



INTERNATIONAL
URANIUM (USA)
CORPORATION

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March 1, 2002

Mr. Melvyn Leach, Chief
Fuel Cycle Licensing Branch
Office of Nuclear Materials Safety and Safeguards
U.S. Nuclear Regulatory Commission
Mail Stop T-8A33
2 White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

Re: International Uranium (USA) Corporation
SUA-1358
Docket No. 40-8681
White Mesa Mill, Blanding, Utah
License Condition Number 9.5 – Surety

Dear Mr. Ting:

Pursuant to License Condition No. 9.5 of Source Materials License No. SUA-1358, Docket No. 40-8681, and appropriate revisions of 10 CFR Part 40, Appendix A, Criterion 9, please find enclosed two copies of an updated reclamation and decommissioning cost estimate in support of the Surety Bond on the White Mesa Mill.

The attached reclamation estimate is based on the plan approved by License Amendment 15, issued on July 15, 2000. The revised reclamation estimate and surety amount is \$10,229,268, which is a decrease from the current surety amount of \$10,365,458. The attached estimate represents a total revision to Attachment C of Revision 3.0 to the approved July 2000 Reclamation Plan.

The revised estimate was based on updated quotes for equipment rental, labor rates, fuel, and subcontractor services. A summary of the updated unit costs is included with the revised estimate. In addition, in your letter dated January 14, 2002, you asked the following question.

“What would be the cost of disposing of the stockpiled material should the mill be shut down prior to another processing run? Has this cost estimate been factored into the current surety?”

The total estimated cost for disposing of the currently stored alternate feed material is approximately \$200,000. This amount includes a 15% contingency as well as a 10% profit allowance to account for the work being conducted by an outside contractor.

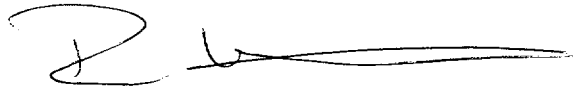
NMSSOI Public

Overall, this additional amount represents only 11% of the current total Mill area decommission cost and only 2% of the total projected cost for the decommissioning and reclamation of the White Mesa Mill and tailings area. The conservatively high 15% contingency amount included in the Mill's reclamation budget is more than sufficient to provide for the cost of disposing of any remaining ores not processed prior to mill shut down. IUSA historically viewed any remaining stockpiled alternate feed ores as a variance in quantity of material to be removed from the ore pad, and as such, would properly be covered by the contingency.

Nevertheless, in this revision of the cost estimate the additional cost of disposing the currently stored alternate feed material into the tailings cells has been incorporated into the Mill Decommissioning Cost. The cost for disposal of the stored alternate feed materials will naturally vary as processing reduces the volume of material stored on the ore pad. This element of the Reclamation Cost Estimate will be evaluated when the volume of materials varies significantly or at the time of the annual review.

If you have any questions on the attached revised reclamation and decommissioning cost estimate, please feel free to contact me at (303) 389-4153.

Very truly yours,



Ron F. Hochstein
President and Chief Executive Officer

RFH:mlh

Enclosures

cc: William von Till
David C. Frydenlund
Michelle R. Rehmann
Harold R. Roberts
Rich E. Bartlett
Ron E. Berg

International Uranium Corporation (USA) Corp.

Cost Estimates for Reclamation

Of

White Mesa Mill

Blanding, Utah

February 2002

Source Materials License No. SUA – 1358
Docket No. 40-8681

ATTACHMENT C

COST ESTIMATES
FOR
RECLAMATION
OF
WHITE MESA FACILITIES
BLANDING, UTAH

PREPARED BY
INTERNATIONAL URANIUM (USA) CORP.
1050 17TH STREET, SUITE 950
DENVER, COLORADO 80265

FEBRUARY 2002

International Uranium Corporation (USA) Corp.

Cost Estimates for Reclamation

Of

White Mesa Mill

Blanding, Utah

February 2002

Source Materials License No. SUA – 1358
Docket No. 40-8681

International Uranium Corporation (USA) Corp.

Cost Estimates for Reclamation of White Mesa Mill

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7. Miscellaneous Cost Calculations
8. Rock Production Costs
9. Equipment Costs
10. Labor Costs
11. Long Term Care Calculation

Summary of Changes in February 2002 Reclamation Cost Update

Unit Cost Factors

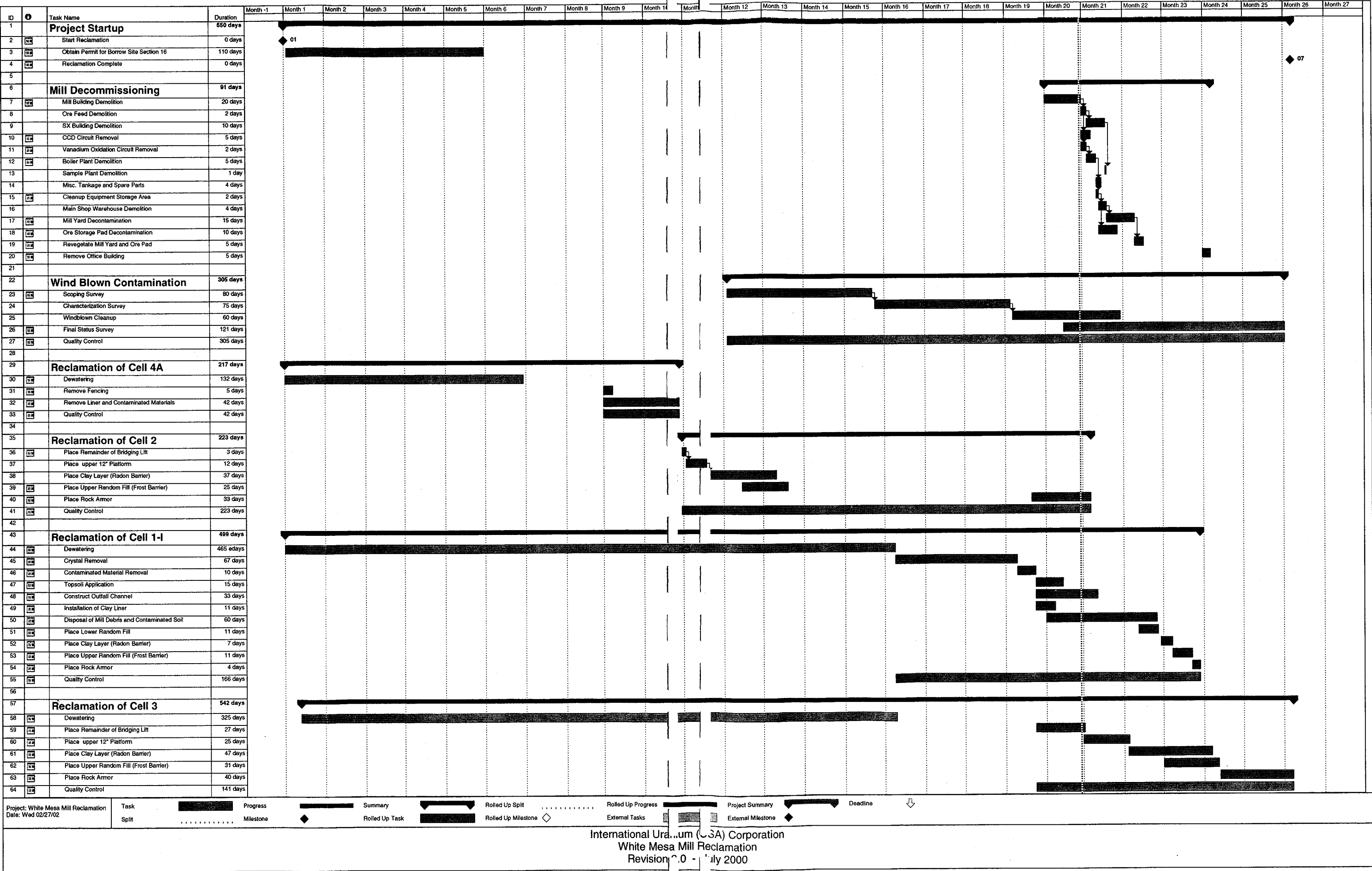
- Update Equipment rental, mobilization, and maintenance costs, **Butler Machinery Company**, February 20, 2002
- Update Labor costs, "Utah General Decision No. 010009, November 16, 2001"
- Update Fuel cost, #2 Red Diesel, **BCL Distributing Company**, Blanding, Utah, January 31, 2002
- Update Screen Plant rental costs, **Power Motive Corporation**, Denver, Colorado, February 19, 2002
- Update Drill and Blast cost estimate, **Buckley Powder Company**, Englewood, Colorado, January 17, 2000
- Update Trackhoe and Metal Shear rental costs, **Power Motive Corporation**, Denver, Colorado, February 19, 2002
- Update Crane rental costs, **Crane Services, Inc.**, Albuquerque, New Mexico, February 19, 2002
- Update Highway Truck rental costs, **Cosby Trucking, Inc.**, Blanding, Utah, February 19, 2002
- Escalate **Long Term Care Fund** by December 2001 CPI-U factor (176.7)

Plan Modifications

None

WHITE MESA MILL RECLAMATION COST ESTIMATE
February 2002

Mill Decommissioning		\$1,649,290
Cell 2		\$1,102,379
Cell 3		\$1,544,475
Cell 4A		\$123,900
Cell 1		\$1,199,605
Miscellaneous		\$1,921,104
Subtotal Direct Costs		<u>\$7,540,754</u>
Profit Allowance	10.00%	\$754,075
Contingency	15.00%	\$1,131,113
Licensing & Bonding	2.00%	\$150,815
Long Term Care Fund		\$652,511
Total Reclamation		<u>\$10,229,268</u>
Revised Bond Amount		<u><u>\$10,229,268</u></u>



MILL DECOMMISSIONING

MILL DECOMMISSIONING

Mill Building Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	720	\$12,757
Mechanics	hrs	\$13.86	640	\$8,872
Laborers	hrs	\$10.35	320	\$3,311
Small Tools	hrs	\$1.25	960	\$1,200
Cat 769 Haul Truck	hrs	\$62.82	640	\$40,207
Truck Drivers	hrs	\$12.74	640	\$8,154
Cat 988 Loader	hrs	\$96.88	160	\$15,501
Cat 375 Excavator	hrs	\$118.80	160	\$19,007
PC-400 with Shears	hrs	\$159.18	160	\$25,469
65 Ton Crane	hrs	\$56.35	160	\$9,017
30 Ton Crane	hrs	\$36.36	80	\$2,909
Equipment Maintenance (Butler)	hrs	\$12.08	1,360	\$16,433
Concrete Removal	sf	\$3.30	37,500	\$123,750

Total Mill Building Demolition

\$286,587

Ore Feed Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	48	\$850
Mechanics	hrs	\$13.86	64	\$887
Laborers	hrs	\$10.35	32	\$331
Small Tools	hrs	\$1.25	96	\$120
Cat 769 Haul Truck	hrs	\$62.82	64	\$4,021
Truck Drivers	hrs	\$12.74	64	\$815
Cat 988 Loader	hrs	\$96.88	16	\$1,550
Cat 375 Excavator	hrs	\$118.80	16	\$1,901
PC-400 with Shears	hrs	\$159.18	16	\$2,547
30 Ton Crane	hrs	\$36.36		\$0
Equipment Maintenance (Butler)	hrs	\$12.08	112	\$1,353

Total Ore Feed Demolition

\$14,376

SX Building Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	240	\$4,252
Mechanics	hrs	\$13.86	320	\$4,436
Laborers	hrs	\$10.35	160	\$1,655
Small Tools	hrs	\$1.25	480	\$600
Cat 769 Haul Truck	hrs	\$62.82	320	\$20,104
Truck Drivers	hrs	\$12.74	320	\$4,077
Cat 988 Loader	hrs	\$96.88	80	\$7,750
Cat 375 Excavator	hrs	\$118.80	80	\$9,504
PC-400 with Shears	hrs	\$159.18	80	\$12,734
65 Ton Crane	hrs	\$56.35		\$0
30 Ton Crane	hrs	\$36.36		\$0
Equipment Maintenance (Butler)	hrs	\$12.08	560	\$6,767
Concrete Removal	sf	\$3.30	55,970	\$184,701

Total SX Building Demolition

\$256,580

MILL DECOMMISSIONING

CCD Circuit Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	135	\$2,392
Mechanics	hrs	\$13.86	120	\$1,664
Laborers	hrs	\$10.35	60	\$621
Small Tools	hrs	\$1.25	180	\$225
Cat 769 Haul Truck	hrs	\$62.82	120	\$7,539
Truck Drivers	hrs	\$12.74	120	\$1,529
Cat 988 Loader	hrs	\$96.88	30	\$2,906
Cat 375 Excavator	hrs	\$118.80	30	\$3,564
PC-400 with Shears	hrs	\$159.18	30	\$4,775
65 Ton Crane	hrs	\$56.35	30	\$1,691
30 Ton Crane	hrs	\$36.36	15	\$545
Equipment Maintenance (Butler)	hrs	\$12.08	255	\$3,081
Concrete Removal	sf	\$3.30	15,000	\$49,500

Total CCD Circuit Removal

\$80,032

Sample Plant Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	24	\$425
Mechanics	hrs	\$13.86	32	\$444
Laborers	hrs	\$10.35	16	\$166
Small Tools	hrs	\$1.25	48	\$60
Cat 769 Haul Truck	hrs	\$62.82	32	\$2,010
Truck Drivers	hrs	\$12.74	32	\$408
Cat 988 Loader	hrs	\$96.88	8	\$775
Cat 375 Excavator	hrs	\$118.80	8	\$950
PC-400 with Shears	hrs	\$159.18	8	\$1,273
30 Ton Crane	hrs	\$36.36		\$0
Equipment Maintenance (Butler)	hrs	\$12.08	56	\$677
Concrete Removal	sf	\$3.30	4,200	\$13,860

Total Sample Plant Removal

\$21,048

Boiler Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	120	\$2,126
Mechanics	hrs	\$13.86	160	\$2,218
Laborers	hrs	\$10.35	80	\$828
Small Tools	hrs	\$1.25	240	\$300
Cat 769 Haul Truck	hrs	\$62.82	160	\$10,052
Truck Drivers	hrs	\$12.74	160	\$2,038
Cat 988 Loader	hrs	\$96.88	40	\$3,875
Cat 375 Excavator	hrs	\$118.80	40	\$4,752
PC-400 with Shears	hrs	\$159.18	40	\$6,367
65 Ton Crane	hrs	\$56.35		\$0
30 Ton Crane	hrs	\$36.36		\$0
Equipment Maintenance (Butler)	hrs	\$12.08	280	\$3,383
Concrete Removal	sf	\$3.30	2,900	\$9,570

Total Boiler Demolition

\$45,510

MILL DECOMMISSIONING

Vanadium Oxidation Circuit Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	48	\$850
Mechanics	hrs	\$13.86	64	\$887
Laborers	hrs	\$10.35	32	\$331
Small Tools	hrs	\$1.25	96	\$120
Cat 769 Haul Truck	hrs	\$62.82	64	\$4,021
Truck Drivers	hrs	\$12.74	64	\$815
Cat 988 Loader	hrs	\$96.88	16	\$1,550
Cat 375 Excavator	hrs	\$118.80	16	\$1,901
PC-400 with Shears	hrs	\$159.18	16	\$2,547
65 Ton Crane	hrs	\$56.35		\$0
30 Ton Crane	hrs	\$36.36		\$0
Equipment Maintenance (Butler)	hrs	\$12.08	112	\$1,353
Concrete Removal	sf	\$3.30	1,200	\$3,960

Total Vanadium Oxidation Circuit Removal

\$18,336

Main Shop/Warehouse Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	96	\$1,701
Mechanics	hrs	\$13.86	128	\$1,774
Laborers	hrs	\$10.35	64	\$662
Small Tools	hrs	\$1.25	192	\$240
Cat 769 Haul Truck	hrs	\$62.82	128	\$8,041
Truck Drivers	hrs	\$12.74	128	\$1,631
Cat 988 Loader	hrs	\$96.88	32	\$3,100
Cat 375 Excavator	hrs	\$118.80	32	\$3,801
PC-400 with Shears	hrs	\$159.18	32	\$5,094
Equipment Maintenance (Butler)	hrs	\$12.08	224	\$2,707
Concrete Removal	sf	\$3.30	19,300	\$63,690

Total Main Shop/Warehouse Demolition

\$92,442

Office Building Demolition

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	72	\$1,276
Mechanics	hrs	\$13.86	96	\$1,331
Laborers	hrs	\$10.35	48	\$497
Small Tools	hrs	\$1.25	144	\$180
Cat 769 Haul Truck	hrs	\$62.82	96	\$6,031
Truck Drivers	hrs	\$12.74	96	\$1,223
Cat 988 Loader	hrs	\$96.88	24	\$2,325
Cat 375 Excavator	hrs	\$118.80	24	\$2,851
PC-400 with Shears	hrs	\$159.18	24	\$3,820
Equipment Maintenance (Butler)	hrs	\$12.08	168	\$2,030
Concrete Removal	sf	\$1.25	12,100	\$15,125

Total Office Building Demolition

\$36,689

MILL DECOMMISSIONING

Misc. Tankage & Spare Parts Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	24	\$425
Mechanics	hrs	\$13.86	32	\$444
Laborers	hrs	\$10.35	16	\$166
Small Tools	hrs	\$1.25	48	\$60
Cat 769 Haul Truck	hrs	\$62.82	32	\$2,010
Truck Drivers	hrs	\$12.74	32	\$408
Cat 988 Loader	hrs	\$96.88	8	\$775
Cat 375 Excavator	hrs	\$118.80	8	\$950
PC-400 with Shears	hrs	\$159.18	8	\$1,273
Equipment Maintenance (Butler)	hrs	\$12.08	56	\$677
Concrete Removal	sf	\$1.25		\$0

Total Misc. Tankage & Spare Parts Removal

\$7,188

Mill Yard Decontamination

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	582	\$10,312
Cat 637 Scraper	hrs	\$139.96	257	\$35,969
Cat 988 Loader	hrs	\$96.88	65	\$6,297
Cat D8N Dozer With Ripper	hrs	\$68.03	65	\$4,422
Cat D7 Dozer	hrs	\$57.08	65	\$3,710
Cat 651 Waterwagon	hrs	\$68.97	65	\$4,483
Cat 14G Motorgrader	hrs	\$46.96	65	\$3,052
Equipment Maintenance (Butler)	hrs	\$12.08	582	\$7,032

Total Mill Yard Decontamination

\$75,278

Ore Storage Pad Decontamination

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	429	\$7,601
Cat 637 Scraper	hrs	\$139.96	189	\$26,452
Cat 988 Loader	hrs	\$96.88	48	\$4,650
Cat D8N Dozer With Ripper	hrs	\$68.03	48	\$3,265
Cat D7 Dozer	hrs	\$57.08	48	\$2,740
Cat 651 Waterwagon	hrs	\$68.97	48	\$3,311
Cat 14G Motorgrader	hrs	\$46.96	48	\$2,254
Equipment Maintenance (Butler)	hrs	\$12.08	429	\$5,184

