounded groundwater system directly beneath the tailings facility.

I trust this review satisfies the requirement contained in License Condition #17C. Please contact me at your earliest convenience should you have any questions concerning the information contained herein.

Sincerely,



James P. Langley
Director

Table 1

Total Gallons from Dewatering Well

2000

April	=	83,171 gal
May	=	97,493 gal
June	=	84,860 gal
July	=	114,583 gal
August	=	94,126 gal
September	=	90,052 gal
October	=	108,072 gal
Total	=	672,357 gal

Table 2

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL LBS
Ra 228 E-11 lbs.	--	--	--	E-12 3.99	E-12 6.69	E-12 4.08	E-12 5.51	E-12 4.52	E-12 4.33	E-12 5.19	--	--	E-11 3.43
Ra 226 E-8 lbs.	--	--	--	E-7 5.64	E-7 6.61	E-7 5.75	E-7 7.76	E-7 6.38	E-7 6.10	E-7 7.32	--	--	E-6 4.56
U lbs.	--	--	--	23	27	23	31	26	25	30	--	--	185
TDS lbs.	--	--	--	22,902	26,846	23,367	31,552	25,919	24,797	29,759	--	--	185,142
Se lbs.	--	--	--	.31	.37	.32	.43	.35	.34	.41	--	--	2.53
V lbs.	--	--	--	.50	.59	.51	.69	.57	.54	.65	--	--	4.1
Ag lbs.	--	--	--	0	0	0	0	0	0	0	--	--	0
Ni Lbs.	--	--	--	.26	.31	.27	.36	.30	.29	.34	--	--	2.13
Mo lbs.	--	--	--	1.27	1.49	1.30	1.75	1.44	1.38	1.65	--	--	10.28
Pb lbs.	--	--	--	0	0	0	0	0	0	0	--	--	0
Cr lbs.	--	--	--	0	0	0	0	0	0	0	--	--	0
NO3 lbs.	--	--	--	50	58	51	69	56	54	65	--	--	403
SO4 lbs.	--	--	--	14,366	16,839	14,658	19,792	16,258	15,555	18,667	--	--	116,135
Cl lbs.	--	--	--	582	683	594	802	659	630	757	--	--	4,707
Na Lbs.	--	--	--	3,660	4,290	3,734	5,042	4,142	3,962	4,755	--	--	29,585
												TOTAL	336,176

Ra²²⁸

Assays 1.6 pci/L Avg.

$$\frac{(T \frac{1}{2} * At \text{ wgt}) Ra^{226}}{(T \frac{1}{2} * At \text{ wgt}) \text{ Element}} =$$

$$\frac{(1602 \text{ y}) (226)}{(5.75 \text{ y}) (228)} = \frac{362052}{1311} = 276 \text{ u/gm Ra}^{228}$$

$$\frac{1 \text{ ci}}{\text{ci/gm}} = \text{gm}$$

$$1 \text{ ci} = .0036 \text{ gm Ra}^{228}$$

$$1 \text{ pci} = 3.6 \text{ E-15 gm Ra}^{228}$$

$$(3.6 \text{ E-15 gm/pci}) (1.6 \text{ pci/L}) = 5.76 \text{ E-15 gm}$$

$$\frac{(5.76 \text{ E-15 gm}) (3.785 \text{ L/gal})}{453.6 \text{ g/lb}} = 4.81 \text{ E-17 lbs/gal}$$

2000

$$\text{April} \quad (4.81 \text{ E-17 lbs/gal}) (83,171 \text{ gal}) = 3.99 \text{ E-12 lbs}$$

$$\text{May} \quad (4.81 \text{ E-17 lbs/gal}) (97,493 \text{ gal}) = 6.69 \text{ E-12 lbs}$$

$$\text{June} \quad (4.81 \text{ E-17 lbs/gal}) (84,860 \text{ gal}) = 4.08 \text{ E-12 lbs}$$

$$\text{July} \quad (4.81 \text{ E-17 lbs/gal}) (114,583 \text{ gal}) = 5.51 \text{ E-12 lbs}$$

$$\text{August} \quad (4.81 \text{ E-17 lbs/gal}) (94,126 \text{ gal}) = 4.52 \text{ E-12 lbs}$$

$$\text{September} \quad (4.81 \text{ E-17 lbs/gal}) (90,052 \text{ gal}) = 4.33 \text{ E-12 lbs}$$

$$\text{October} \quad (4.81 \text{ E-17 lbs/gal}) (108,072 \text{ gal}) = 5.19 \text{ E-12 lbs}$$

$$\text{Total} = 3.43 \text{ E-11 pounds}$$

Ra²²⁶

Assays 81.2 pci/L Avg.

$$1 \text{ gm Ra}^{226} = 1 \text{ ci Ra}^{226}$$

$$81.2 \text{ pci} = 81.2 \text{ E-11 ci} = 81.2 \text{ E-11 gm}$$

$$\frac{(81.2 \text{ E-11 gm})(3.785 \text{ L/gal})}{453.6 \text{ g/lb}} = 6.77 \text{ E-12 lbs/gal}$$

2000

April	(6.77 E-12 lbs/gal) (83,171 gal)	= 5.64 E-7 lbs
May	(6.77 E-12 lbs/gal) (97,393 gal)	= 6.61 E-7 lbs
June	(6.77 E-12 lbs/gal) (84,860 gal)	= 5.75 E-7 lbs
July	(6.77 E-12 lbs/gal) (114,583 gal)	= 7.76 E-7 lbs
August	(6.77 E-12 lbs/gal) (94,126 gal)	= 6.38 E-7 lbs
September	(6.77 E-12 lbs/gal) (90,052 gal)	= 6.10 E-7 lbs
October	(6.77 E-12 lbs/gal) (108,072 gal)	= 7.32 E-7 lbs
	Total	= 4.56 E-6 pounds

U

Assays 32.7 mg/L Avg.

$$\frac{(32.7 \text{ mg/L}) (3.785 \text{ L/gal})}{(1,000 \text{ mg/g}) (453.6 \text{ g/lb})} = .00027 \text{ lbs/gal}$$

2000

April	(.00027 lbs/gal) (83,171 gal)	= 23 lbs
May	(.00027 lbs/gal) (97,493 gal)	= 27 lbs
June	(.00027 lbs/gal) (84,860 gal)	= 23 lbs
July	(.00027 lbs/gal) (114,583 gal)	= 31 lbs
August	(.00027 lbs/gal) (94,126 gal)	= 26 lbs
September	(.00027 lbs/gal) (90,052 gal)	= 25 lbs
October	(.00027 lbs/gal) (108,072 gal)	= 30 lbs
	Total	= 185 lbs.

TDS

Assays 33,000 mg/L Avg.

$$\frac{(33,000 \text{ mg/L}) (3.785 \text{ L/gal})}{(1,000 \text{ mg/g}) (453.6 \text{ g/lb})} = 0.2754 \text{ lbs/gal}$$

2000

April	(.2754 lbs/gal) (83,171 gal)	= 22,902 lbs
May	(.2754 lbs/gal) (97,493 gal)	= 26,846 lbs
June	(.2754 lbs/gal) (84,860 gal)	= 23,367 lbs
July	(.2754 lbs/gal) (114,583 gal)	= 31,552 lbs
August	(.2754 lbs/gal) (94,126 gal)	= 25,919 lbs
September	(.2754 lbs/gal) (90,052 gal)	= 24,797 lbs
October	(.2754 lbs/gal) (108,072 gal)	= 29,759 lbs
	Total	= 185,142 lbs

Se

Assays 0.451 mg/L Avg.

$$\frac{(0.451 \text{ mg/L}) (3.785 \text{ L/gal})}{(1,000 \text{ mg/g}) (453.6 \text{ g/lb})} = 3.76 \text{ E-6 lbs/gal}$$

2000

April	(3.76 lbs/gal) (83,171 gal)	= 0.31 lbs
May	(3.76 lbs/gal) (97,493 gal)	= 0.37 lbs
June	(3.76 lbs/gal) (84,860 gal)	= 0.32 lbs
July	(3.76 lbs/gal) (114,583 gal)	= 0.43 lbs
August	(3.76 lbs/gal) (94,126 gal)	= 0.35 lbs
September	(3.76 lbs/gal) (90,052 gal)	= 0.34 lbs
October	(3.76 lbs/gal) (108,072 gal)	= 0.41 lbs
	Total	= 2.53 lbs