Total Ore Storage Pad Decontamination

\$55,456

Equipment Storage Area Cleanup

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	154	\$2,729
Cat 637 Scraper	hrs	\$139.96	69	\$9,657
Cat 988 Loader	hrs	\$96.88	17	\$1,647
Cat D8N Dozer With Ripper	hrs	\$68.03	17	\$1,156
Cat D7 Dozer	hrs	\$57.08	17	\$970
Cat 651 Waterwagon	hrs	\$68.97	17	\$1,172
Cat 14G Motorgrader	hrs	\$46.96	17	\$798
Equipment Maintenance (Butler)	hrs	\$12.08	154	\$1,861

Total Equipment Storage Area Cleanup

\$19,991

MILL DECOMMISSIONING

Revegetate Mill Yard & Ore Pad

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	231	\$4,093
Cat 637 Scraper	hrs	\$139.96	132	\$18,474
Cat 988 Loader	hrs	\$96.88	0	\$0
Cat D8N Dozer With Ripper	hrs	\$68.03	33	\$2,245
Cat D7 Dozer	hrs	\$57.08	33	\$1,884
Cat 651 Waterwagon	hrs	\$68.97		\$0
Cat 14G Motorgrader	hrs	\$46.96	33	\$1,550
Equipment Maintenance (Butler)	hrs	\$12.08	231	\$2,791

Total Revegetate Mill Yard & Ore Pad

\$31,037

Total Demolition and Decontamination

\$1,040,548

CLEANUP OF WINDBLOWN CONTAMINATION

Scoping Survey

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Soil Samples	each	\$50.00	100	\$5,000
Survey Crew	hrs	\$13.32	752	\$10,018
Sample Crew	hrs	\$13.32	1,312	\$17,479

Total Scoping Survey

\$32,497

Characterization Survey

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Soil Samples	each	\$50.00	472	\$23,600
Sample Crew	hrs	\$13.32	1,136	\$15,134

Total Characterization Survey

\$38,734

Final Status Survey

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Soil Samples	each	\$50.00	300	\$15,000
Sample Crew	hrs	\$13.32	3,552	\$47,320

Total Final Status Survey

\$62,320

Windblown Cleanup

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,190	\$21,084
Cat 637 Scraper	hrs	\$139.96	680	\$95,170
Cat D8N Dozer With Ripper	hrs	\$68.03	170	\$11,565
Cat D7 Dozer	hrs	\$57.08	170	\$9,704
Cat 14H Motorgrader	hrs	\$46.96	170	\$7,983
Soil Samples	each	\$50.00	500	\$25,000
Survey Crew	hrs	\$13.32	163	\$2,172
Sample Crew	hrs	\$13.32	83	\$1,106
Equipment Maintenance (Butler)	hrs	\$12.08	1,190	\$14,379

Total Windblown Cleanup

\$188,162

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	\$62.00	2,080	\$128,960

Total Quality Control

\$128,960

Total Cleanup Windblown Contamination

\$450,673

MILL DECOMMISSIONING

Alternate Feed Disposal

Linde, Ashland & Heritage Material

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,255	\$22,237
Cat 769 Haul Truck (3)	hrs	\$62.82	772	\$48,488
Cat 988 Loader	hrs	\$96.88	257	\$24,924
Cat 651 Waterwagon	hrs	\$68.97	176	\$12,139
Cat 14G Motorgrader	hrs	\$46.96	50	\$2,348
Equipment Maintenance (Butler)	hrs	\$12.08	1,255	\$15,165

Total Linde, Ashland & Heritage Material

\$125,301

Total Quantity 151,274 Cubic Yards
196 Cubic Yards per Truck per hour
772 Truck Hours

Cameco Barrels

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$12.74	316	\$4,024
Flat Bed Trailer and Tractor*	hrs	\$55.00	316	\$17,372
Fork Lift (2)	hrs	\$18.00	632	\$11,371

Total Cameco Barrels

\$32,767

* includes operator

31,586 Barrels
40 Barrels per load
0.4 Hours per load
316 Truck Hours

Sub-Total Alternate Feed Disposal

\$158,068

TOTAL MILL DECOMMISSIONING

\$1,649,290

PROJECT..... Date..... Cost by..... Sheet... of.....

MILL DECOMMISSIONING

1) REMOVAL OF CONTAMINATED MATERIALS FROM MILL YARD.

ASSUME:

- 18" (1.5 feet) WILL HAVE TO BE REMOVED
- AREA (FROM CAD) = 1,643,453 ft²
= 37.8 ACRES

Therefore VOLUME MOVED = $[1,643,453 \times 1.5] \div 27 = 91,302 \text{ yd}^3$

$\frac{91,300 \text{ yd}^3}{355 \text{ yd}^3/\text{hr}} = \boxed{257 \text{ hours}}$

say

$\boxed{91,300 \text{ yd}^3}$

$\boxed{\text{HAUL ROUTE} = 2}$

2) REMOVAL OF CONTAMINATED MATERIALS FROM ORE PITS

ASSUME:

- 18" WILL HAVE TO BE REMOVED
- AREA (FROM CAD) = 976,780 ft²
= 22.4 ACRES.

Therefore VOLUME MOVED = $[976,780 \times 1.5] \div 27 = 54,265 \text{ yd}^3$

say $\boxed{54,300 \text{ yd}^3}$

$\frac{54,300 \text{ yd}^3}{287 \text{ yd}^3/\text{hr}} = \boxed{189 \text{ hours}}$

$\boxed{\text{HAUL ROUTE} = 3}$

PROJECT.....

Date.....

Cost by.....

Sheet of.....

MILL DECOMMISSIONING

3) DEMOLITION EQUIPMENT

- KAMATSU PC400 (or Cat Equivalent) WITH La Bounty Shears (hydraulic)
- Cat 275L BACKHOO w/ GRAPPLES.
- 769C ROCK TRUCKS (4 ea)
- 98B LOADER (1 ea)

4) DEMOLITION CREW.

- HEAVY EQUIPMENT OPERATORS - PC400, 285, 98B
- DUST CONTROL - 2 - LABORERS
- MECHANICS - CUTTING UP OF DEBRIS TO REMOVE VOIDS 4
- TRUCK DRIVERS - 4 ea - 769D TRUCKS

5) Total & EXPENDITURE SUMMARY, covering the following:

- SAFETY GEAR
- HAND TOOLS
- BOTTLED GASES & TOOLS.
- About 1.25 / MAN HOUR FOR ALL BUT U.E. OPERATORS + TRUCK DRIVERS

PROJECT..... DATE..... CALC BY..... SHEET..... OF.....

MILL DECOMMISSIONING

6) DEMOLITION TIME ESTIMATES. (SHEAR & GRAPPLE)

• MILL BUILDING	20 days
• COARSE ORE	2 days
• SX BUILDING	10 days
• CCD, FLT, LARKONE	5 days
• SAMPLE PLANT	1 day
• BOILER	5 days
• Vanadium Oxidation	2 days
• SHOP / WAREHOUSE	4 days
• OFFICE BUILDING	3 days
• MIX TRENCH & "NORTH FORT"	4 days

7) FOUNDATION DEMOLITION

- ASSUME THAT MEANS 020-750-0440 OVER ENTIRE AREA OF STRUCTURE WILL SURFACE @ \$3.33/ft²
- AREAS ARE AS FOLLOWS. (FROM C&D)

	<u>Area, ft²</u>	<u>EST \$</u>
MILL BUILDING	37,500	120,000
SX BUILDING	53,970	179,100
SHOP / WAREHOUSE	19,280	61,700
OFFICE	12,100	39,700 15,125
SAMPLE PLANT	4,200	13,400
DIESEL SHOP	2050	6,600
BOILER	2900	9,300

- LABOR \$2.75, EQUIP \$.55

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

PROJECT..... Date..... Calc by..... Sheet..... of.....

MILL DECOMMISSIONING

8) REVEGETATION

ASSUME ---

- MILL YARD AREA = 1,643,453 ft²
- ORE PAD AREA = 976,780 ft²
- PACE 6"
- 637 ROUTE #4 APPROXIMATES HALL

$$\text{hours} \left[\frac{[1,643,453 + 976,780] \text{ ft}^2 \times \frac{1}{2} \text{ ft}}{27 \frac{\text{ft}^3}{\text{yd}}} \right] = 48,522 \text{ yd}^3$$

$$\text{say } \boxed{48,600 \text{ yd}^3}$$

$$\frac{48,600 \text{ yd}^3}{360 \text{ yd}^3/\text{hr}} = \boxed{132 \text{ "637" hours}}$$

MILL DECOMMISSIONING WIND BLOWN CONTAMINATION

1) Scoping Survey

- Initial survey will be conducted on a area to be disturbed But for this estimate it is defined as an area approximated by a perimeter 1000 feet outside of the restriction area boundaries. This is conservative since wind blown contamination would most likely be found down wind of the site, which is on the East side of the restriction area.

AREA DETERMINED by Calc. = 38,728,000 ft²

Area Requiring wind blown survey is

TOTAL AREA -	38,728,000 ft ²
Cell 4A	1,909,000 ft ²
Cell 3	3,234,000 ft ²
Cell 2	2,987,000 ft ²
Cell 1	2,576,000 ft ²
MILL YARD	1,643,000 ft ²
ORE STORAGE PAD	977,000 ft ²
	<hr/>
	25,402,000 ft ²

- ASSUME PLACEMENT OF STANDARD NRC/EPA 10 X 10 meter grid (1076 ft²).
- ASSUME Scoping Survey Completed by Scanning with MR meter Hold close to ground while traveling at ± 0.5 m/sec as per Guidance in NUREG 5849.
- SURVEY Crew of 2 Capable of setting 500 grid points per Day

$$\frac{25,402,000 \text{ ft}^2}{1076 \text{ ft}^2} = 23,600 \text{ Grid points}$$

$$\frac{23,600 \text{ POINTS}}{500 \text{ POINTS/Day}} \approx 47 \text{ Days}$$

$$2 \text{ men} \times 8 \text{ hrs} \times 47 \text{ Days} = \boxed{752 \text{ manhrs}} - \text{Survey}$$

- Scanning Crew Consists of 2 men -

Coverage $0.5 \text{ m/sec} \times 60 \text{ sec/min} \times 8 \text{ hrs/day} = 14,400 \text{ m/c}$
 Assume .8 eff. factor
 $14,400 \text{ m/day} \times .8 = 11,520 \text{ m/day}$

Wind down Construction - Setup Survey

- Assume 30 meter PBM for each 10 x 10 grid to cover 10% of surface area (see Notes 554^g),

$$\text{Crew Can Scan } \frac{11,520 \text{ m/day}}{30 \text{ m/grid}} = 384 \text{ grids/day}$$

$$\therefore \frac{23,600 \text{ grids}}{384 \text{ grids/day}} \approx 62 \text{ days to complete initial Scan}$$

$$62 \text{ days} \times 2 \text{ men} \times 8 \text{ hrs/day} = \boxed{992 \text{ man hrs}}$$

- Assume map production + Data Reduction take Scanning crew an additional 20 days to complete

$$20 \text{ days} \times 2 \text{ men} \times 8 \text{ hrs/day} = \boxed{320 \text{ man hrs}}$$

$$\text{Total Scanning Man hrs} = \boxed{1312}$$

- Seeping Survey will require 100 Corbentary Soil Samples at a cost of \$50.00/each (Unit + 0.226)
- Samples can be taken at same time as Scanning take places.

2) Characterization Survey -

Survey of areas identified as affected areas by Seep Survey

- Assume:

- 20% of area will require additional Sampling
- Probing will be used, 4 probe sites/grid (Air, Ground)
- Soil Samples will be required on 10% of grid squares
- Samples will be for Unit + R. etc
- Cost/Sample = \$50 (unit)

$$\frac{25,402,000 \text{ ft}^2}{107641 \frac{\text{ft}^2}{\text{grid}}} = 23,608 \text{ grids} \times .2 = 4722 \text{ Grids}$$

- Crew can cover 100 Grids/day probing
- Crew can take 25 Soil Samples/day

$$\text{Probing takes } \frac{4722 \text{ grids}}{100 \text{ grids/day}} \approx \boxed{47 \text{ Days}}$$

$$47 \times 2 \times 8 = \boxed{752 \text{ hrs}}$$

WIND-BLOWN CONTAMINATION - CHARACTERIZATION SURVEY

Soil Samples are 10% of Price grids

$$4721 \times .10 = 472 \text{ Soil Samples}$$

$$\frac{472 \text{ Samples}}{25 \text{ Samples/1007}} \approx \boxed{19 \text{ days}} \times 8 \text{ hrs} \times 2 = \boxed{304 \text{ hrs}}$$

MAP Preparation + Data Reduction for 5 days

$$5 \times 2 \times 8 \text{ hr} = \boxed{80 \text{ hrs}}$$

$$\text{Total Hrs} = \boxed{1136 \text{ man hrs}}$$

3) RECONCILIATION CONTACT SURVEY

- Provided by QA/QC Contractor

4) FINAL STATUS SURVEY

- IN ORDER TO GAIN FINAL RELEASE, WILL REQUIRE 4 GAMMA ESTIMATES PER EACH 100 m² GRID SQUARE IN THE AFFECTED AREA (20% of Area)
- 200 RANDOM SOIL SAMPLES WILL BE GATHERED FROM THE UNAFFECTED AREAS (80% of Area)
- WILL REQUIRE 100 CONFIRMATORY SAMPLES FOR THE AFFECTED AREA

Therefore

$$\begin{aligned} 25,402 \div 1076 \text{ ft}^2/100 \text{ m}^2 &= 23,607 \text{ Grids TOTAL} \\ 23,607 \times 0.20 &= 4,721 \text{ Grids } \underline{\underline{\text{AFFECTED}}} \\ 4,721 \times 4 &= 18,886 \text{ GAMMA ESTIMATES.} \end{aligned}$$

- CREW CAN TAKE 100 PROBE SAMPLES/DAY

$$\therefore 18886 \div 100 = 188.8 \text{ days} \quad \underline{\underline{190 \text{ days}}}$$

- CREW CAN TAKE 25 SOIL SAMPLES/DAY

$$\therefore [200 + 100] \div 25 = 12 \text{ days.}$$

- ASSUME 20 additional DAYS FOR DATA REDUCTION & REPORT GENERATION

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

PROJECT..... Date..... Calc by..... Sheet..... of.....

MILL DECOMMISSIONING
WIND BLOWN CONTAMINATION (Cont)

5) CLEAN-UP.

- ASSUME 20% OF AREA SURVEYED REQUIRES CORRECTIVE ACTION
- 6' OF SOIL WILL BE STRIPPED

$$\begin{array}{rcl} \text{Therefore} & 25,402 \text{ ft}^2 \times 0.20 \times 0.5 \text{ ft} & = 2,540,000 \text{ ft}^3 \\ & & \approx 94,000 \text{ yd}^3 \\ & \text{say} & \boxed{94,100 \text{ yd}^3} \end{array}$$

- AS IT IS NOT KNOWN WHAT AREAS MAY BE CONTAMINATED, ASSUME THE USE OF 637 HAUL ROUTE #6 TO BE CONSERVATIVE.
- BECAUSE OF THE POTENTIAL FOR IRREGULAR & DISCONNECTED AREAS, EFFICIENCY WILL BE ONLY 50% OF REGULAR 637 EFFICIENCY.

$$\begin{array}{rcl} \text{Therefore} & 277 \text{ yd}^3/\text{hr} \times 0.50 & = 138.5 \text{ yd}^3/\text{hr} \\ & & \text{say } \boxed{138 \text{ yd}^3/\text{hr}} \end{array}$$

$$\begin{array}{rcl} \text{Therefore} & 94,100 \text{ yd}^3 \div 138 \text{ yd}^3/\text{hr} & = 681 \text{ scraper hours} \\ & & \text{say } \boxed{680 \text{ hours}} \end{array}$$

RECLAMATION OF CELL 2

RECLAMATION OF CELL 2

Obtain Permits for Clay Borrow Site - Section 16

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Permits & Licenses	ea	\$10,000.00	5	\$50,000

Total Obtain Permits for Clay Borrow Site - Section 16

\$50,000

Place Remainder of Bridging (Platform) Lift

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	178	\$3,154
Cat 627F Scraper	hrs	\$139.96	78	\$10,917
Cat 815C Compactor	hrs	\$64.16	20	\$1,283
Cat D8N Dozer With Ripper	hrs	\$68.03	20	\$1,361
Cat D7 Dozer	hrs	\$57.08	20	\$1,142
Cat 651 Waterwagon	hrs	\$68.97	20	\$1,379
Cat 14G Motorgrader	hrs	\$46.96	20	\$939
Equipment Maintenance (Butler)	hrs	\$12.08	178	\$2,151

Total Place Remainder of Bridging (Platform) Lift

\$22,325

Place Lower Random Fill (12")

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	902	\$15,981
Cat 637 Scraper	hrs	\$139.96	402	\$56,262
Cat 825 Compactor	hrs	\$64.16	100	\$6,416
Cat D8N Dozer With Ripper	hrs	\$68.03	100	\$6,803
Cat D7 Dozer	hrs	\$57.08	100	\$5,708
Cat 651 Waterwagon	hrs	\$68.97	100	\$6,897
Cat 14G Motorgrader	hrs	\$46.96	100	\$4,696
Equipment Maintenance (Butler)	hrs	\$12.08	902	\$10,899

Total Place Lower Random Fill (12")

\$113,662

Clay Layer

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,690	\$29,943
Cat 825 Compactor	hrs	\$64.16	320	\$20,530
Cat D8N Dozer With Ripper	hrs	\$68.03	300	\$20,409
Cat D7 Dozer	hrs	\$57.08	0	\$0
Cat 651 Waterwagon	hrs	\$68.97	300	\$20,691
Cat 14G Motorgrader	hrs	\$46.96	320	\$15,027
Cat 980 Loader	hrs	\$63.01	300	\$18,903
5000 Gallon Water Truck	hrs	\$39.34	150	\$5,900
Highway Trucks	hrs	\$40.00	2,400	\$96,000
Truck Drivers	hrs	\$12.74	2,400	\$30,577
Equipment Maintenance (Butler)	hrs	\$12.08	4,090	\$49,420

Total Place Clay Layer

\$307,400

RECLAMATION OF CELL 2

Upper Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,990	\$35,258
Cat 637 Scraper	hrs	\$139.96	796	\$111,405
Cat 825 Compactor	hrs	\$64.16	199	\$12,767
Cat D8N Dozer With Ripper	hrs	\$68.03	199	\$13,538
Cat D7 Dozer	hrs	\$57.08	199	\$11,360
Cat 651 Waterwagon	hrs	\$68.97	199	\$13,725
Cat 14G Motorgrader	hrs	\$46.96	199	\$9,345
5000 Gallon Water Truck	hrs	\$39.34	199	\$7,828
Equipment Maintenance (Butler)	hrs	\$12.08	1,990	\$24,046

Total Place Upper Random Fill

\$239,271

Rock Armor

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	825	\$14,617
Cat D7 Dozer	hrs	\$57.08	275	\$15,698
Cat 651 Waterwagon	hrs	\$68.97	275	\$18,967
Cat 14G Motorgrader	hrs	\$46.96	275	\$12,914
Rock Cost Delivered	CY	\$3.51	66,200	\$232,457
Equipment Maintenance (Butler)	hrs	\$12.08	825	\$9,969

Total Place Rock Armor

\$304,621

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	\$62.00	1,050	\$65,100

Total Quality Control

\$65,100

TOTAL RECLAMATION OF CELL 2

\$1,102,379

Volume Calculations
Cell 2

2/10/99

1) AREA OF CELL 2 - $2,986,660 \text{ ft}^2 = \boxed{68.56 \text{ ACRES}}$

2) AREA OF CELL 2 STILL OPEN 2/10/99 (SEE FIGURE A)

$1000 \times 200 \text{ APPROXIMATE AREA} \approx 200,000 \text{ sf} (4.6 \text{ ACRES})$

3) ASSUMPTIONS:

- Bridging layer is placed using random fill from piles WEST OF CELL 2
- Cell will be graded to Design elevation utilizing finer materials in random fill stockpiles and from "Clay" stockpiles.
- Clay will be mined, blended & hauled from borrow site located in Section 16 - 4 miles south of the mill - using Belly dump Trucks - Clay layer on top of Cell only, except on South Slope Common to Cell 3
- The upper 2 feet of random fill will be placed utilizing the fine random fill and clay stockpiles
- Rock for side armor, Top armor and Toe aprons will come from an off-site gravel source 1 mile north of Blainey, Rock will be produced through screening, stockpiles and Trucked to the site at the time of use. Belly dump Trucks will dump gravel in windrows on the top and sides of the Cell.