V

Assays 0.72 mg/L Avg.

$$\frac{(0.72 \text{ mg/L}) (3.785 \text{ L/gal})}{(1,000 \text{ mg/g}) (453.6 \text{ g/lb})} = 6.0 \text{ E-6 lbs/gal}$$

2000

April	(6.0 E-6 lbs/gal) (83,171 gal)	= 0.50 lbs
May	(6.0 E-6 lbs/gal) (97,493 gal)	= 0.59 lbs
June	(6.0 E-6 lbs/gal) (84,860 gal)	= 0.51 lbs
July	(6.0 E-6 lbs/gal) (114,583 gal)	= 0.69 lbs
August	(6.0 E-6 lbs/gal) (94,126 gal)	= 0.57 lbs
September	(6.0 E-6 lbs/gal) (90,052 gal)	= 0.54 lbs
October	(6.0 E-6 lbs/gal) (108,072 gal)	= 0.65 lbs
	Total	= 4.1 lbs

Ag
Assays less than 0.01 mg/L

2000

April	0 lbs.
May	0 lbs.
June	0 lbs.
July	0 lbs.
August	0 lbs.
September	0 lbs.
October	0 lbs.

Ni

Assays 0.38 mg/L Avg.

$\frac{(0.38 \text{ mg/l}) (3.785 \text{ L/gal})}{(1000 \text{ mg/g}) (453.6 \text{ g/lb.})} = 3.17 \text{ E-6 lbs./gal.}$

2000

April	(3.17 E-6 lbs/gal.) (83,171 gal.)	= 0.26 lbs.
May	(3.17 E-6 lbs/gal.) (97,493 gal.)	= 0.31 lbs.
June	(3.17 E-6 lbs/gal.) (84,860 gal.)	= 0.27 lbs.
July	(3.17 E-6 lbs/gal.) (114,583 gal.)	= 0.36 lbs.
August	(3.17 E-6 lbs/gal.) (94,126 gal.)	= 0.30 lbs.
September	(3.17 E-6 lbs/gal.) (90,052 gal.)	= 0.29 lbs.
October	(3.17 E-6 lbs/gal.) (108,072 gal.)	= 0.34 lbs.

Total = 2.13 pounds

Mo

Assays 1.83 mg/L Avg.

$\frac{(1.83 \text{ mg/l}) (3.785 \text{ L/gal})}{(1000 \text{ mg/g}) (453.6 \text{ g/lb.})} = 1.5 \text{ E-5 lbs./gal.}$

2000

April (1.5 E-5 lbs/gal.) (83,171 gal.) = 1.27 lbs.

May (1.5 E-5 lbs/gal.) (97,493 gal.) = 1.49 lbs.

June (1.5 E-5 lbs/gal.) (84,860 gal.) = 1.30 lbs.

July (1.5 E-5 lbs/gal.) (114,583 gal.) = 1.75 lbs.

August (1.5 E-5 lbs/gal.) (94,126 gal.) = 1.44 lbs.

September (1.5 E-5 lbs/gal.) (90,052 gal.) = 1.38 lbs.

October (1.5 E-5 lbs/gal.) (108,072 gal.) = 1.65 lbs.

Total = 10.28 pounds

Pb
Assays less than 0.05 mg/L Avg.

2000

April	0 lbs.
May	0 lbs.
June	0 lbs.
July	0 lbs.
August	0 lbs.
September	0 lbs.
October	0 lbs.

Cr
Assays less than 0.05 mg/L Avg.

2000

April 0 lbs.

May 0 lbs.

June 0 lbs.

July 0 lbs.

August 0 lbs.

September 0 lbs.

October 0 lbs.

NO3

Assays 71.7 mg/L Avg.

$(71.7 \text{ mg/L}) (3.785 \text{ L/gal}) = .001 \text{ lbs./gal.}$

$(1000 \text{ mg/g}) (453.6 \text{ g/lb.})$

2000

April (.001 lbs/gal.) (83,171 gal.) = 50 lbs.

May (.001 lbs/gal.) (97,493 gal.) = 58 lbs.

June (.001 lbs/gal.) (84,860 gal.) = 51 lbs.

July (.001 lbs/gal.) (114,583 gal.) = 69 lbs.

August (.001 lbs/gal.) (94,126 gal.) = 56 lbs.

September (.001 lbs/gal.) (90,052 gal.) = 54 lbs.

October (.001 lbs/gal.) (108,072 gal.) = 65 lbs.

Total = 403 pounds

SO4

Assays 20,700 mg/L Avg.

$\frac{(20,700 \text{ mg/L}) (3.785 \text{ L/gal})}{(1000 \text{ mg/g}) (453.6 \text{ g/lb.})} = .17 \text{ lbs./gal.}$

2000

April (.17 lbs/gal.) (83,171 gal.) = 14,366 lbs.

May (.17 lbs/gal.) (97,493 gal.) = 16,839 lbs.

June (.17 lbs/gal.) (84,860 gal.) = 14,658 lbs.

July (.17 lbs/gal.) (114,583 gal.) = 19,792 lbs.

August (.17 lbs/gal.) (94,126 gal.) = 16,258 lbs.

September (.17 lbs/gal.) (90,052 gal.) = 15,555 lbs.

October (.17 lbs/gal.) (108,072 gal.) = 18,667 lbs.

Total = 116,135 pounds

Cl

Assays 894 mg/L Avg.

$(894 \text{ mg/L}) (3.785 \text{ L/gal}) = .007 \text{ lbs./gal.}$

$(1000 \text{ mg/g}) (453.6 \text{ g/lb.})$

2000

April (.007 lbs/gal.) (83,171 gal.) = 582 lbs.

May (.007 lbs/gal.) (97,493 gal.) = 683 lbs.

June (.007 lbs/gal.) (84,860 gal.) = 594 lbs.

July (.007 lbs/gal.) (114,583 gal.) = 802 lbs.

August (.007 lbs/gal.) (94,126 gal.) = 659 lbs.

September (.007 lbs/gal.) (90,052 gal.) = 630 lbs.

October (.007 lbs/gal.) (108,072 gal.) = 757 lbs.

Total = 4,707 pounds

Na

Assays 5,310 mg/L Avg.

$(5,310 \text{ mg/L}) (3.785 \text{ L/gal}) = .044 \text{ lbs./gal.}$

$(1000 \text{ mg/g}) (453.6 \text{ g/lb.})$

2000

April	(.044 lbs/gal.) (83,171 gal.)	= 3,660 lbs.
May	(.044 lbs/gal.) (97,493 gal.)	= 4,290 lbs.
June	(.044 lbs/gal.) (84,860 gal.)	= 3,734 lbs.
July	(.044 lbs/gal.) (114,583 gal.)	= 5,042 lbs.
August	(.044 lbs/gal.) (94,126 gal.)	= 4,142 lbs.
September	(.044 lbs/gal.) (90,052 gal.)	= 3,962 lbs.
October	(.044 lbs/gal.) (108,072 gal.)	= 4,755 lbs.
		Total = 29,585 pounds



Billings • Casper • Gillette
Helena • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2993 SALT CREEK HIGHWAY • CASPER, WY 82601
MAILING: P.O. BOX 3258 • CASPER, WY 82602
E-mail: casper@energylab.com • FAX: (307) 234-1639
PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT

Client:
Moab Reclamation Trust
Dale Edwards
PO Box 1207
Moab, UT 84532

Project ID: MOAB MILL SITE
Sample ID: D.W. SAMPLE COMP.
Laboratory ID: 00-34688-1
Sample Matrix: Liquid P.O. Number: A-7541
Sample Date / Time: 26-Jul-00 NST
Received Date: 27-Jul-00 1000 Date Reported: August 28, 2000 1355