4) Bridging Layer (Random Fill) LEFT TO PLACE

$$\frac{200,000 \text{ ft}^2 \times 3 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 22,222 \text{ cy} \rightarrow \boxed{23,000 \text{ cy}}$$

5) Bring Lower random fill up to Design ELEVATIONS

Assume Full Area of Cell \times 1 foot thick

$$\frac{2,986,660 \text{ ft}^2 \times 1 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 110,617 \text{ cy} \rightarrow \boxed{110,700 \text{ cy}}$$

Volume Calculation Cell 2
(cont)

6) Placement of clay layer (1 foot thick on top of cell only)

$$\text{Full Area of Cell} \times 1 \text{ ft thick} = \frac{2986,660 \text{ ft}^2 \times 1 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 110,617 \text{ cy} \rightarrow \boxed{110,700 \text{ cy}}$$

7) Upper Random Fill Volume - Top of Pile

$$\text{Full Area of Cell} \times 2 \text{ ft Thick} = \frac{2986,660 \text{ ft}^2 \times 2 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 221,234 \text{ cy} \rightarrow \boxed{221,300 \text{ cy}}$$

8) Armor Protection - Top of Cell

$$\text{Full Area of Cell} \times .5 \text{ ft} = \frac{2986,660 \text{ ft}^2 \times .5 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 55,309 \text{ cy} - \boxed{55,400 \text{ cy}}$$

9) Cell 2 North Slope (Slope #1) Common with Cell 1

- Average height = 12 feet
- Length = 2600 ft

a) Random Fill to Reseal Slope from 3:1 to 5:1

$$\text{Final Width} = \left[\frac{12 \times 12 \times 5}{2} - \frac{12 \times 12 \times 3}{2} \right] \times 2600 = 374,400 \text{ ft}^3 = 13,867 \text{ cy}$$

$$= \boxed{13,900 \text{ cy}}$$

Remaining Random Fill

$$\left[\frac{15 \times 15 \times 5}{2} - \frac{12 \times 12 \times 5}{2} \right] \times 2600 = 526,500 \text{ ft}^3 = \boxed{19,500 \text{ cy}}$$



Volume Calculations Cell 2
(Cont)

Total Random Fill Volume = $\boxed{33,400 \text{ cy}}$

b) Rock Armour 8" Thick - (67 ft)

$$\left[\frac{15.67 \times 15.67 \times 5}{2} - \frac{15 \times 15 \times 5}{2} \right] \times 2600 \text{ ft}$$

$$132,957 \text{ ft}^3 = 4925 \text{ cy} \rightarrow \boxed{5000 \text{ cy}}$$

c) Toe Apron $\frac{2 \times 7 \times 2600}{27} = 1348 \text{ cy} \rightarrow \boxed{1400 \text{ cy}} - \boxed{6400 \text{ cy}}$

d) North Slope Common with mine yard

- Average height 1 ft
- Average length 900 ft

e) Random Fill - Wedge - $\left[\frac{1 \times 1 \times 5}{2} - \frac{1 \times 1 \times 3}{2} \right] \times 900 \text{ ft}$

$$900 \text{ ft}^3 = 33 \text{ cy} \rightarrow \boxed{100 \text{ cy}}$$

Random Fill → Random

$$\left[\frac{4 \times 4 \times 5}{2} - \frac{1 \times 1 \times 5}{2} \right] \times 900 \text{ ft}$$

$$33,750 \text{ ft}^3 = 1250 \text{ cy} \rightarrow \boxed{1300 \text{ cy}}$$

Total Random Fill $\boxed{1,400 \text{ cy}}$

b) Rock Armour 8" Thick

$$\left[\frac{4.67 \times 4.67 \times 5}{2} - \frac{4 \times 4 \times 5}{2} \right] \times 900$$

$$13,070 \text{ ft}^3 = 484 \text{ cy}$$

$\boxed{500 \text{ cy}}$

No Toe Apron No Fill



No. 5505
Engineer's Computation Pad

Volume Calculation Cell 2
(CONT)

11) Cell 2 West Dike Slope #3

- Average Height 2 ft
- Length 500 ft.

a) Random Fill

$$\text{Wedge} \quad \left[\frac{2 \times 2 \times 5}{2} - \frac{2 \times 2 \times 3}{2} \right] \times 500 = 2000 \text{ ft}^3 \\ = 74 \text{ cy} \rightarrow \boxed{100 \text{ cy}}$$

$$\text{Remaining Random Fill} \quad \left[\frac{5 \times 5 \times 5}{2} - \frac{2 \times 2 \times 5}{2} \right] \times 500$$

$$= \frac{26,250 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 972 \text{ cy} \Rightarrow \boxed{1000 \text{ cy}}$$

$$\text{Total} \quad \boxed{1100 \text{ cy}}$$

b) Rock Armor

$$\left[\frac{5.67 \times 5.67 \times 5}{2} - \frac{.5 \times 5 \times 5}{2} \right] \times 500 \\ = \frac{8936 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} \approx 331 \text{ cy} \rightarrow \boxed{400 \text{ cy}}$$

TOE Apron (?) → not required for slope 10' Long - Drainage from Cell goes south to Cell 3 and then off of South Slope of Cell 3

12) Cell 2 East Dike (Slope #4)

- Average height 1 ft
- Length = 1250 ft

a) Random Fill

$$\text{Wedge Form \# 10} \quad 1 \text{ ft}^3/\text{LF}$$

$$1 \text{ ft}^3/\text{LF} \times 1250' = 1250 \text{ ft}^3 \\ = 46 \text{ cy} \rightarrow \boxed{100 \text{ cy}}$$

$$\text{Remaining Random Fill} - \text{Form \# 10} \quad 37.5 \text{ ft}^3/\text{LF}$$

$$\frac{37.5 \text{ ft}^3/\text{LF} \times 1250 \text{ LF}}{27 \text{ ft}^3/\text{cy}} = 1736 \text{ cy} \rightarrow \boxed{1800 \text{ cy}}$$

$$\text{Total - Random Fill} \quad \boxed{1900 \text{ cy}}$$

Volume Calculation Cell 2 (cont)

12 (cont) Rock Armor 8" (.67') Thick

USING # 10 14.52 ft³/LF DICE

$$14.52 \times 1250 \text{ LF} = 18152 \text{ ft}^3$$

$$\frac{18152 \text{ ft}^3}{27 \text{ ft}^3} \Rightarrow 672 \text{ CY} \rightarrow \boxed{700 \text{ CY}}$$

NO TOE APPAN

13) SOUTH Slope Cell 2 COMM WITH Cell 3

• Average Height 3 ft
• Length 3500 ft

a) Random Fill - Wedge $\rightarrow \left[\frac{3 \times 3 \times 5}{2} + \frac{3 \times 3 \times 5}{2} \right] \times 3500$

$$= \frac{31500 \text{ ft}^3}{27} = 1167 \text{ CY}$$

$$\rightarrow \boxed{1200 \text{ CY}}$$

b) Clay Layer $\left[\frac{4 \times 4 \times 5}{2} - \frac{3 \times 3 \times 5}{2} \right] \times 3500$

$$\frac{61250 \text{ ft}^3}{27} = 2268 \text{ CY} \rightarrow \boxed{2300 \text{ CY}}$$

c) Random Fill (upper) $\left(\frac{6 \times 6 \times 5}{2} - \frac{4 \times 4 \times 5}{2} \right) \times 3500$

$$\frac{175000 \text{ ft}^3}{27} = 6481 \text{ CY} \rightarrow \boxed{6500 \text{ CY}}$$

D) Rock Armor -

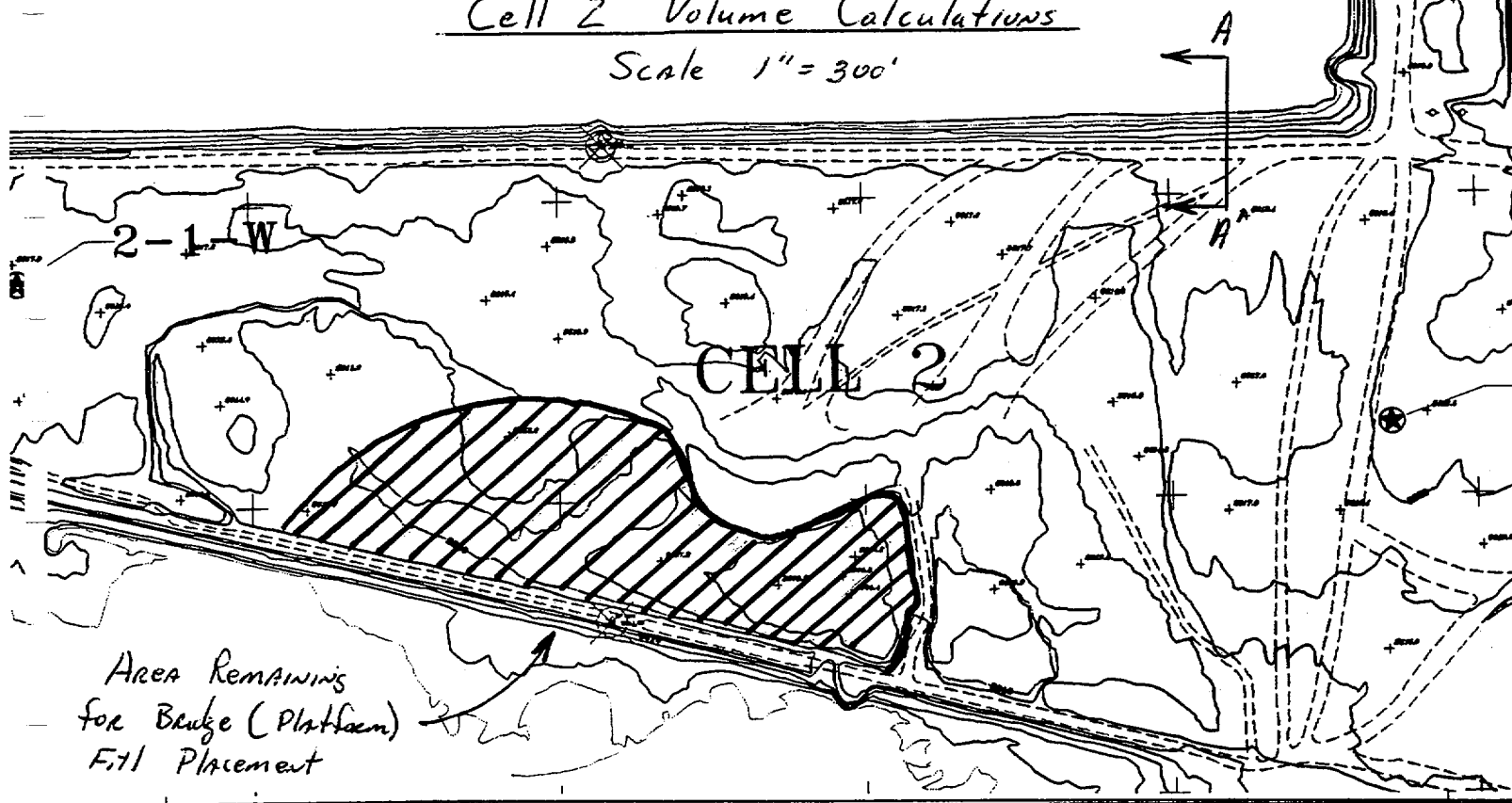
$$\left(\frac{6.67 \times 6.67 \times 5}{2} - \frac{6 \times 6 \times 5}{2} \right) \times 3500$$

$$\frac{741278 \text{ ft}^3}{27} = 2751 \text{ CY} \rightarrow \boxed{2800 \text{ CY}}$$

NO TOE APPAN -

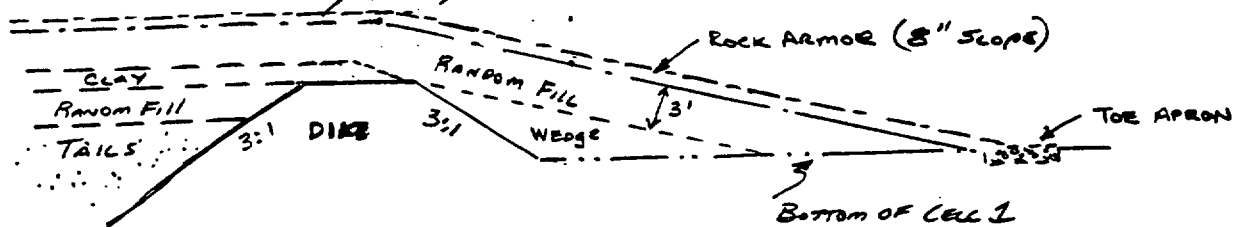
Cell 2 Volume Calculations

Scale 1" = 300'



SECTION A-A (NOT TO SCALE) TYPICAL SECTION THRU EXTERIOR DIKE

SHOWING COVER (6" TOP)



A

Area Modified for
Cell 1-I Disposal Area

A'

Volume Calculations
Cell 2

Volume Summary.

	Bridge Layer	Lower Random	CLAY	Upper Random	Removal
TOP OF CELL	23,000	110,700	110,700	221,300	55,400
NORTH (Slope #1)		13,900	—	19,500	6,400
NORTH (Slope #2)		100	—	1,300	500
WEST (Slope #3)		100	—	1,000	400
EAST (Slope #4)		100	—	1,800	700
SOUTH (Slope #5)		1200	2,300	6,500	2800
TOTALS	23,000	126,100	113,000	251,400	66,200

PROJECT QUANTITIES

Cell Slopes

Slope No.		Height feet	Length feet	EXISTING DIKE "A"		WEDGE "B"		RANDOM FILL "C"		RANDOM FILL "D"		RIPRAP "E"	
				AREA	VOL (CY)	AREA	VOL (CY)	AREA	VOL (CY)	AREA	VOL (CY)	AREA	VOL (CY)
1	Cell 2 North dike	12	2,600	216.0	20,800	144.0	13,867	62.5	6,019	140.0	13,481	51.7	4,976
2	Cell 2 North Dike	1	900	1.5	50	1.0	33	7.5	250	30.0	1,000	15.0	500
3	Cell 2 West Dike	2	500	6.0	111	4.0	74	12.5	231	40.0	741	18.3	340
4	Cell 2 East Dike	1	1,250	1.5	69	1.0	46	7.5	347	30.0	1,389	15.0	694
5	Cell 2 South Dike	3	3,500	0.0	0	9.0	1,167	17.5	2,269	50.0	6,481	30.7	3,976
Cell 2 Slope Totals			6,150		21,031		15,187		9,116		23,093		10,485
6	Cell 3 West Dike	2	1,100	6.0	244	4.0	163	12.5	509	40.0	1,630	18.3	747
7	Cell 3 South Dike	16	1,750	384.0	24,889	256.0	16,593	82.5	5,347	180.0	11,667	65.0	4,213
8	Cell 3 South Dike	39	1,700	2,281.5	143,650	1,521.0	95,767	197.5	12,435	410.0	25,815	141.7	8,920
9	Cell 3 East Dike	6	800	54.0	1,600	36.0	1,067	32.5	963	80.0	2,370	31.7	938
Cell 3 Slope Totals			5,350		170,383		113,589		19,255		41,481		14,819
Total Material Requirements (CY)					191,414		128,776		28,370		64,574		25,304

NOTE:

Values shown in the "Area" column are the CROSS SECTIONAL AREA for the component in SQUARE FEET.
 Values shown in the "Volume" column are the component's area x length converted to CUBIC YARDS.

CELL 2 RECLAMATION

CAT 637 RESOURCE REQUIREMENTS

	Volume	Route	Yds/Hr	%	Equip hrs
Cell 2 Bridging Lift					
Tailings Surface	23,000	5	296	100%	77.7
				TOTAL	77.7
Cell 2 Lower Random fill					
Tailings surface	110,700	5	296	67%	250.6
Tailings Surface	110,700	4	368	33%	99.3
Slope 1	13,900	5	296	100%	47.0
Slope 2	100	4	368	100%	0.3
Slope 3	100	5	296	100%	0.3
Slope 4	100	4	368	100%	0.3
Slope 5	1,200	5	296	100%	4.1
				TOTAL	401.7
Cell 2 Upper Random Fill					
Tailings surface	221,300	5	296	67%	500.9
Tailings Surface	221,300	4	368	33%	198.4
Slope 1	19,520	5	296	100%	65.9
Slope 2	1,300	4	368	100%	3.5
Slope 3	100	5	296	100%	0.3
Slope 4	1,800	4	368	100%	4.9
Slope 5	6,500	5	296	100%	22.0
				TOTAL	796.0
Cell 2 Rock Armour use Highway Trucks					

WHITE MESA MILL Rte '99

Clay Production

Handleage From Section 16

Hour Profile From Sec 16 - 10000

#	Segment Length	Grade	Loose	End
1	2000'	4%	600 m.	1 min .65
2	1500'	11%	540 m	1.8 min 1 min
3	4200'	1.8%	1260 m	1.4 min 1.2 min
4	5600'	0.5%	1600 m	1.6 min 1.5 min
5	5700'	1.4%	1710 m	1.75 min 1.68 min
6	5200'	0.8%	1560 m	1.5 min 1.48 min
	24,500'			

9.05 min 7.43 min
16.48 min

4.6 mwe TRIP LOADER
9.2 mile Round Trip

CLAY = 2380 ¹/₂ cy loose

Fixed Trues - LOADING -

980 r 7 cy Bucket Spreader to Load

.5 min/cycle = 16.5 minutes/hr

1.5 minutes to Load x 8 Trues = 12 minutes

Dump -> using belly dumps -> Continuous

Cycle is 15 minutes to 6 minutes to spread

OFF ROAD application 22 cy/10000

Cycle time = 18 minutes/truck

50 minutes/hr = 2.7 cycles/hr

22 cy/cycle x 2.7 cycles/hr x 8 trucks
= 475.2 cy/hr.