Constituent	Results	Units	Reporting		Date / Time Analyzed
			Limit	Method	
✕ Chloride, Dissolved	894	mg/l	1	EPA 200.7	01-Aug-00 1118 cp
✕ Chromium, Dissolved	<0.05	mg/l	0.05	EPA 200.7	01-Aug-00 1118 cp
✕ Lead, Dissolved	<0.05	mg/l	0.05	EPA 200.7	01-Aug-00 1118 cp
✕ Molybdenum, Dissolved	1.83	mg/l	0.05	EPA 200.7	01-Aug-00 1118 cp
✕ Nickel, Dissolved	0.38	mg/l	0.05	EPA 200.7	01-Aug-00 1118 cp
✕ Nitrate + Nitrite as N	71.7	mg/l	0.1	EPA 353.2	02-Aug-00 1537 rwk
✕ Selenium, Dissolved	0.451	mg/l	0.001	EPA 200.8	09-Aug-00 0701 ts
✕ Silver, Dissolved	<0.01	mg/l	0.01	EPA 200.8	09-Aug-00 0701 ts
✕ Sodium, Dissolved	5310	mg/l	1	EPA 200.7	01-Aug-00 1118 cp
✕ Sulfate, Dissolved	20700	mg/l	1	EPA 200.7	01-Aug-00 1118 cp
✕ Total Dissolved Solids	33000	mg/l	10	SM 2540-C	01-Aug-00 1345 jr
✕ Vanadium, Dissolved	0.72	mg/l	0.1	EPA 200.7	01-Aug-00 1118 cp
✕ Uranium Natural	32.7	mg/l	0.0003	EPA 200.8	09-Aug-00 0701 ts
Gross Alpha, Dissolved	29000	pCi/l	1	EPA 900.0	03-Aug-00 1200 lh
Alpha Error Estimate	170	pCi/l		EPA 900.0	03-Aug-00 1200 lh
✕ Radium 226, Dissolved	81.2	pCi/l	0.2	EPA 903.0	07-Aug-00 1200 rs
Radium 226 Error Estimate	2.9	pCi/l		EPA 903.0	07-Aug-00 1200 rs
✕ Radium 228, Dissolved	1.6	pCi/l	1	EPA 904.0	14-Aug-00 1200 lh
Radium 228 Error Estimate	0.2	pCi/l		EPA 904.0	14-Aug-00 1200 lh

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**QUALITY ASSURANCE REPORT
MOAB RECLAMATION TRUST**

Laboratory ID Range: 34688-1
Report Date: August 28, 2000

Major Ions	Method	RPD ₁	Spike ₂	Analyst	Date Analyzed
Sodium	EPA 200.7	1.9	92	jal	08-01-00
Sulfate	EPA 200.7	0.2	89	jal	08-01-00
Chloride	EPA 200.7	0.3	101	jal	08-01-00
Nitrate + Nitrite	EPA 353.2	2.2	109	rk	08-02-00

Non-Metals					
Total Dissolved Solids	SM 2540-C	0.2	98	jr	08-04-00

Trace Metals					
Chromium	EPA 200.7	0.0	100	jal	08-01-00
Lead	EPA 200.7	4.5	91	jal	08-01-00
Molybdenum	EPA 200.7	3.1	95	jal	08-01-00
Nickel	EPA 200.7	3.4	90	jal	08-01-00
Selenium	EPA 200.8	0.0	102	ts	08-08-00
Silver	EPA 200.7	0.0	81	jal	08-01-00
Vanadium	EPA 200.7	2.1	98	jal	08-01-00

Radiometrics					
Uranium	EPA 200.8	0.4	112	ts	08-08-00
Radium 226	EPA 903.0	0.0	91	rs	08-07-00
Radium 228	EPA 904.0	0.0	128	lh	08-14-00
Gross Alpha	EPA 900.0	0.0	100	rs	08-03-00

NOTES:

- (1) These values are an assessment of analytical precision. The acceptance range is 0-20% for sample results above 10 times the reporting limit. This range is not applicable to samples with results below 10 times the reporting limit.
- (2) These values are an assessment of analytical accuracy. They are a percent recovery of the spike addition. ELI Reviewed By: a matrix spike on 10 percent of all samples for each analytical method.