Sec 2 = 118,000 cy/CLAY = 27 hrs LOADER + haulage + 22 sec

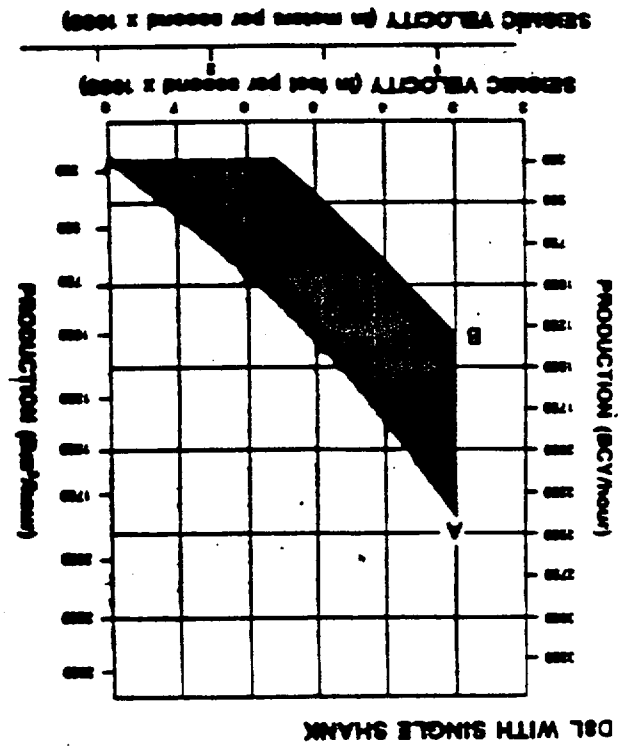
(DOZER Rte 500 cy/hr / 50 =)

141,000 kg = 297 hrs (8 trucks) Spreading & Capacating to 1000 PLOT
at motorway distance.

Trucks 257 x 10 = 2570 hrs - 2376 hrs 45% of load time.
DOZER 300 x 1 = 300 hrs 2576 hrs 297 = 300
LOADER 239 x 1 = 239 hrs 297 = 300
GRADER 239 x 1 = 239 hrs 297 = 300
WV 288 x 1 = 288 hrs 297 = 300
COMPACTOR 300 x 20 = 6000 hrs

CLAY PRODUCTION COSTS
- SECTION 16 SOURCE -

- 1). CLAY PRODUCTION
- CLAYS WILL BE RIPPED FROM SOURCE @ SECTION 16
 - APPROX 400 VERTICAL FEET OF BAUGHN BASIN EXPOSURE
 - FROM CAT HAND BOOK ---
 - MAX SEISMIC VELOCITY OF CLAY @ 6000 FT/SEC



REV
A - CORN
B - ADVANCE

- BASED ON THE ABOVE, DCL CAT SHOULD BE ABLE TO PRODUCE AT LEAST 250 BCY/HOUR WITH AN AVERAGE OF 500 BCY/HOUR

500 BCY/HOUR

- WE WILL ASSUME THAT THE CAT IS UTILIZED EVERY DAY OF CLAY PRODUCTION FOR RIPPING AND OR DOING/REDOING/REPAIRATION.

RECLAMATION OF CELL 3

RECLAMATION OF CELL 3

Dewatering of Cell 3

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Dewatering of Cell 3	hrs	\$0.48	62,400	\$30,000

Total Dewatering of Cell 3

\$30,000

Place Remainder of Bridging (Platform) Lift

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,582	\$28,025
Cat 637 Scraper	hrs	\$139.96	703	\$98,389
Cat 825 Compactor	hrs	\$64.16	176	\$11,275
Cat D8N Dozer With Ripper	hrs	\$68.03	176	\$11,956
Cat D7 Dozer	hrs	\$57.08	176	\$10,033
Cat 651 Waterwagon	hrs	\$68.97	176	\$12,121
Cat 14G Motorgrader	hrs	\$46.96	176	\$8,253
Equipment Maintenance (Butler)	hrs	\$12.08	1,582	\$19,113

Total Place Remainder of Bridging (Platform) Lift

\$199,165

Place Lower Random Fill (12")

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,745	\$30,913
Cat 637 Scraper	hrs	\$139.96	775	\$108,465
Cat 825 Compactor	hrs	\$64.16	194	\$12,430
Cat D8N Dozer With Ripper	hrs	\$68.03	194	\$13,198
Cat D7 Dozer	hrs	\$57.08	194	\$11,074
Cat 651 Waterwagon	hrs	\$68.97	194	\$13,380
Cat 14G Motorgrader	hrs	\$46.96	194	\$9,110
Equipment Maintenance (Butler)	hrs	\$12.08	1,745	\$21,082

Total Place Lower Random Fill (12")

\$219,653

Clay Layer

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	1,975	\$34,993
Cat 637 Scraper	hrs	\$139.96	0	\$0
Cat 825 Compactor	hrs	\$64.16	375	\$24,058
Cat D8N Dozer With Ripper	hrs	\$68.03	350	\$23,810
Cat D7 Dozer	hrs	\$57.08	0	\$0
Cat 651 Waterwagon	hrs	\$68.97	350	\$24,140
Cat 14G Motorgrader	hrs	\$46.96	375	\$17,609
Cat 980 Loader	hrs	\$63.01	350	\$22,054
5000 Gallon Water Truck	hrs	\$39.34	175	\$6,884
Highway Trucks	hrs	\$40.00	2,800	\$112,000
Truck Drivers	hrs	\$12.74	2,800	\$35,674
Equipment Maintenance (Butler)	hrs	\$12.08	4,775	\$57,697

Total Place Clay Layer

\$358,918

RECLAMATION OF CELL 3

Upper Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	2,490	\$44,117
Cat 637 Scraper	hrs	\$139.96	996	\$139,396
Cat 825 Compactor	hrs	\$64.16	249	\$15,975
Cat D8N Dozer With Ripper	hrs	\$68.03	249	\$16,939
Cat D7 Dozer	hrs	\$57.08	249	\$14,214
Cat 651 Waterwagon	hrs	\$68.97	249	\$17,174
Cat 14G Motorgrader	hrs	\$46.96	249	\$11,693
5000 Gallon Water Truck	hrs	\$39.34	249	\$9,795
Equipment Maintenance (Butler)	hrs	\$12.08	2,490	\$30,087

Total Place Upper Random Fill

\$299,389

Rock Armor

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	948	\$16,796
Cat D7 Dozer	hrs	\$57.08	316	\$18,039
Cat 651 Waterwagon	hrs	\$68.97	316	\$21,795
Cat 14G Motorgrader	hrs	\$46.96	316	\$14,839
Rock Cost Delivered	CY	\$3.51	76,110	\$267,255
Equipment Maintenance (Butler)	hrs	\$12.08	948	\$11,455

Total Place Rock Armor

\$350,179

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	\$62.00	1,406	\$87,172

Total Quality Control

\$87,172

TOTAL RECLAMATION OF CELL 3

\$1,544,475

2/16/77

VOLUME CALCULATIONS CELL 3

1) Area of Top of cell by Cell - 3,234,252 ft²

74.25 ACRES

2) Area of Bridging layer (lower random) placed 1,481,000 ft²

34 ACRES

3) ASSUMPTIONS:

- Bridging Layer (random fill) comes from random fill stockpiles west of Cell 3 - using haul route #6.
- STOCKPILES DESIGNATED AS "CLAY" will be used for top 12" of lower random fill
- Clay for the random barrier will be mined, blended, and hauled from Section 16 four miles South of the mill. 8" on slopes, 6" on top + 2'x7' apron at bottom of south slopes
- 2 foot layer of upper random fill will come from finer material in random fill stockpiles and "Clay" stockpiles
- Rock armor for top, side slopes, and toe aprons will come from same source as Cell 2 Rock Armor. - Gravel pit North of Blasting.
- Clay layer extends over only the top of Cell NOT ON SLOPES.

4) Bridging layer left to place

$$\frac{(3,234,252 \text{ ft}^2 - 1,481,000 \text{ ft}^2) \times 3 \text{ ft}}{27 \text{ ft}^3/\text{CY}} = \text{CY}$$

$$\frac{1,753,252 \times 3}{27} = 194,805 \text{ CY}$$

194,800 CY

5) Bring lower random fill up to design elevations (assume even total area for estimate, in reality parts of east end of pond is up to elevation already.)

$$\frac{3,234,252 \text{ ft}^2 \times 1 \text{ ft}}{27 \text{ ft}^3/\text{CY}} = 119,787 \text{ CY} \rightarrow 119,800 \text{ CY}$$

VOLUME CALCULATIONS CELL 3

- 6) Placement of Clay Layer (for inside) over full area Top of Cell

$$\frac{3,234,252 \text{ ft}^2 \times 4 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 119,773 \text{ cy} \rightarrow \boxed{119,800 \text{ cy}}$$

[.8 loss factor]

- 7) upper random fill volume over full area of Cell

$$\frac{3,234,252 \text{ ft}^2 \times 2 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 239,574 \text{ cy} \rightarrow \boxed{239,600 \text{ cy}}$$

- 8) Armor protection - Top of Cell 6" (.5 ft)

$$\frac{3,234,252 \text{ ft}^2 \times .5 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 59,894 \text{ cy} \rightarrow \boxed{59,900 \text{ cy}}$$

- 9) CELL 3 WEST Slope (Slope #6) 2 foot high, 1100 feet Long

- No Clay on Slopes
- TOE Apron ONLY AT Base of Long Slopes or where drainage off of the Cells is directed
- Random fill wedge \rightarrow NO EXISTING DIKE \rightarrow SO Transition from top Corner

$$\left(\frac{2 \times 2 \times 5}{2} \times 1100 \text{ ft} \right) / 27 = 407 \text{ cy} \rightarrow \boxed{410 \text{ cy}}$$

- Random Fill

$$\left(\frac{5 \times 5 \times 5}{2} - \frac{2 \times 2 \times 5}{2} \right) \times 1100 \text{ ft} \rightarrow 57,750 \text{ ft}^3$$

$$\frac{57,750 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 2138 \text{ cy} \rightarrow \boxed{2,200 \text{ cy}}$$

- Rock Armor

$$\left(\frac{5.67 \times 5.67 \times 5}{2} - \frac{5 \times 5 \times 5}{2} \right) \times 1100 \rightarrow 19,659 \text{ ft}^3$$

$$\frac{19,659 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 728 \text{ cy} \rightarrow \boxed{730 \text{ cy}}$$

VOLUME CALCULATION CELL 3

10) Cell 3 South Dike (West End) Slope #7

• 16 ft average height

• 1750 feet long

Random Fill Wedge → 3:1-5:1 Covered →

$$\left[\frac{16 \times 16 \times 5}{2} - \frac{16 \times 16 \times 3}{2} \right] \times 1750 \text{ ft} \rightarrow 443,000 \text{ ft}^3$$

$$\frac{443,000 \text{ ft}^3}{27.7 \text{ ft}^3/\text{cy}} = 16,592 \text{ cy} \rightarrow \boxed{16,600 \text{ cy}}$$

Random fill - 1

$$\left[\frac{19 \times 19 \times 5}{2} - \frac{16 \times 16 \times 5}{2} \right] \times 1750 = 459,375 \text{ ft}^3$$

$$\frac{459,375 \text{ ft}^3}{27.7 \text{ ft}^3/\text{cy}} = 17,013 \text{ cy} \rightarrow \boxed{17,100 \text{ cy}}$$

Rock Armor -
Slope + 8" thick

$$\left[\frac{19.67 \times 19.67 \times 5}{2} - \frac{19 \times 19 \times 5}{2} \right] \times 1750 \rightarrow$$

$$113,351 \text{ ft}^3 = 4198 \text{ cy} \rightarrow \boxed{4200 \text{ cy}}$$

Rock Armor at top of slope

$$\frac{2' \text{ thick} \times 7' \text{ wide} \times 1750' \text{ long}}{27.7 \text{ ft}^3/\text{cy}} = 907 \text{ cy} \rightarrow \boxed{1000 \text{ cy}}$$

11) Cell 3 South Dike (East End Common with Cell 4A) Slope #5

• 39 ft average height
• 1700 ft long
• 1500 ft wide

Random Fill Wedge

$$\left[\frac{39 \times 39 \times 5}{2} - \frac{39 \times 39 \times 3}{2} \right] \times 1700 \text{ ft} \rightarrow 2,535,700 \text{ ft}^3$$

$$\frac{2,535,700 \text{ ft}^3}{27.7 \text{ ft}^3/\text{cy}} = 95,766 \text{ cy} \rightarrow \boxed{95,800 \text{ cy}}$$

Volume Calculations See 3

2/16/79

11) cont

Upper Random Fill

$$\left[\frac{42 \times 42 \times 5}{2} - \frac{39 \times 39 \times 5}{2} \right] \times 1700 \rightarrow 1,032,750 \text{ ft}^3$$

$$\frac{1,032,750 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} \rightarrow 38,250 \text{ cy} \rightarrow \boxed{38,250 \text{ cy}}$$

Rock Armor

$$\left[\frac{42.67 \times 42.67 \times 5}{2} - \frac{42 \times 42 \times 5}{2} \right] \times 1700 = 241,098 \text{ ft}^3$$

$$\frac{241,098 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 8930 \text{ cy} \rightarrow \boxed{8930 \text{ cy}}$$

Rock Toe Armor

$$\frac{24 \times 74 \times 1700 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 851 \text{ cy} \rightarrow \boxed{900 \text{ cy}}$$

Total Rock

9850 cy

12) Core 3 East Shore

- Average height 4 feet
- 800 feet long

Random Fill (No existing dune) - $\frac{42.4 \times 5}{2} \times 800 = 32,000 \text{ ft}^3$

$$\frac{32,000 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 1185 \text{ cy} \Rightarrow \boxed{1200 \text{ cy}}$$

Rock Armor - $\left(\frac{4.67 \times 4.67 \times 5}{2} - \frac{4 \times 4 \times 5}{2} \right) \times 800 = 11,618 \text{ ft}^3$

$$\frac{11,618 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} \Rightarrow \boxed{430 \text{ cy}}$$

NO Toe Armor



Volume Calculation Cell 3

Volume Summary

	Bridge Layer	Lower Run	Coal	Upper Runway	Armor
Top of Cell	194,800	119,800	119,800	239,400	59,900
West Slope (#6)	—	410	—	2,200	730
South Dike (#7)	—	16,600	—	17,100	5,200
South Dike (#8)	—	95,800	—	38,300	9,850
East Slope (#9)	—	—	—	1,200	430
Totals (#)	194,800	232,610	119,800	298,200	76,110



CELL 3 PRODUCTION
(USE SAME ASSUMPTION AS CELL 2)
CLAY

$$\text{Clay Volume} = \frac{119,800 \text{ BCY}}{.8 \text{ Swell factor}} = 149,750 \text{ LCY}$$

TRUCKING 475 LCY/hr - 8 TRUCKS + 1 Loader

$$\frac{149,750 \text{ LCY}}{475 \text{ LCY/hr}} \approx 316 \text{ hr} + 10\% \Rightarrow \text{use } 350 \text{ hrs}$$

$$350 \times 8 \text{ Trucks} = \boxed{2800 \text{ hrs}}$$

980 Loader - 350 hrs

D8N Dozer w/ripper - 350 hrs

CAT 651 WW 350 hrs

CAT 825 Compactor 375 hrs

CAT 14G Grader 375 hrs

5000 Gallon Water Tank 175 hrs

ROCK ARMOR

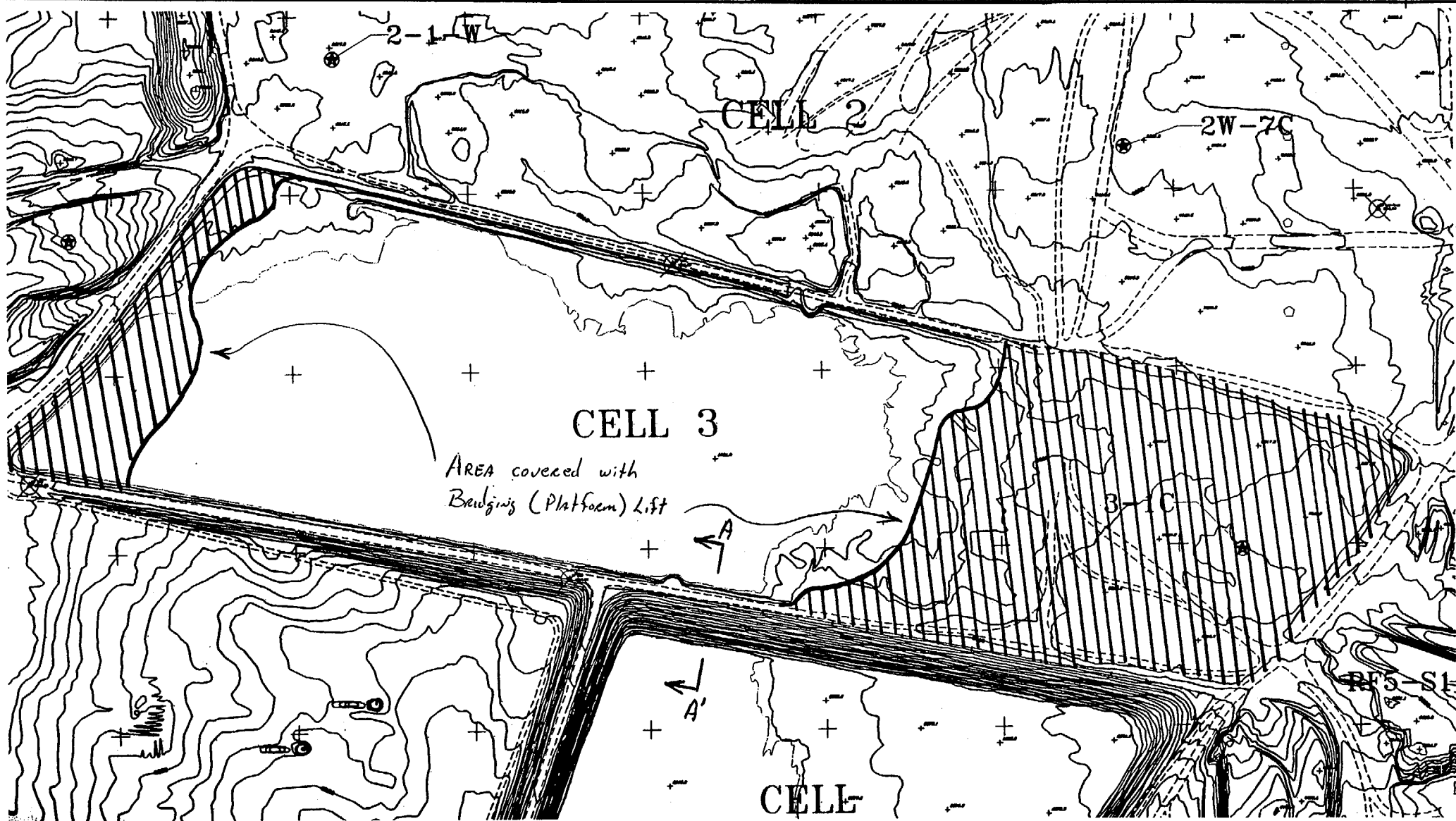
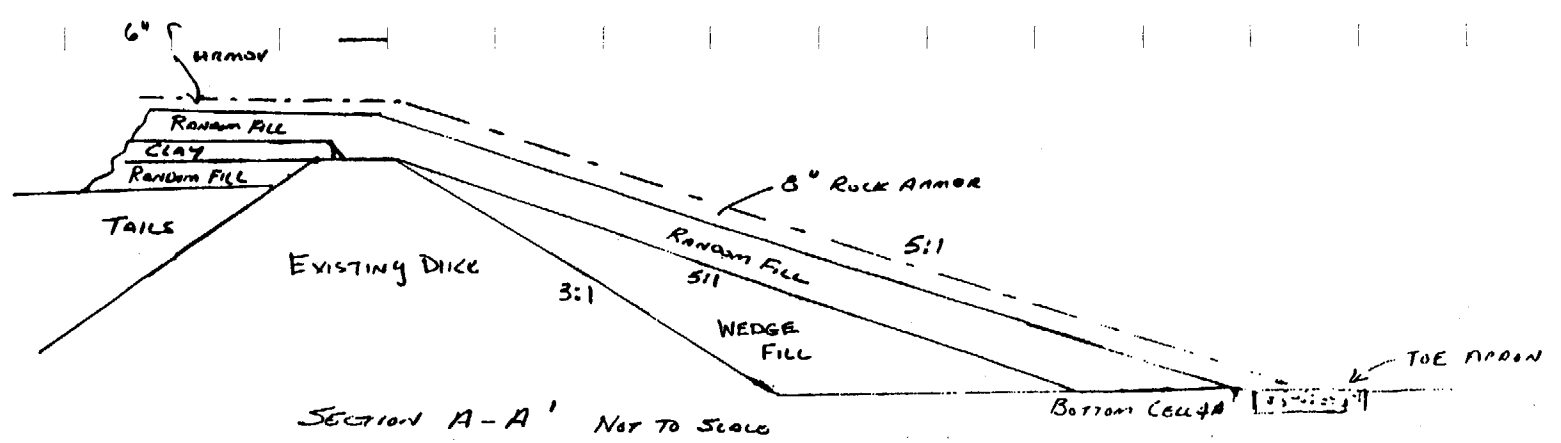
$$\text{Rock Armor Volume} = 76,110 \text{ CY} - 33 \text{ cy/truck} \times 8 \text{ Trucks}$$

304 CY/hr - Delivered

Say 25% extra time to

Finish spreading - 1

$$291 \text{ CY/hr} \rightarrow 316 \text{ hrs}$$



Calculation Sheet

Project Reclam. Plan Est. by HRR

Page 1 of

Date 01-24-01

Volume Calculations - Cell 3

1) Area of Top of Cell by Cap = $3,234,252 \text{ ft}^2$ 74.25 AC.

2) Area of Bridging Layer (platform fill) placed to date

34 acres from WMM Mill Staff = $1,481,040 \text{ ft}^2$

3) Platform Layer left to place:

$(3,234,252 - 1,481,040) \times 3.0 \text{ ft.} / 27 \text{ ft}^3/\text{yd}^3 = 194,801 \text{ yd}^3$

CELL 3 RECLAMATION

CAT 637 RESOURCE REQUIREMENTS

	Volume	Route	Yds/Hr	%	Equip hrs
Cell 3 Bridging Lift					
Tailings Surface	194,800	6	277	100%	703.25
				TOTAL	703.25
Cell 3 Lower Random Fill					
Tailings surface	119,800	6	296	100%	404.7
Slope 6	410	6	296	100%	1.4
Slope 7	16,600	6	368	100%	45.1
Slope 8	95,800	6	296	100%	323.6
Slope 9	0	6	368	100%	0.0
				TOTAL	774.9
Cell 3 Upper Random fill					
Tailings surface	239,400	6	296	100%	808.8
Slope 6	2,200	6	296	100%	7.4
Slope 7	17,100	6	368	100%	46.5
Slope 8	38,300	6	296	100%	129.4
Slope 9	1,200	6	368	100%	3.3
				TOTAL	995.3
Cell 3 Rock Armour use Highway Trucks					

CELL 4A CLEANUP

CELL 4A CLEANUP

Dewatering of Cell 4A

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Dewatering of Cell 4A	hrs	\$0.48	11,500	\$5,529

Total Dewatering of Cell 4A

\$5,529

Remove Fencing

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Cat 988 Loader	hrs	\$96.88	40	\$3,875
Equipment Operators	hrs	\$17.72	40	\$709
Equipment Maintenance (Butler)	hrs	\$12.08	40	\$483
Laborers	hrs	\$10.35	160	\$1,655

Total Remove Fencing

\$6,723

Remove Liner & Contaminated Material to Cell 3

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	303	\$5,368
Cat 769 Truck	hrs	\$62.82	606	\$38,071
Truck Driver	hrs	\$12.74	606	\$7,721
Cat 988 Loader	hrs	\$96.88	303	\$29,355
Equipment Maintenance (Butler)	hrs	\$12.08	909	\$10,984

Total Remove Liner & Contaminated Material to Cell 3

\$91,499

Quality Control

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	\$62.00	325	\$20,150

Total Quality Control

\$20,150

TOTAL CELL 4A CLEANUP

\$123,900

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

PROJECT..... DATE..... CALC BY..... SHEET..... OF.....

CELL 4R WORK

1) ASSUMPTIONS

- ANY XTALS ARE PICKED UP WITH LINER
- AVERAGE OF 1 FOOT UNDER LINER WILL GO TO CELL 3
- ALL DIRT MATERIAL IS UNCONTAMINATED & CAN BE UTILIZED FOR CELL 3 COVER, THEREFORE, NO COST IS PLACED AGAINST ITS REMOVAL
- AREA OF CELL FOR VOLUME ESTIMATES IS 1,909 M²
- CRYSTALS ESTIMATED TO BE 6" THICK OVER ENTIRE AREA

Therefore

QUANTITY OF CONTAMINATED MATERIAL:

$$[1,909,000 \times [6/12 + 12/12]] \div 27 \text{ ft}^3/\text{yd}^3 = 106,055$$

say 106,100 yd³

and

BASED ON HAUL ROUTE B PROFILE, EFFICIENCY = 175 yd³/truck haul.

$$106,100 \text{ yd}^3 \div 175 \text{ yd}^3 = 606 \text{ TRUCK HAULS}$$

$$= 303 \text{ FLEET HAULS (2 TRUCKS)}$$

RECLAMATION OF CELL1

RECLAMATION OF CELL 1

Dewatering of Cell 1

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Dewatering of Cell 1	hrs	\$0.48	62,400	\$30,000

Total Dewatering of Cell 1

\$30,000

Crystal Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	2,695	\$47,749
Cat 769 Truck	hrs	\$62.82	2,157	\$135,511
Truck Drivers	hrs	\$12.74	2,157	\$27,481
Cat 988 Loader	hrs	\$96.88	539	\$52,218
Cat D8N Dozer With Ripper	hrs	\$68.03	539	\$36,667
Cat 375 Excavator	hrs	\$118.80	539	\$64,031
Cat 651 Waterwagon	hrs	\$68.97	539	\$37,175
Cat 14G Motorgrader	hrs	\$46.96	539	\$25,311
Equipment Maintenance (Butler)	hrs	\$12.08	4,852	\$58,628

Total Crystal Removal

\$484,771

Contaminated Materials Removal

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	616	\$10,914
Cat 637 Scraper	hrs	\$139.96	308	\$43,106
Cat D8N Dozer With Ripper	hrs	\$68.03	77	\$5,238
Cat 825C Compactor	hrs	\$64.16	77	\$4,940
Cat 651 Waterwagon	hrs	\$68.97	77	\$5,311
Cat 14G Motorgrader	hrs	\$46.96	77	\$3,616
Equipment Maintenance (Butler)	hrs	\$12.08	616	\$7,443

Total Contaminated Materials Removal

\$80,568

Topsoil Application

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	240	\$4,252
Cat 637 Scraper	hrs	\$139.96	120	\$16,795
Cat D8N Dozer With Ripper	hrs	\$68.03	40	\$2,721
Cat 651 Waterwagon	hrs	\$68.97	40	\$2,759
Cat 14G Motorgrader	hrs	\$46.96	40	\$1,878
Equipment Maintenance (Butler)	hrs	\$12.08	240	\$2,900

Total Topsoil Application

\$31,305

RECLAMATION OF CELL1

Construct Channel

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	858	\$15,202
Cat 637 Scraper	hrs	\$139.96	272	\$38,068
Cat 769 Truck	hrs	\$62.82	450	\$28,271
Truck Drivers	hrs	\$12.74	450	\$5,733
Cat 988 Loader	hrs	\$96.88	150	\$14,532
Drilling & Blasting Contractor	BCY	\$0.90	89,100	\$80,190
Cat 14G Motorgrader	hrs	\$46.96	218	\$10,237
Cat D8N Dozer With Ripper	hrs	\$68.03	218	\$14,830
Equipment Maintenance (Butler)	hrs	\$12.08	1,308	\$15,805

Total Construct Channel

\$222,868

Place Clay Liner

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	355	\$6,290
Cat 637 Scraper	hrs	\$139.96	0	\$0
Cat 825 Compactor	hrs	\$64.16	60	\$3,849
Cat D8N Dozer With Ripper	hrs	\$68.03	60	\$4,082
Cat D7 Dozer	hrs	\$57.08	0	\$0
Cat 651 Waterwagon	hrs	\$68.97	60	\$4,138
Cat 980 Loader	hrs	\$63.01	60	\$3,781
5000 Gallon Water Truck	hrs	\$39.34	30	\$1,180
Highway Trucks	hrs	\$40.00	435	\$17,400
Truck Drivers	hrs	\$12.74	435	\$5,542
Cat 14G Motorgrader	hrs	\$46.96	85	\$3,991
Equipment Maintenance (Butler)	hrs	\$12.08	1,580	\$19,091

Total Place Clay Liner

\$69,345

Place Lower Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	602	\$10,666
Cat 637 Scraper	hrs	\$139.96	172	\$24,072
Cat 825 Compactor	hrs	\$64.16	86	\$5,517
Cat D8N Dozer With Ripper	hrs	\$68.03	86	\$5,850
Cat D7 Dozer	hrs	\$57.08	86	\$4,909
Cat 651 Waterwagon	hrs	\$68.97	86	\$5,931
Cat 14G Motorgrader	hrs	\$46.96	86	\$4,038
Equipment Maintenance (Butler)	hrs	\$12.08	602	\$7,274

Total Place Lower Random Fill

\$68,259

RECLAMATION OF CELL1

Clay Cap

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	305	\$5,404
Cat 637 Scraper	hrs	\$139.96	0	\$0
Cat 825 Compactor	hrs	\$64.16	55	\$3,529
Cat D8N Dozer With Ripper	hrs	\$68.03	55	\$3,742
Cat D7 Dozer	hrs	\$57.08	0	\$0
Cat 651 Waterwagon	hrs	\$68.97	55	\$3,793
Cat 14G Motorgrader	hrs	\$46.96	55	\$2,583
Cat 980 Loader	hrs	\$63.01	55	\$3,466
5000 Gallon Water Truck	hrs	\$39.34	30	\$1,180
Highway Trucks	hrs	\$40.00	440	\$17,600
Truck Drivers	hrs	\$12.74	440	\$5,606
Equipment Maintenance (Butler)	hrs	\$12.08	305	\$3,685

Total Place Clay Cap

\$50,587

Upper Random Fill

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	688	\$12,190
Cat 637 Scraper	hrs	\$139.96	172	\$24,072
Cat 825 Compactor	hrs	\$64.16	86	\$5,517
Cat D8N Dozer With Ripper	hrs	\$68.03	86	\$5,850
Cat D7 Dozer	hrs	\$57.08	86	\$4,909
Cat 651 Waterwagon	hrs	\$68.97	86	\$5,931
Cat 14G Motorgrader	hrs	\$46.96	86	\$4,038
5000 Gallon Water Truck	hrs	\$39.34	86	\$3,383
Equipment Maintenance (Butler)	hrs	\$12.08	688	\$8,313

Total Place Upper Random Fill

\$74,205

RECLAMATION OF CELL1

Rock Armor

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	90	\$1,595
Cat D7 Dozer	hrs	\$57.08	30	\$1,713
Cat 651 Waterwagon	hrs	\$68.97	30	\$2,069
Cat 14G Motorgrader	hrs	\$46.96	30	\$1,409
Rock Cost Delivered	CY	\$3.51	8,607	\$30,223
Equipment Maintenance (Butler)	hrs	\$12.08	90	\$1,087

Total Place Rock Armor

\$38,095

Quality Control

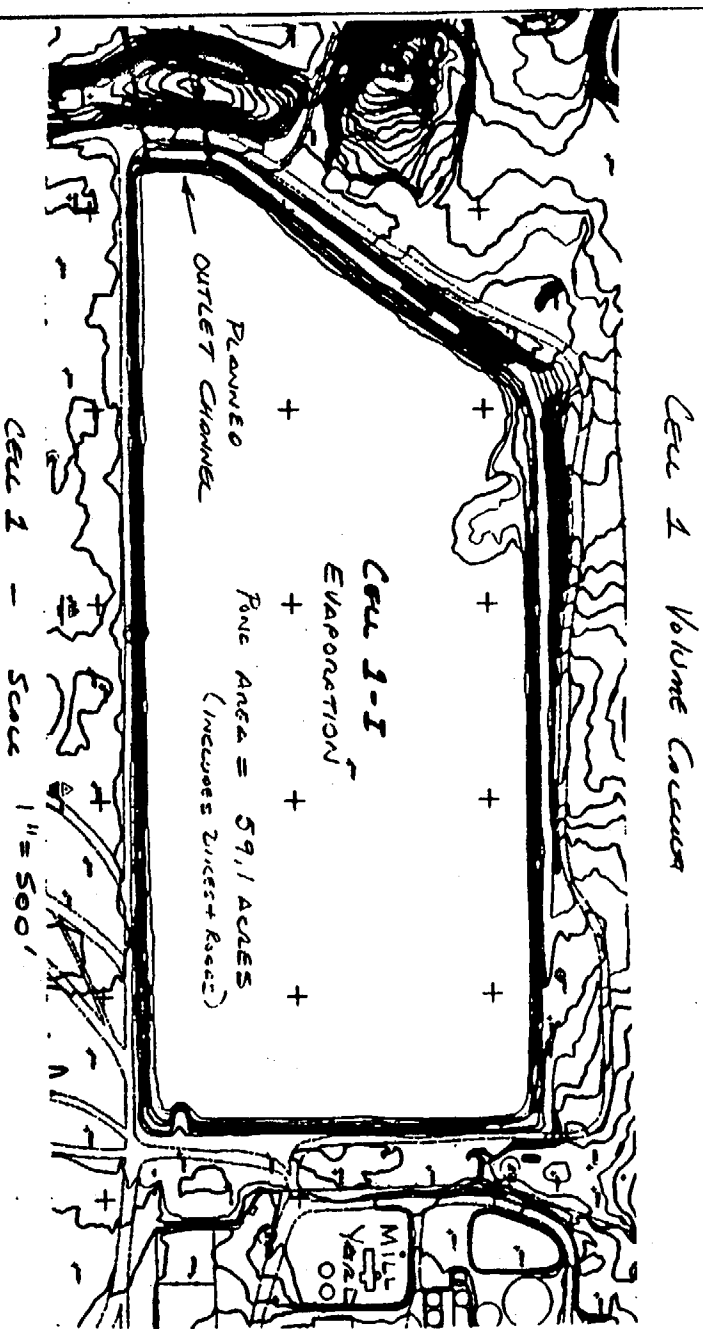
Resource Description	Units	Cost/Unit	Task Units	Task Cost
Quality Control Contractor	hrs	\$62.00	800	\$49,600

Total Quality Control

\$49,600

TOTAL RECLAMATION OF CELL 1

\$1,199,605



1) Coagulant Volume + Liner Cover

- Coagulant thickness based on historical chlorine of top or Coagulant layer and Area mapping → Assume 3 ft thick
- Soil cover over PVC Liner 1 1/2' by design and as built
- Liner designed and Soil Cover all pulled up at same time.

$$\text{Area of River } 2,575,703 \text{ ft}^2 \times (3 \text{ ft} + 1.5 \text{ ft}) = 429,253 \text{ Cy}$$

$$27 \text{ ft}^3/\text{cy}$$

$$\rightarrow 429,300 \text{ Cy}$$

2) Volume of Contaminated material under Liner

- Assume for purposes of this estimate that 1 ft of Contaminated material must be removed from under liner for each cell

$$\frac{2,575,703 \text{ ft}^2 \times 1 \text{ ft}}{27 \text{ ft}^3/\text{cy}} = 95,396 \text{ Cy} \rightarrow 95,400 \text{ Cy}$$

3) Time Required to haul Xyls + Liner Cover Assuming the use of 4-769 Trucks & 275C Tractors, 986 Loader, Assume haul Route #1 for production (199 cy/hr/truck/hr)

$$\frac{429,300 \text{ Cy}}{199 \text{ Cy/hr}} = 2157 \text{ truck-hrs} - 539 \text{ hrs/truck}$$

CELL VOLUME CALCULATIONS

4)