Report Approved By:

STEVEN E. CARLSON
ORGANICS SUPERVISOR

Reviewed By:

ROGER CARLINO
LABORATORY SUPERVISOR

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MOAB MILL RECLAMATION TRUST

c/o PricewaterhouseCoopers LLP
1201 Louisiana Street
Houston, Texas 77002

December 21, 2000

Carolyn Huntoon, Ph.D.
Assistant Secretary for Environmental Management
U.S. Department of Energy
1000 Independence Avenue, SE
Washington, DC 20585

By Federal Express

Re: Moab Mill Reclamation Trust - Request for Early Funding of Title X Claim

Executive Summary. The Trust exists for the sole purpose of reclamation of the Moab Mill Site. It derives much of its funding from payments under DoE's Title X program. The Trust is nearing the end of currently available funds. Recent legislation effectively will stop the Trust's reclamation efforts as of next October. At that time it is anticipated that more than \$2,000,000 will be due the Trust for past expenditures covered by the Title X program. In the normal payment cycle, this money would not be payable until May of 2002. Thus, the money cannot then be used for reclamation purposes since the legislation will operate as a bar. If the money were to be paid earlier than in the normal course, the funds can be used currently to place the Site in a safe condition for transfer to DoE. The Trust is willing to waive a substantial portion of its claim to assist in this effort. The Trust requests that the Department allow a one-time early payment of the Trust's claim.

Dear Ms. Huntoon:

The United States Nuclear Regulatory Commission ("NRC") and the State of Utah, Department of Environmental Quality (the "State") designated PricewaterhouseCoopers LLP ("PWC") with trust responsibility of the Moab Mill Reclamation Trust (the "Trust" or "Licensee"). The Trust was created to carry out reclamation of the site (the "Site") located in Moab, Utah and formerly operated by Atlas Corporation ("Atlas") under NRC

License SUA-917 (the "License"). The Site contains a large (13,000,000-ton) area of mill tailings referred to as the "Pile."

On December 1, 1999, an agreement (the "Trust Agreement") was executed between Atlas as Trustor and William B. Abington, a Partner of PricewaterhouseCoopers LLP as Trustee, creating the Trust.

As Licensee, the Trust is entitled to receive reimbursements under the so-called Title X Program administered by the U.S. Department of Energy ("DoE"). It has been determined that DoE's share of appropriate reclamation costs at the Site amounts to 56.1% of that expended.

By legislation signed by the President in October of this year, the Site is to be transferred by the Trust to DoE and the License terminated by the anniversary of the date of the law. The Trust is proceeding with the reclamation of the Site in accordance with the License and the Final Reclamation Plan contemplated thereunder.

Given the timing of funding of reimbursement of Title X funds, if allowed to proceed in the normal course, moneys owed will not be paid in time for the Trust to place the Site in a good, safe and proper condition for transfer to DoE. This letter sets forth the request of the Trust for an advance payment of a portion of the Title X funding owed to the Trust for reclamation purposes so that certain actions may be paid for and performed on the Site prior to transfer to DoE.

Background

The following provides background on operations of the Trust to date, our recommendation as to future activities, and those steps the Trust is willing to take to facilitate DoE's efforts to allocate early funds to the Trust.

Following selection of prime contractors earlier in 2000, the Trust began work as prescribed in the License and the Final Site Reclamation plan. Critical to any long-term activity involving the Pile - either closing it in place or moving it to another location - excess water must be removed from the soils constituting the Pile. Those water-laden areas commonly are referred to as "slimes." Focusing on dewatering the Pile, the Trust hired the firm SRK Consultants and their subcontractor to install vertical "wicks" in the Pile to provide channels for in situ water to escape. The Trust retained Harding Lawson Associates ("HLA", now Harding ESE) to recontour and surcharge the Pile. The recontouring was designed to reduce rainwater infiltration into and facilitate drainage

from the Pile. The surcharge enhances dewatering by squeezing water from the interstitial spaces in the Pile into the wick channels, for transport to the surface for evaporation. HLA's scope of work includes all earth moving work on the Site

The wicking operation involved the placement of 17,000 ribbon-like wicks into the central area of the Pile, tied together into a central gathering sump for pumping to an evaporation pond on the Pile. The wicking is complete, and the sump and pump installation will be completed shortly. To operate efficiently, the slimes into which the wicks are placed must be surcharged with soil to force the moisture out of the Pile.