TIME REQUIRED TO REMOVE MATERIAL FROM UNDER LNER IN PLACE
IN CELL #3 - USE HAUL ROUTE #2 - 4 SCRAPERS

$$\frac{95,500 \text{ cy}}{310 \text{ cy/hr/scraper}} = 308 \text{ scraper hours} \quad 4 \text{ scrapers} = 77 \text{ hrs/UNIT.}$$

5)

TOP SOIL VOLUMES → place 6" of TOP SOIL OVER AREA OF

$$\text{Cell 1} - \frac{2,575,703 \text{ ft}^2 \times .5 \text{ ft}}{27 \text{ ft}^3/\text{cy}} \approx 47,693 \text{ cy}$$

$$\rightarrow 48,000 \text{ cy}$$

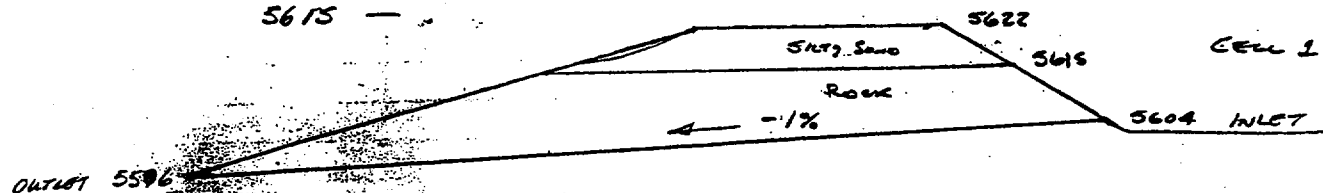
USE SCRAPER FLEET ASSUME ROUTE 1 → 310 cy/hr/scraper

$$\frac{48,000 \text{ cy}}{310 \text{ cy/hr/scraper}} \approx 155 \text{ hrs using one scraper}$$

$$\text{if use 4 scrapers} \approx 40 \text{ hrs/UNIT.}$$

6) DISCHARGE CHANNEL VOLUME →

- CHANNEL WILL HAVE BASE WIDTH OF 150 ft - SIDE SLOPE 3:1
- CHANNEL FLOW LINE WILL DROP AT .01 ft/ft (1%)
- ROCK ELEVATION BASED ON DRILL HOLE + CONSTRUCTION REPORT IS AT 5615 -

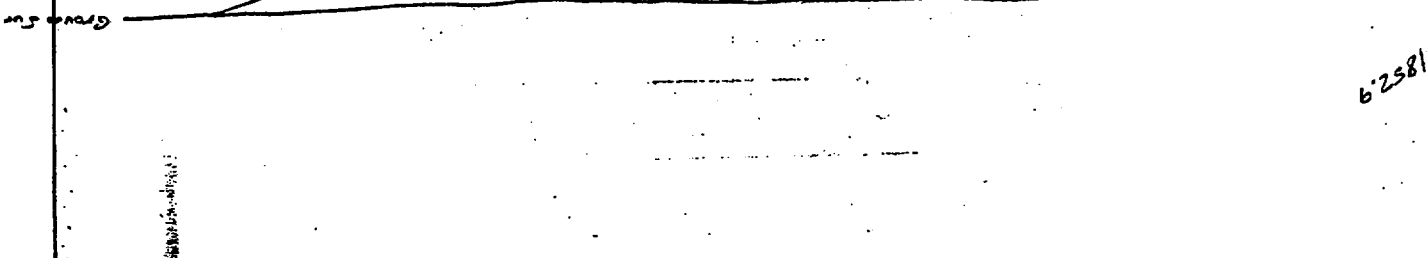
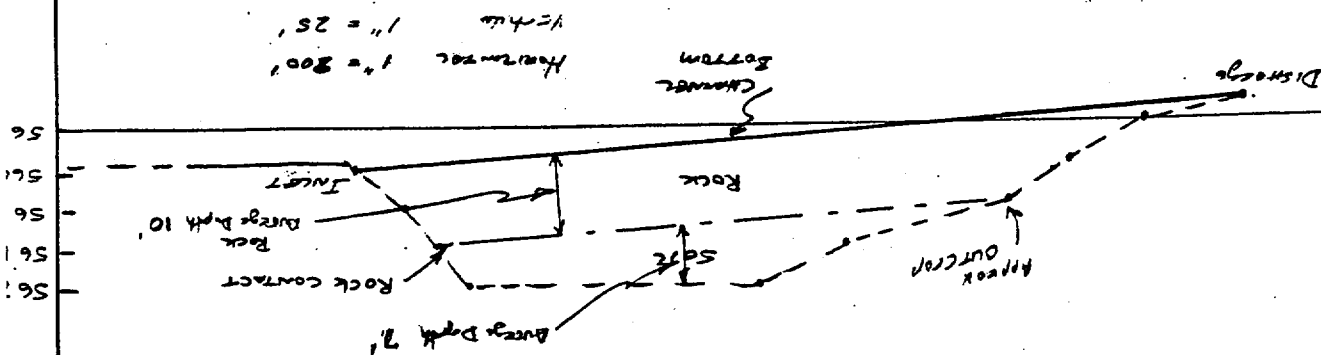


Random Fill and TOP SOIL STOCKPILES will be used in the
RECLAMATION OF Cells 2+3 and the mill yard before discharge
channel is built.

Cell 1 Volume Calculations

OUTLET CHANNEL SECTIONS

Section A-A'



• Assume

Rock = 81 cy/ft channel length
Soil = 76 cy/ft channel length

300 ft channel =

64,800 cy Rock
60,800 cy Soil

• Use scrapers on soil removal

• Drill and Blast Rock use Truax to blow away
Based on EFL's experience during construction - Rock does Not Rip
Blasting is required.

• Assume Route 1 for Truax + Scrapers

Truax - 199 cy/truck/hr
Scrapers - 310 cy/hr

INTERNATIONAL URANIUM (USA) CORP.
COST ESTIMATE

Channel Excavation (entire)

Boil → $\frac{69,800 \text{ cy}}{310 \text{ cy/hr}} = 196 \text{ scraper hrs} \Rightarrow 50 \text{ hr/normal 5 cy scraper}$

Road → $\frac{69,800 \text{ cy}}{199 \text{ cy/hr}} = 325 \text{ truck hrs} \Rightarrow 2 \text{ trucks} = 163 \text{ hr}$

Drilling + Blasting Road → 10 ft average depth → # 0.90/cy
Based on Recruit Contractor quote



41
22-142 100 SHEETS
22-144 200 SHEETS

HEET



Top Soil Stockpile

Remains for Lumberman + Mill Wood Residue

3:1 Side Slopes

150' Bottom Width

Inlet 5604 M

Top of Dam Rock (SS) 5615

(From Dam Hill #1.95 + Cartwright Road)

Bottom Elevation of Cell

5604

Cell 1 Outlet Channel

1'±2001

5616

5617

5618



BUCKLEY POWDER CO. 42 INVERNESS DRIVE EAST, ENGLEWOOD, COLORADO 80112 (303) 790-7007 FAX (303) 790-7033

January 17, 2000

Mark Kerr
KGL Associates, Inc.
P.O. Box 200128
Denver, CO 80220

REF: Drilling and shooting pricing at U.S. Silica's mine near Sulphur, OK

Dear Mark:

I want to thank you for the opportunity to meet with you at your office on Friday. The meeting allowed me to get a better feel for what KGL does and where you are heading and I hope it allowed you to get to know what Buckley Powder Co. can do for KGL. I definitely see some synergies in our companies where we may be able to help each other out.

For the U.S. Silica job, it is my understanding that up to 250,000 cubic yards of limestone needs to be blasted at depths from five feet to thirty feet. The material needs to be blasted so as a 990 loader can remove the material for waste. Based on these parameters, Buckley Powder is pleased to offer the following prices to drill and shoot;

Overburden - \$.75 per cubic yard blasted
Sand - \$.45 per cubic yard blasted

Billed yardage shall be based on total drill depth times the pattern footage. The price is inclusive of all services needed from pattern layout, drilling, blasting, seismograph, and all paperwork.

The before mentioned prices are contingent upon the following requirements:

1. The rock depth averages at least 15 feet.
2. KGL provide a drilling area free of any oversize rock, and of such gradient as to allow a rubber tire drill access to the pattern. If a track drill is needed then a price adjustment will be necessary.
3. If Buckley Powder Co., determines the gas line that runs through the property is at risk, we may need to adjust blasting procedures which will necessitate a price adjustment.

Again, thank you for allowing Buckley Powder Co., to submit this bid to you, and we look forward to working with KGL in the future. If there are any questions, please feel free to call me at 303/790-7007.

Sincerely,

Steve Buckley
President

Unit rates

works for any yardage (200,000)

1/19/00 2pm

Calculation / Work Sheet

Page of

Date 07-06-00

Project: Rec. Plan Revision 3.0 by

Revision to Topsoil Cost - Cell 1-I

5) Place 6" of Topsoil over open area of Cell 1-I

Total area of Cell 1 - w/ side slopes = 60 ac.

Area consumed by new disposal area =

$$(175' + 100') \times 2,600 = 715,000 \text{ ft}^2 = 16.41 \text{ ac.}$$

use 16-

Total area to be topsoiled = 60 - 16 = 44 acres

$$\text{Total volume} = \frac{44 \times 43,560 \times 0.5 \text{ ft}}{27} = 35,493 \text{ yd}^3$$

Use scraper fleet - assume route No. 1

310 yd³ / hr / machine

$$\frac{35,493 \text{ yd}^3}{310} = 114.5 \text{ hr.}$$

use 3 machines

38.17 hr. —

use 40 hr. x 3

120 hr.

Total

Revision to Channel construction cost.

New channel width - 1200 ft (was 800 ft)

Assume
Rock 81 "cy / ft of channel length
Soil 76 "cy / ft of channel length

1100 ft
89,100 cy rock

83,600 cy soil

• use scrapers on soil removal

• Drill & Blast Rock - use trucks to haul

Based on EPA's experience during construction -
Rock is not easily ripped - blasting is required

• Assume Route 1 for Trucks and Scrapers

Trucks 199 yds / truck / hr
Scrapers 310 " scrapers / "

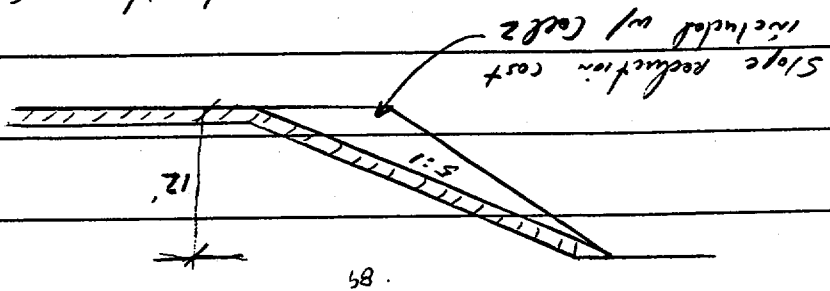
Rock - $\frac{89,100 \text{ yds}^3}{199} = 448 \text{ hr}$ - 3 trucks - 150 hr ea
450 hr

Soil - $\frac{83,600 \text{ yds}^3}{310} = 270$ - 4 units - 67.5 = 68 hr ea
272 hr

Support equipment - 150 hr. + 68 hr. = 218 hr.

Installation of Clay Liner in Cell 1-I

Clay liner - Average depth of Tailings - 18'



Slope length = $(5 \times 12) = 60'$

Horizontal length = 12'

$12' + 90' = 102'$

265 - 85 = 180

Total length = 265

$266 \text{ ft} \times 12' \times 2600 \text{ ft} = 691,600 \text{ ft}^2$

25,615 yd^3 liner

Clay production cost - from Cell 2 estimate

$22 \text{ yd}^3 \text{ per cycle} \times 2.7 \text{ cycles/hr} = 59.4 \text{ yd}^3$

per hour/hour

Use 8 trucks = 475 yd^3/hr

$\frac{25,615 \text{ yd}^3}{475} = 54 \text{ hr} - \text{use } 60 \text{ hr}$

Calculation / Work Sheet

Page of

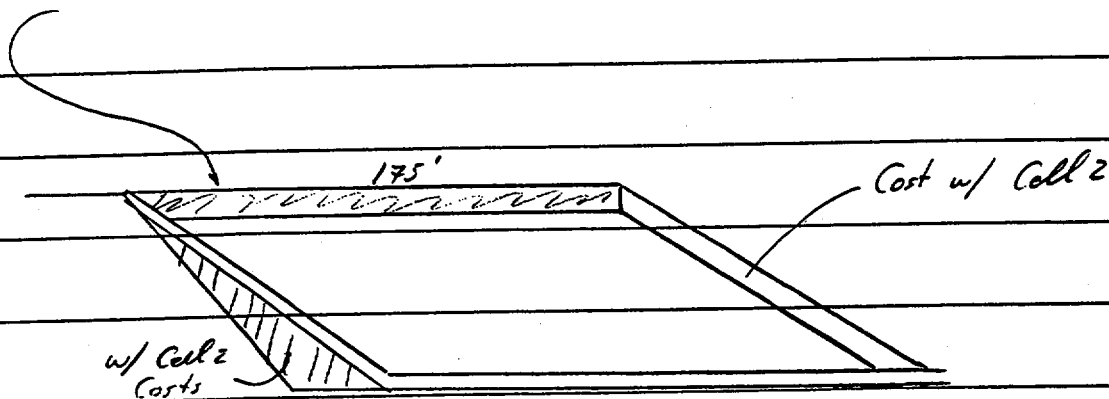
Date 07-06-00

Project Rec Plan Revision 3.0 by

Installation of lower Random Fill

North Slope lower Random Fill included with
Cell 2 Cost (19,500 yd³)

lower Random Fill on extension Area.



3' thick - 175' wide x 2600 ft

50,556 yd³

Use Route 5 haulage - scrapers $\geq 296 \text{ yd}^3/\text{hr} = 171 \text{ hr.}$

use 2 scrapers - 87 hr. each use 174

Calculation / Work Sheet

Page of

Date 07-06-00

Project: Rec Plan Revision 3.0 by

Clay Cap - top and side slope

top - 175 ft

slope - 90 ft

265 ft x 1.0 ft thick x 2,600 ft

25,518 yd³

Use same haulage factor for clay liner

22 yd³ per truck cycle - x 2.7 cycles/hr -

59.4 yd³
per hour/truck

8 trucks = 475 yd³/hr = 53.7 hr - use 55

440 truck hr

55 other

Calculation / Work Sheet

Page of

Date 07-06-00

Project: Rec. Plan Revision 3.0 by JRR

Place Upper Random Fill

2'-0" lay over top and slope

$$\text{Total width} = 175' + 90' = 265 \text{ ft}$$

$$265 \times 2600 \times 2'-0" = 1,378,000 \text{ ft}^3$$

$$= 51,037 \text{ yd}^3$$

$$\text{Use Route 5 haulage} - \text{scrapers } 296 \text{ yd}^3/\text{hr} = 172 \text{ hr.}$$

$$\text{Use 2 scrapers} = 86 \text{ hr.}$$

Calculation / Work Sheet

Page of
Date 07-06-00

Project: Rec. Plan Revision 3.0 by JHK

Installation of Rock Armor

Top of new area = $175' \times 2600 \text{ ft}$

6" Thick $175 \times 2600 \times 0.5 = 227,500 \text{ ft}^3$

$8,426 \text{ yd}^3$

Toe Apron on East and West sections

$(175' \times 7' \times 2' \text{ Thick}) \times 2 = 4900 \text{ ft}^3 = 182 \text{ yd}^3$

Upstream slope and toe apron running east-west included
in Cell 2 Reclamation Costs

Total $8,607 \text{ yd}^3$

$8,607 \text{ yd}^3 - 38 \text{ yd}^3 / \text{touch} = 226.5 \text{ hr.} - \text{use } 227$

use 8 touches $28.31 \text{ hr.} - \text{use } 30$

MISCELLANEOUS ITEMS

MISCELLANEOUS ITEMS

Equipment Mobilization

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Butler Machinery Mobilization	LS	\$164,400.00	1	\$164,400
Other Equipment Mobilization	LS	\$2,500.00	1	\$2,500

Total Equipment Mobilization

\$166,900

Office Facilities

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Run New Powerline	LS	\$15,000.00	1	\$15,000
Utilities for Offices	months	\$1,000.00	36	\$36,000

Total Temporary Office Facilities

\$51,000

Wheel Wash Facility

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Laborers	hrs	\$10.35	8,320	\$86,084
Construct Wheel Wash Facility	LS	\$50,000.00	1	\$50,000
Facility constructed in 2000				(\$50,000)
Total Wheel Wash Facility				\$86,084

MANAGEMENT/SUPPORT

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Manager/Engineer	hrs	\$48.69	6,240	\$303,826
Radiation Safety Officer	hrs	\$37.87	6,240	\$236,309
Secretary	hrs	\$15.55	6,240	\$97,055
Clerk	hrs	\$12.85	4,866	\$62,522
Environmental Technician	hrs	\$20.29	4,866	\$98,719
Maintenance Foreman	hrs	\$27.73	6,240	\$173,012
Chemist	hrs	\$22.65	2,080	\$47,121
Security	hrs	\$8.12	18,720	\$151,913
Safety Engineer	hrs	\$20.29	4,160	\$84,396
Misc. Materials & Supplies	hrs	\$36.45	6,240	\$227,448
Health Physics Costs	hrs	\$64.81	2,080	\$134,800

Total Management/Support

\$1,617,120

TOTAL MISCELLANEOUS ITEMS

\$1,921,104

ROCK PRODUCTION COST

Assumptions:

Rock is obtained from gravel source north of Blanding, Utah. BLM Public pit
 Rock is processed by screening only, no crushing is required, 1.25 CY of feed for 1 CY of product
 Rock is produced and stockpiled at the site
 Site is 7 road miles from the mill; 6 miles of which is paved public highway
 Rock will be hauled in 22 CY bellydump trucks, contract haulers (\$52.00/hr)
 Rock will be dumped in windrows on Tailings Cells by trucks, spread by grader, and compacted by D7 Dozer
 Trucks can average 30 MPH (1.75 rounds/hr)

	Product Required (CY)	Reject Factor	Material Feed to Plant (CY)	Plant Throughput (CY/hr)	Plant Operating Hours
Material fed to plant	146,000	25.0%	182,500	122	1,500

PRODUCTION OF RIPRAP

Resource Description	Units	Cost/Unit	Task Units	Task Cost
Equipment Operators	hrs	\$17.72	2,340	\$41,460
Laborer	hrs	\$10.35	1,500	\$15,520
Cat D8N Dozer With Ripper	hrs	\$68.03	365	\$24,830
Cat 980 Loader	hrs	\$63.01	1,975	\$124,445
Screening Plant w/conveyors*	hrs	\$53.69	1,500	\$80,540
Contract Highway Trucks - Bellydumps**	hrs	\$52.00	3,800	\$197,600
Equipment Maintenance (Butler)	hrs	\$12.08	2,340	\$28,275

Total Production of RipRap **\$512,669**

RIPRAP COST PER CUBIC YARD DELIVERED

\$3.51

* Cost Quoted from Mr. Terry Berg, Power Motive Corporation, Denver, Colorado updated Feb. 19, 2002
 \$9,450 per month, 176 hours per month

** Cost quoted from Dennis Cosby, Cosby Trucking, Inc., Blanding, Utah, Updated Feb. 19, 2002
 (includes ownership expense, fuel, maintenance and operator)

Record Of Telephone Call

Page 1 of 1

Project: White Mesa - Reclamation Cost Update by AKL

Call to: Dennis Cosby
Company: Cosby Trucking
Phone No: (435) 678-2890
Date: 02-19-02
Subject: Update Highway Truck Cost

Notes:

Called to update highway truck rates.
Small change from last year. Safe to
use \$52⁰⁰ / hour. Includes ownership,
maint., fuel and operator.

Comments:

Last year rate was \$55/hr.
Decrease due to lower diesel fuel cost.

EQUIPMENT COSTS

WHITE MESA MILL RECLAMATION COST HOURLY EQUIPMENT COSTS 1999 DOLLARS

Actual equipment rates quoted from Butler Machinery 12 month rental period
February 20, 2002

February 20, 2002

Units	RATE		MTCE	FUEL	FUEL @	TOTAL	Mob/Demob	Mob/Demob	Operating Hrs	
	MONTHLY	HOURLY	EXPENDABLES	USAGE	\$0.59	COST	per machine	Totals	per Month	
637E Scraper	4	21,700	123.30	2.50	24.0	14.16	\$139.96	\$12,750.00	\$51,000.00	704
D8R Dozer	1	10,800	61.36	1.65	8.5	5.02	\$68.03	\$8,200.00	\$8,200.00	176
D7R Dozer	1	9,100	51.70	1.25	7.0	4.13	\$57.08	\$7,100.00	\$7,100.00	176
825G Compactor	1	9,600	54.55	1.35	14.0	8.26	\$64.16	\$7,900.00	\$7,900.00	176
980 G Loader	1	9,900	56.25	1.45	9.0	5.31	\$63.01	\$7,700.00	\$7,700.00	176
988 F Loader	1	15,400	87.50	2.30	12.0	7.08	\$96.88	\$9,400.00	\$9,400.00	176
769D Haul Truck	4	9,700	55.11	2.40	9.0	5.31	\$62.82	\$7,800.00	\$31,200.00	704
375L Excavator	1	18,900	107.39	3.15	14.0	8.26	\$118.80	\$17,100.00	\$17,100.00	176
651 Water Wagon	1	9,900	56.25	2.10	18.0	10.62	\$68.97	\$8,500.00	\$8,500.00	176
5000 gal Water Truck	1	5,700	32.39	1.05	10.0	5.90	\$39.34	\$3,200.00	\$3,200.00	176
14H/Ripper Motor Grader	1	7,500	42.61	1.10	5.5	3.25	\$46.96	\$5,900.00	\$5,900.00	176
16H/Ripper Motor Grader	1	10,500	59.66	1.25	8.5	5.02	\$65.92	\$7,200.00	\$7,200.00	176
								\$164,400.00		3,168

Equipment Rental Rate Quoted by Power Motive, Denver, Colorado (02/19/2002) for PC400 Kamatsu Excavator with LaBounty MSD 70R Shear

PC-400 w Shear	23,200.00	131.82	19.10	14.0	8.26	\$159.18	\$2,500.00
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Small tools allocation - Demolition -
\$1.25/mechanic labor hour for
oxygen/acetylene, expendables

\$1.25

Total Equipment Mobilization

\$166,900.00

	Monthly Maintenance Flat Rate	Planned Operating Hours/month	Availability Factor	Maintenance Cost per Operating Hour
Butler Equipment Maintenance Cost	\$35,600.00	3,168	0.93	\$12.08

Crane Rental Rates	RATE		MTCE	FUEL	FUEL @	TOTAL
	MONTHLY	HOURLY	EXPENDABLES	USAGE	\$0.59	COST
65 ton Hydraulic Crane	8,000	45.45	2.05	15.0	8.85	\$56.35
30 ton Hydraulic Crane	5,000	28.41	2.05	10.0	5.90	\$36.36

Rental Rates updated from Crane Services, Inc. 02/19/2002

February 20, 2002

International Uranium Corporation
ATTN: Harold Roberts
E-Mailed to hroberts@intluranium.com

Dear Harold:

Thank you for the invitation to quote International Uranium Corporation (IUC) the equipment needed for their mining project in Blanding, Utah. Butler Machinery Company (Butler) respectfully submits our proposal for a maintained fleet of Caterpillar machines.

Listed on Attachment A, you will find the models, quantities, monthly rental rates, hours allowed per month, excess hour charge, guaranteed number of months rates are based upon, total freight charges and the maintenance rate per hour for materials only.

All rates shown on Attachment A do not include any state, local, property or any other taxes that may be applicable.

Rates are based upon electric hour meter readings which are attached to the dash of each machine. Rates are based on 176 hours of use each month. Excess hour charges, if any, will be calculated and invoiced at the end of the project. There would be no credit issued for any hours under the allowed during the term of this proposal. If IUC elects to double shift machines, then Butler would invoice those hours at the end of each month. (To figure the double shift rates, take the excess hour rate shown on Attachment A times the number of hours).

Rates are based upon a minimum guarantee of 12 months and a package deal.

Maintenance:

The maintenance rates per hour listed on Attachment A includes the material part items only, such as air, oil, and fuel filters, lubricant oils, grease, anti-freeze, batteries, fan belts, lights and make-up oils. Butler would invoice IUC actual hours used on machines at the end of each month.

Our monthly maintenance charge would be \$35,600.00, which includes our labor, specialized lube trucks, support vehicles and equipment, specialized tooling, scheduled oil sampling, parts trailers and inventories, mileage and travel expense. Butler will provide two (2)

full-time maintenance technicians on site fifty (50) hours per week on a schedule to be determined, Monday through Friday. IUC would have to schedule the machines available for a time frame yet to be determined adequate for Butler maintenance personnel to perform the required maintenance. Butler would invoice IUC for the monthly maintenance charge at the beginning of each month.

Repairs:

Butler would be responsible for all repairs including parts and labor on our machines other than failures caused by damages or mis-use. Repairs include items as minor as starters, alternators, water pumps, hydraulic hoses, etc. to the major items such as engines, transmissions, differentials, brakes, hydraulic pumps and cylinders, etc. If time permits and IUC requests Butler's technician to perform repairs or maintenance on their machines, our hourly charge would be \$63.00 per hour for standard time, \$81.00 per hour for overtime and \$95.00 per hour for Sundays and holidays plus materials.

Freight:

Freight charges include both delivery and return, assembly, and disassembly of equipment.

IUC's Responsibilities Include:

Operators. Provide the operators as needed to operate machines as stated in Caterpillar's operating guide. Butler will provide, at no expense to IUC, qualified training instructors for the purposes of training operators. This training would take place on the jobsite at the initial start up of the job and would include classroom, walk around, and in iron demonstrations.

Fuel. Supply and fill all fuel for equipment including Butler's service vehicles.

Damages. This includes glass breakage, bent handrails, step ladders, fenders, etc. Butler's normal policy for repairing damages to rental machines is to repair them when the rental period is completed, however, if the damaged item is of a safety concern, we would repair the damages as soon as possible after they occurred. An itemized list of the parts and labor required would be provided to IUC prior to starting the repair, and invoiced at current list prices plus freight upon completion.

Undercarriage and Tires: IUC would be responsible for all tire wear including tire damages on the machines with an asterisk listed on Attachment A. Equipment would have to be returned with same brand and model tires as when delivered, or prorated accordingly by percentage of tire wear and condition at termination of rental period.

Upon delivery of machines, a representative of Butler, a representative of IUC and a representative from an independent

tire dealer or manufacturer would jointly verify in writing the condition, percentage of wear, and tire value. Upon termination of rental, we would again have the representatives mentioned above determine the condition, percentage of wear, and tire values. Any differences noted, would then be charged or credited to IUC including both materials and labor.

Undercarriage wear on all track type machines would be Butler's expense.

Ground Engaging Tools:

IUC would be responsible for all parts relating to ground engaging tools (G.E.T.), i.e. cutting edges, ripper tips and protectors, bucket tips and adapters, edges between adapters, wear plates on bottom of buckets and all mounting hardware. Butler would install these items on an as needed basis at the current Caterpillar list price plus freight at no additional labor costs. All machines would be delivered with new G.E.T. items and are to be returned with new.

We wish to thank IUC and you for giving us the opportunity to present our proposal and for all the consideration we receive.

Sincerely yours,

BUTLER MACHINERY COMPANY

Oscar D. Swenson
Rental Fleet Marketing Manager

ODS:jw

Enclosure

cc: Joel Nikle, Rental Fleet Manager

ATTACHMENT A

**INTERNATIONAL URANIUM CORPORATION
EQUIPMENT NEEDED FOR JOB IN BLANDING, UTAH
FEBRUARY 20, 2002**

					MINIMUM GUARANTEED	TOTAL**	MAINTENANCE
		MONTHLY RENTAL	HOURS ALLOWED	EXCESS HOUR CHARGE	NUMBER OF MONTHS RATE BASED UPON	FREIGHT CHARGES TO & FROM	RATE PER HOUR
<u>MODEL</u>	<u>QTY</u>	<u>RATE</u>	<u>PER MONTH</u>	<u>CHARGE</u>	<u>BASED UPON</u>	<u>TO & FROM</u>	<u>PER HOUR</u>
*637E	4	\$21,700 EA.	176 EA.	\$62 EA.	12 EA.	\$12,750 EA.	\$2.50 EA.
D9R/RIPPER	1	13,200	176	38	12	9,800	1.90
D8R/RIPPER	1	10,800	176	31	12	8,200	1.65
D7R/RIPPER	1	9,100	176	26	12	7,100	1.25
825G	1	9,600	176	28	12	7,900	1.35
980G	1	9,900	176	29	12	7,700	1.45
*988F	1	15,400	176	44	12	9,400	2.30
*769D	4	9,700 EA.	176 EA.	28 EA.	12 EA.	7,800 EA.	2.40
375L	1	18,900	176	54	12	17,100	3.15
10,000 GALLON WATER WAGON	1	9,900	176	29	12	8,500	2.10
5,000 GALLON WATER WAGON	1	5,700	176	17	12	3,200	1.05
14H/RIPPER	1	7,500	176	22	12	5,900	1.10
16H/RIPPER	1	10,500	176	30	12	7,200	1.25
* PLUS TIRE WEAR							
** INCLUDES ASSEMBLY AND DISASSEMBLY							

637 SCRAPER EFFICIENCY

NOMINAL CAPACITY

31

HAUL ROUTE	TRAVEL TIME	FIXED TIME	EFFICIENCY	MINUTES PER TRIP	TRIPS/ HOUR	YARDS/ HOUR
1	3.90	1.20	85%	6.0	10.0	310
2	3.25	1.20	85%	5.2	11.5	355
3	4.30	1.20	85%	6.5	9.3	287
4	3.10	1.20	85%	5.1	11.9	368
5	4.15	1.20	85%	6.3	9.5	296
6	4.50	1.20	85%	6.7	8.9	277
7	3.75	1.20	85%	5.8	10.3	319

CAT 637 SCRAPER

TRAVEL TIMES FOR CAT 637 SCRAPERS BASED ON PROJECTED HAUL ROUTES

Haul Segment	Distance Feet	Distance Meters	Rolling Resistance	Grade %	Ave Speed MPH	Time Min
1a	200	67	7.5	0.0	9.1	0.25
1b	500	167	5.0	0.0	12.6	0.45
1c	200	67	3.0	2.5	9.1	0.25
1d	1400	467	3.0	0.0	18.7	0.85
1e	250	83	3.0	0.0	9.5	0.30
1f	250	83	3.0	0.0	11.4	0.25
1g	1400	467	3.0	0.0	21.2	0.75
1h	200	67	3.0	(2.5)	11.4	0.20
1i	400	133	5.0	0.0	13.0	0.35
1j	200	67	7.5	0.0	9.1	0.25
						3.90
2a	200	67	7.5	0.0	9.1	0.25
2b	2150	717	3.0	(0.5)	22.2	1.10
2c	250	83	5.0	0.0	9.5	0.30
2d	250	83	5.0	0.0	11.4	0.25
2e	2250	750	3.0	+0.5	23.2	1.10
2f	200	67	7.5	0.0	9.1	0.25
						3.25
3a	250	83	7.5	0.0	8.1	0.35
3b	3300	1100	3.0	-0.5	23.4	1.60
3c	250	83	5.0	0.0	9.5	0.30
3d	250	83	5.0	0.0	11.4	0.25
3e	3300	1100	3.0	+0.5	25.0	1.50
3f	250	83	7.5	0.0	9.5	0.30
						4.30
4a	350	117	7.5	-3.5	11.4	0.35
4b	1450	483	3.0	0.0	19.4	0.85
4c	250	83	5.0	0.0	9.5	0.30
4d	250	83	5.0	0.0	11.4	0.25
4e	1700	567	3.0	0.0	22.7	0.85
4f	500	167	7.5	+3.5	11.4	0.50
						3.10

CAT 637 SCRAPER

Haul Segment	Distance Feet	Distance Meters	Rolling Resistance	Grade %	Ave Speed MPH	Time Min
--------------	---------------	-----------------	--------------------	---------	---------------	----------

5a	1400	467	7.5	-2.75	15.9	1.00
5b	1350	450	3.0	0.0	19.2	0.80
5c	250	83	5.0	0.0	9.5	0.30
5d	250	83	5.0	0.0	11.4	0.25
5e	2250	750	3.0	0.0	23.2	1.10
5f	700	233	7.5	+5.5	11.4	0.70
						4.15

6a	600	200	7.5	0.0	11.4	0.60
6b	900	300	3.0	-3.3	20.5	0.50
6c	1450	483	3.0	0.0	19.4	0.85
6d	400	133	5.0	0.0	11.4	0.40
6e	400	133	5.0	0.0	11.4	0.40
6f	1450	483	3.0	0.0	22.0	0.75
6g	900	300	3.0	+3.3	17.0	0.60
6h	450	150	7.5	0.0	12.8	0.40
						4.50

7a	750	250	7.5	-1.5	12.2	0.70
7b	1600	533	3.0	0.0	20.2	0.90
7c	350	117	5.0	0.0	11.4	0.35
7d	350	117	5.0	0.0	11.4	0.35
7e	1600	533	3.0	0.0	22.7	0.80
7f	750	250	7.5	+1.5	13.1	0.65
						3.75

769C TRUCK EFFICIENCY

NOMINAL CAPACITY

25

HAUL ROUTE	TRAVEL TIME	FIXED TIME	EFFICIENCY	MINUTES PER TRIP	TRIPS/ HOUR	YARDS/ HOUR
1	3.90	2.50	85%	7.5	8.0	199
2	3.05	2.50	85%	6.5	9.2	230
3	4.00	2.50	85%	7.6	7.8	196

CAT 769 TRUCKS

TRAVEL TIMES FOR CAT 769C TRUCKS BASED ON PROJECTED HAUL ROUTES

Haul Segment	Distance Feet	Distance Meters	Rolling Resistance	Grade %	Ave Speed MPH	Time Min
1a	200	67	7.5	0.0	7.6	0.30
1b	500	167	5.0	0.0	12.6	0.45
1c	200	67	3.0	2.5	9.1	0.25
1d	1400	467	3.0	0.0	18.7	0.85
1e	250	83	3.0	0.0	9.5	0.30
1f	250	83	3.0	0.0	11.4	0.25
1g	1400	467	3.0	0.0	22.7	0.70
1h	200	67	3.0	(2.5)	11.4	0.20
1i	400	133	5.0	0.0	13.0	0.35
1j	200	67	7.5	0.0	9.1	0.25
						3.90
2a	200	67	7.5	0.0	7.6	0.30
2b	2150	717	3.0	(0.5)	24.4	1.00
2c	250	83	5.0	0.0	9.5	0.30
2d	250	83	5.0	0.0	11.4	0.25
2e	2250	750	3.0	+0.5	26.9	0.95
2f	200	67	7.5	0.0	9.1	0.25
						3.05
3a	250	83	7.5	0.0	8.1	0.35
3b	3300	1100	3.0	-0.5	25.0	1.50
3c	250	83	5.0	0.0	9.5	0.30
3d	250	83	5.0	0.0	11.4	0.25
3e	3300	1100	3.0	+0.5	28.8	1.30
3f	250	83	7.5	0.0	9.5	0.30
						4.00
4a	350	117	7.5	-3.5	11.4	0.35
4b	1450	483	3.0	0.0	19.4	0.85
4c	250	83	5.0	0.0	9.5	0.30
4d	250	83	5.0	0.0	11.4	0.25
4e	1700	567	3.0	0.0	22.7	0.85
4f	500	167	7.5	+3.5	11.4	0.50
						3.10

CAT 769 TRUCKS

Haul Segment	Distance Feet	Distance Meters	Rolling Resistance	Grade %	Ave Speed MPH	Time Min
5a	1400	467	7.5	-2.75	15.9	1.00
5b	1350	450	3.0	0.0	19.2	0.80
5c	250	83	5.0	0.0	9.5	0.30
5d	250	83	5.0	0.0	11.4	0.25
5e	2250	750	3.0	0.0	23.2	1.10
5f	700	233	7.5	+5.5	11.4	0.70
						4.15

6a	600	200	7.5	0.0	11.4	0.60
6b	900	300	3.0	-3.3	20.5	0.50
6c	1450	483	3.0	0.0	19.4	0.85
6d	400	133	5.0	0.0	11.4	0.40
6e	400	133	5.0	0.0	11.4	0.40
6f	1450	483	3.0	0.0	22.0	0.75
6g	900	300	3.0	+3.3	17.0	0.60
6h	450	150	7.5	0.0	12.8	0.40
						4.50

7a	750	250	7.5	-1.5	12.2	0.70
7b	1600	533	3.0	0.0	20.2	0.90
7c	350	117	5.0	0.0	11.4	0.35
7d	350	117	5.0	0.0	11.4	0.35
7e	1600	533	3.0	0.0	22.7	0.80
7f	750	250	7.5	+1.5	13.1	0.65
						3.75

Record Of Telephone Call

Page 1 of 1

Project: Turbine Reclamation Update by: HLH

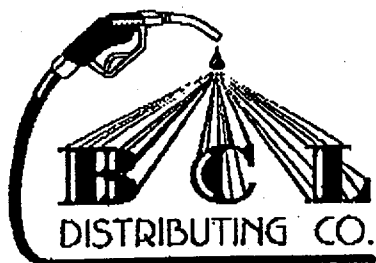
Call to: Carl Hunt
Company: BCL Distributors
Phone No: (435) 678-3311
Date: 01-31-02
Subject: Update Fuel Cost

Notes:

Update off-road diesel fuel cost.
Current bulk transport load - \$ 0.5900 / gallon.
Should be exempt from Utah sales tax - because
use is for pollution control facility.