The recontouring has proceeded according to the Reclamation Plan. The Trust has moved the slimes to the center of the Pile, and has changed the profile of the Pile so that rainwater drains away from the center. We are now redefining the aging terraced sides of the Pile to a flatter profile slope, moving the cut material to the top of the Pile to cover the slimes and to add weight, and will finish off all exposed tailings with a cover of affected soils. This redefinition of the sides and covering with affected soils is underway, but will end when money for this phase of the work is exhausted. Approximately three-fourths of the recontouring of the sides of the Pile to obtain weighting material will have been completed. The sides of the Pile resculpted to date will be compliant with radiological requirements for covering coarse tailings, but the remaining sides will be in the configuration established in 1995, at the time of the placement of the current interim cover.

The Trust has also expended and committed funds to the study of ammonia seepage problems to the Colorado River, and to the initial study and characterization of groundwater issues in the Tamarisk area on the Site. A firm of groundwater experts, Shepherd Miller Incorporated ("SMI"), has been retained to accomplish these tasks. A Corrective Action Plan required under the License is due from them in March 2001.

Other steps are required under the License to formally "close" the Site. Due to the effects of the legislation as well as severe funding constraints, the Trust does not propose to accomplish tasks other than suggested below.

Recommendations

The primary objective for near-term additional work on the Pile is to provide DoE with an installation that achieves the objectives for dewatering as set out in the Reclamation Plan and minimizes the impact of seepage on the groundwater, pending remediation. Secondly, the Trust seeks to leave the Pile in such condition that it presents reduced

potential hazards to the citizenry of Moab, has relatively low maintenance requirements, and accomplishes all of this in an efficient manner.

Towards these ends, the Trust recommends the following.

Complete the recontouring and loading of the Pile

Approximately \$500,000 will be required to complete recontouring of the remaining 25% of the circumference of the Pile. This will place additional weight on the Pile, and continue to force water to the surface for removal and evaporation. At current rates of \$100,000 per week, HLA anticipates that this earthmoving activity will be complete in approximately five weeks.

Recover additional higher radiation soils from areas around the Pile

Based on radiological surveys, excavate those areas of soil containing known elevated levels of radiological contamination around the Site (excluding the so-called Tamarisk area) and place these soils in the center of the Pile for additional weighting on the slimes. While probably not an urgent threat to the community, these soils are rich in uranium and radium, tend to blow with strong winds, and may contribute leached product to the groundwater. Removal now to a more controlled area will minimize future contamination and provide another opportunity to reassure the community that a concerted effort was made to reduce the Site risks.

The amount of work to be done is somewhat subjective, in that the amount of contaminated soils potentially impacting the groundwater is substantial, and total removal is beyond the scope of funds likely to be made available at this time. However, we believe that \$500,000 can remove the most contaminated soils in the area around the old mill site, and that \$1,000,000 can remove much of the contaminated soils from the area between the Pile and the river including those soils in the Tamarisk area. We would not encroach on soils closest to the river, but would begin with the worst soils close to the Pile, and move away only to the extent allowed or required under the License. At \$100,000 per week, these efforts can be complete in five to fifteen weeks.

Reduce erosion probability

The sloped sides of the Pile will be less subject to erosion than were the existing terraced sides, substantially aged since their application in 1995. DoE staff has voiced a concern, however, that the unbroken slope might be subject to water runoff erosion, and we share this concern. This slope is an intermediate step in a well-designed

overall plan that is being delayed by the uncertainties associated with the legislation. We think it prudent that the issue be addressed as a means to lower the maintenance required during the time before environmental impact and other studies can be performed on the Site. Initial estimates for the creation of a "bench" around the side of the recontoured portions of the Pile, near the halfway point, are approximately \$400,000, and would require about four weeks to construct.

Efficiency

A fleet of earthmoving equipment is presently working on the Site. This fleet must be demobilized before the exhaustion of funds. Supplemental funds would allow continuous operations, thereby avoiding our demobilization and subsequent remobilization by DoE. These avoided costs are equivalent to about two weeks of dirt moving activity.

Tasks, estimated time requirements, and estimated costs are set forth below.

Task	Estimated Funds Required	Estimated Time Required
Complete the recontouring and loading of the Pile	\$500,000	5 weeks
Recover additional higher radiation soils from areas around the Pile	\$500,000 to \$1,500,000	5 weeks to 15 weeks
Reduce erosion probability	\$400,000	4 weeks
Efficiency		Decision point by 1/5/2001
Total	\$2,400,000	24 weeks
Additional groundwater characterizations, without pilot plant work	\$500,000	6 months

Trust Actions to Facilitate Funding

DoE has informally expressed a willingness to pursue these efforts, and has agreed to consider the advancement of funds due the Trust under Title X for these purposes. Absent the legislation, the Trust would submit evidence of expenditures made pursuant to the Reclamation Plan to the DoE in April of each year, seeking reimbursement of certain of these costs under the provisions of Title X. Reimbursement of approved expenditures would be received the following April.

The legislation has impacted these procedures. In the normal course of business, the Trust would file for reimbursement of the majority of its expenditures in April 2001, and receive payment in April 2002. Now the Trust must turn over the Site late in 2001. Operations of the Trust will have ceased by April 2002 and funds received then would be meaningless to activities at the Site.

The Trust requests that DoE advance promptly, a significant portion of the funds ultimately due the Trust as of the end of this month, so that work on securing the Pile can continue. In exchange for this out-of-the-ordinary treatment under Title X, the Trust would be willing to forego substantial claims for reimbursement to which it would otherwise be entitled. Specifically, the Trust would claim only for reimbursement for currently perfected (and audited) claims and claims of its costs for the major contractors and direct site management expenses incurred through the month of December 2000. It would forego claims for other expenditures incurred in this normal funding cycle as well as any claims for expenses to be incurred from January 2001 forward. These waived claims would include additional normal reimbursement anticipated in April 2002 and subsequent years, and all other claims for non-site services provided to the Trust by others from April 2000 forward. A summary follows.

To be reimbursed at 100%	To be waived
Major Contractors	All expenses from 1/1/01 forward
Harding ESE (earthmoving)	
Shepherd Miller (groundwater studies)	All Trustee time and expense (PwC)
SRK/Nilex (wicking, dewatering)	All attorney time and expense
SENES (radiological studies)	
Direct Site Expenses	
Payroll	
Utilities	

Property Taxes	
Incidental expenses	
Claims "perfected" to Date	

Audit and Reimbursement

Given the unusual nature of the legislated termination of the Trust's reclamation activity and acceleration of reimbursement, we feel it necessary also to request a modification of the audit process as well. The Trusts requests an accelerated audit process. Albuquerque and DCAA auditors generally have little disagreement with claims of contractors on the Site. We believe the auditors will find little upon which to disagree in the invoices for services rendered by the major on-site contractors. Most disagreements as to coverage under Title X concern activities of the Trustee, travel and other costs and the uses of outside attorneys. The Trust proposes to waive claims for these oft-argued expenditures.

We request that the audit process be expedited, so that the benefits of the acceleration of additional funds are not diluted. We would propose to provide to the auditors, copies of all contractor invoices constituting the claim, and ask that they proceed with a thorough review on an expedited basis - perhaps completing their work and official approvals in two to three days. We would be available to assist in any way requested.

On completion of the audit work, we would request that the transfer of funds be similarly expedited, so that work can continue unabated.

Transfer of Site to DoE

The Trustee and DoE should meet to agree on events and a timetable for the legal and effective transfer by the Trustee to DoE of the Site as provided in the legislation. The funding advancement issues will probably be resolved by early January 2001, and we recommend a date in mid January for the transfer discussions to begin.

Caveat: The above proposal, particularly the Trust's proposed commitment to waive additional claims for reimbursement under Title X, is subject to approval of the Nuclear Regulatory Commission and the State of Utah, the two beneficiaries of the Trust.

Carolyn Huntoon, Ph.D.
December 21, 2000

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It goes without saying that time is very critical in this matter. We will be happy to discuss this with you and your staff. Please call Keith Eastin at (713) 410-2574 or Jim Langley at (713) 356-8283 at your convenience. We look forward to working with the Department on this important project.

Moab Mill Reclamation Trust

By _____
Keith E. Eastin, for William B. Abington, Trustee

E-mail copy to: Suzanne Rudzinski
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