Comments:

See FAX confirmation



1261 SOUTH MAIN ♦ BLANDING, UT 84511

Phone (435) 678-3311 ♦ Fax (435) 678-2621

1-800-887-4174

facsimile transmittal

To: HAROLD ROBERTS

Fax: 303 389-4125

From: CARL HUNT

Date: JAN. 31, 2002

Re: FUEL PRICES

Pages: 1

CC:

☐ Urgent

☒ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

Notes:

#2 RED DIESEL TRANSPORT C. 5900

* DOES NOT INCLUDE SALES TAX

Record Of Telephone Call

Page 1 of 1

Project: Reclamation Cost Update

by: JRC

Call to:

Company: Crane Service, Inc.

Phone No: _____

Date: _____

Subject: Reclamation Cost Update - Crane Rental

Notes:

No change from previous rate.

See attached invoice for rental at
White Mesa Mill - ~~December~~ 2001
October

Comments:



505 Murry Road SE
Albuquerque, NM 87105-0817
(505) 877-1100
Fax: (505) 877-6900

INVOICE

SOLD TO:

INTERNATIONAL URANIUM CORPORAT
INDEPENDENCE PLAZA, SUITE 950
1050 17th STREET, ATTN: AP
DENVER, CO 80265

INVOICE NUMBER 30920	DATE OF INVOICE October 22, 2001
SALESPERSON HOUSE ACCOUNT	
JOB SITE BLANDING, UTAH BLANDING, UT	

CUSTOMER'S ORDER NO.

BL2843

Job: BB-1345

Customer: INT011

TERMS DUE UPON RECEIPT

DATE	DESCRIPTION	UNIT PRICE	TOTAL
09/21/2001 to 10/20/2001	HT 75 Ton Crane - Bare Rental 1.00 Months	\$8,000.00	\$8,000.00
	Total Invoice:		\$8,000.00
1 1/2 % PER MONTH FINANCE CHARGE WILL BE ADDED TO ALL AMOUNTS OVER 30 DAYS, WHICH IS A ANNUAL % RATE OF 18 %. CUSTOMER AGREES TO PAY ALL COSTS OF COLLECTIONS, INCLUDING ATTORNEYS FEES.			
<div data-bbox="417 1545 860 1795"><p>To: <u>TFC</u> Date: <u>10/24</u> Approved: <u>TFC</u> Codes: <u>OR-7828-6192-381</u> <u>01-0000-2450-802</u></p></div> <div data-bbox="1136 1596 1542 1827"><p>8,480 (480) OCT 24 2001 2,000</p></div>			

Record Of Telephone Call

Page 1 of 1

Project: Reclamation Cost Update by: NER

Call to: Terry Beng
 Company: Power Motive
 Phone No: (303) 355-5900
 Date: 02-19-02

Subject: Update Screen and Excavator Cost

Notes:

CEC Screen Plants

Small increase from last year

CEC S-IT 4x10 \$9,450/month

PC 400 Kamatsu Excavator with
 LaBounty MSD for Shear \$23,200/month

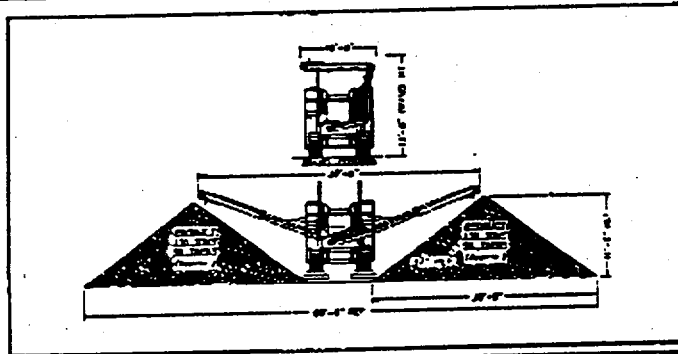
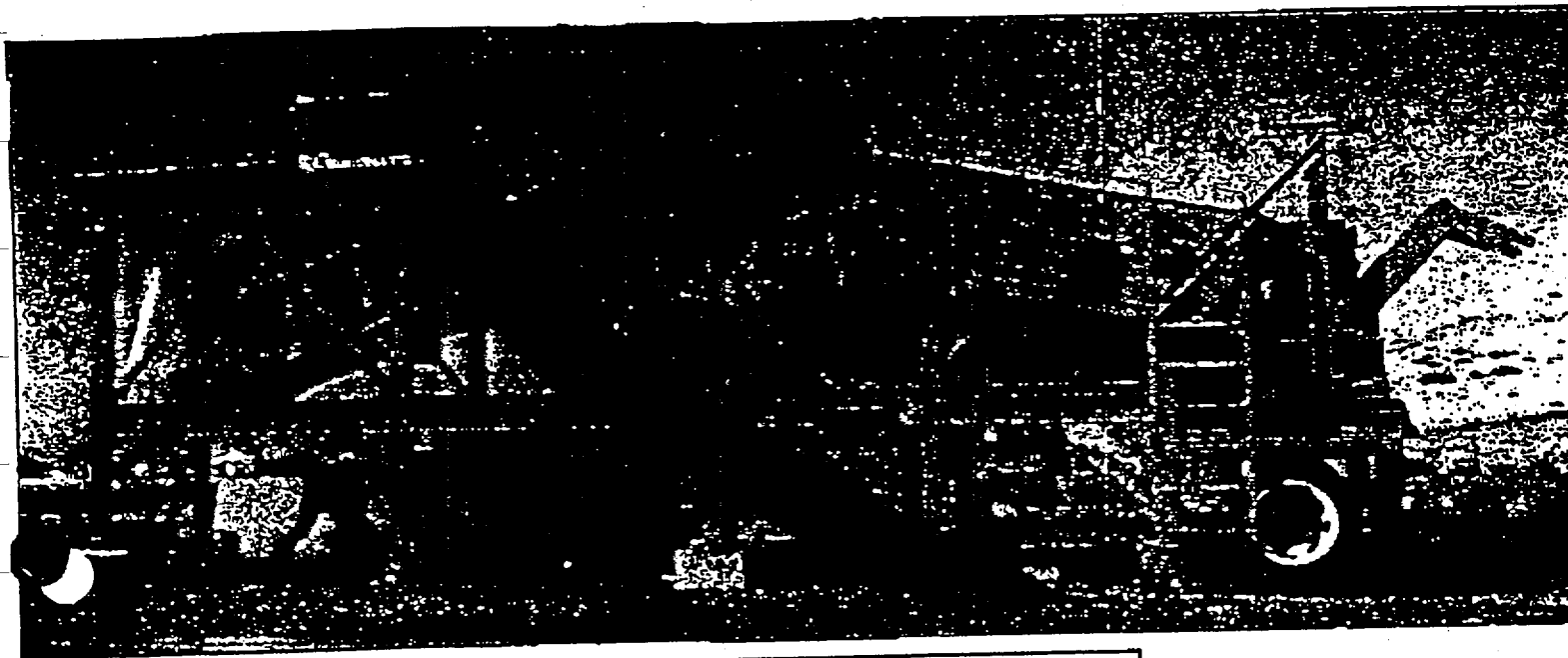
Comments:



Construction Equipment Co.

SCREEN-IT 4 X 10

2 of 7



TRANSPORT

Height: 13'6" Fifth Wheel Pull
Width: 10'0" Spring Suspension, air brakes
Length: 39' Lights, oil filled hubs

ENGINE

4 cylinder Deutz; 46 HP - Air Cooled
65 gallon fuel tank

OPTIONS

4 individual jacking legs
Shredder
Grizzly dump
Stacking Conveyors
Ball decks

HOPPER

5.5 cu. yard charging hopper
Height to load 12'3"
Side Loading width 12'0"

SCREEN

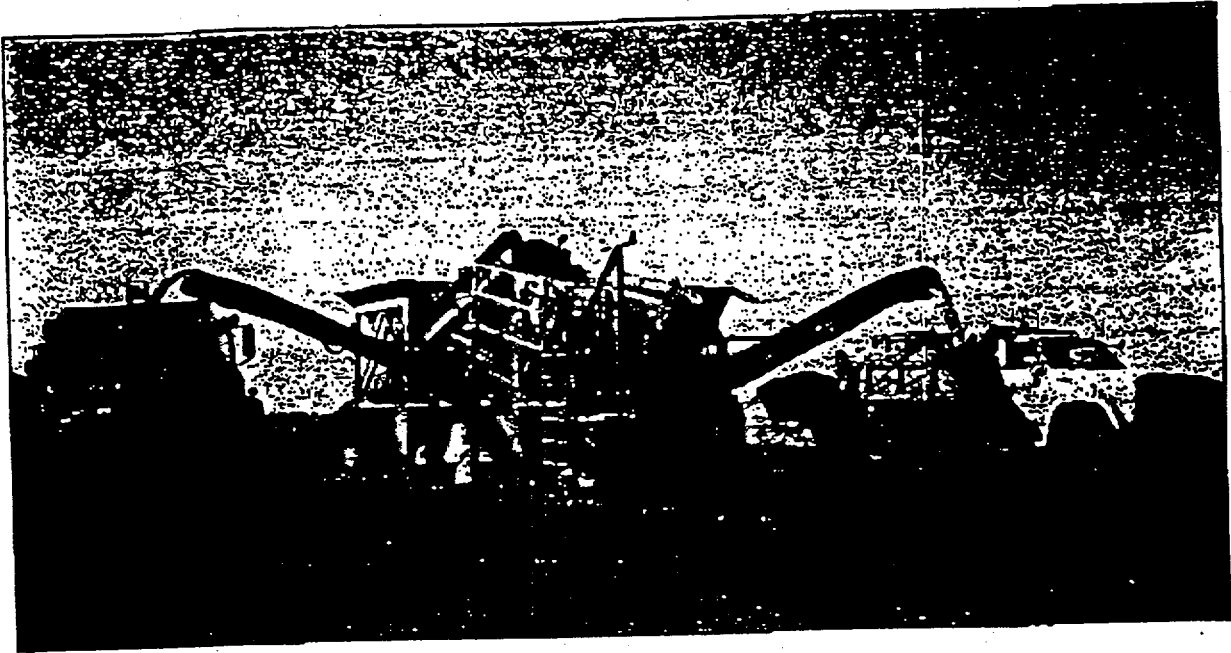
4 x 10; 2 Deck Screen
Hydraulic drive 5/8" Throw
Rubber Spring Suspension

CONVEYORS

36" wide feed conveyor
36" wide under screen conveyor
24" side discharge conveyor
24" rear discharge conveyor

**Diesel Hydraulic-Self Contained
Portable and Easy to Set Up**

3 of 7



**High Production
Screens Sand and Gravel**



Conveyors Can Load Directly Into Truck



Construction Equipment Co.
18650 S.W. Pacific Hwy
Tualatin, OR 97062
503-692-9000
Fax 503-692-6220

Area Dealer

**POWER MOTIVE
5000 VASQUEZ BLVD.
DENVER, CO 80216
PHONE: (303) 355-5900
FAX: (303) 388-9325**



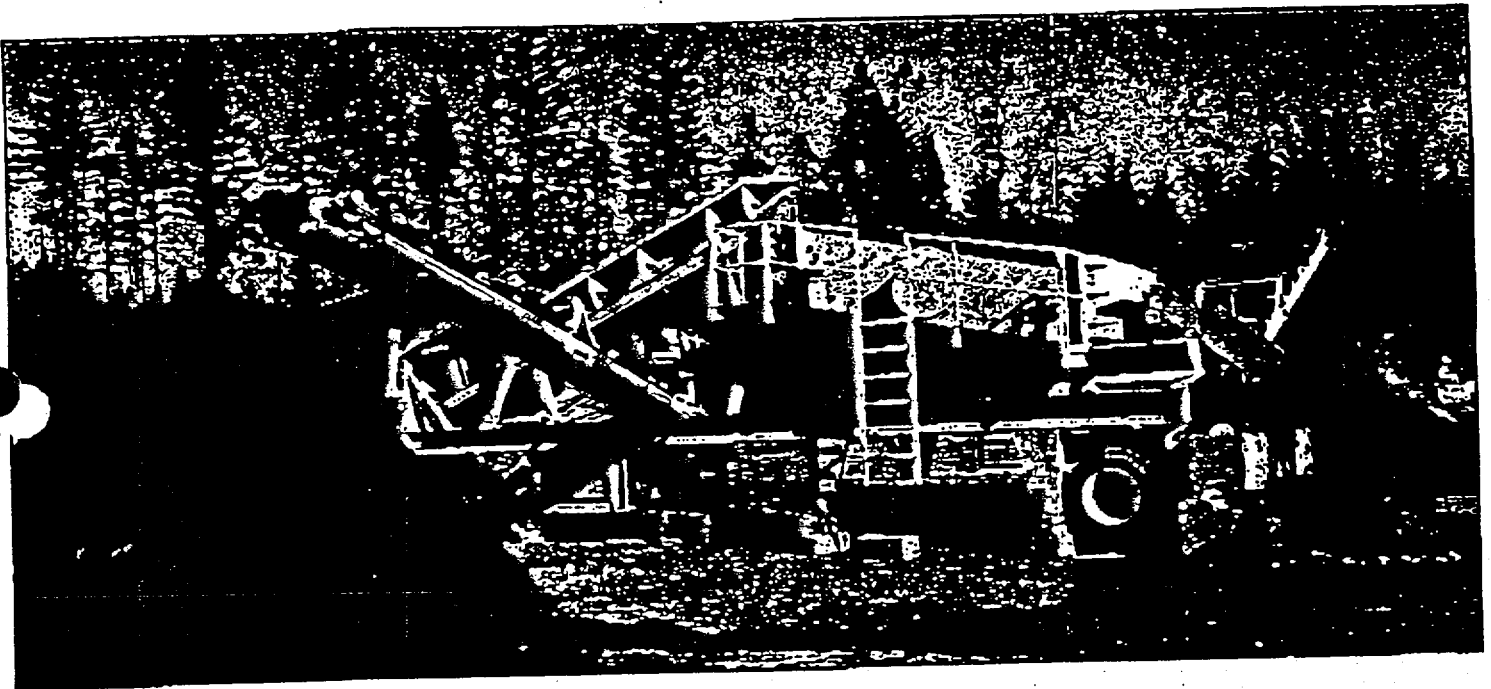
Construction Equipment Co.

SCREEN IT - Series II

Highly Portable - All Hydraulic Setup

Produces Three Different Products

4 of 7



SCREENS COMPOST 120-140 YARDS PER HOUR
SCREENS GRAVEL UP TO 600 TONS PER HOUR

SCREENS: LOG YARD WASTE, COMPOST, BARK, TOP SOIL,
SAND & GRAVEL, TRASH, C & D, STUMPS, CONCRETE,
ROCK AND MANY RECYCLE MATERIALS

Patent #5234564

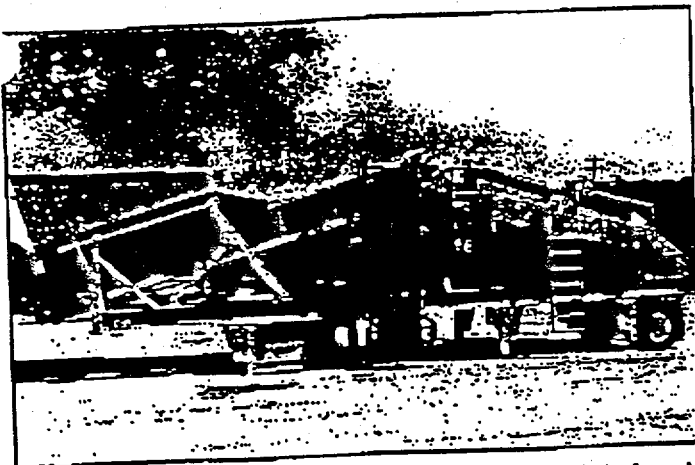


Construction Equipment Co.
P.O. Box 1271
Lake Grove, Oregon 97035
503-635-4427
Fax 503-635-7819

Area Dealer

ALL HYDRAULIC FOLD AND SETUP

5 of 7



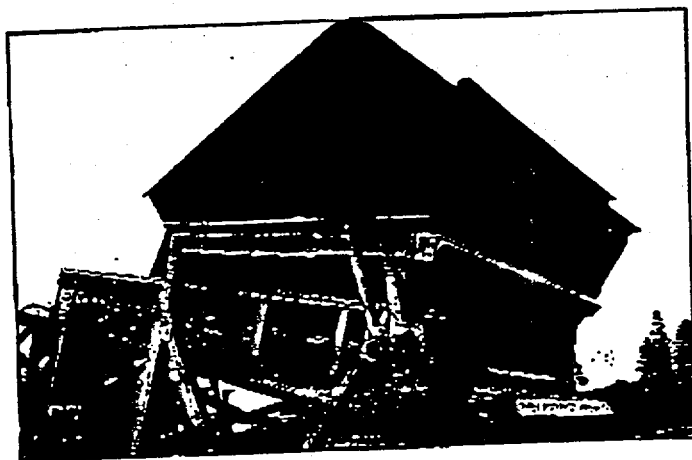
Travel position of the SCREEN IT in which feed conveyor and hopper hydraulically slide back and lower down to transportation height, while hopper wings fold in.



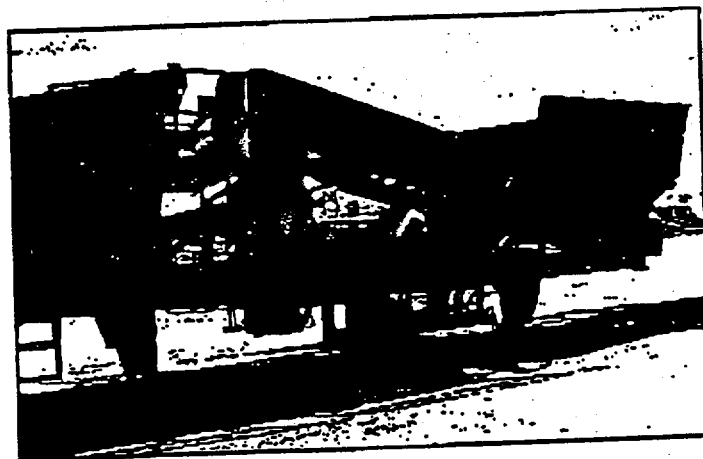
Hydraulic jacking legs are standard for cantelever style blocking, but four (4) individual jacking legs can be an option.



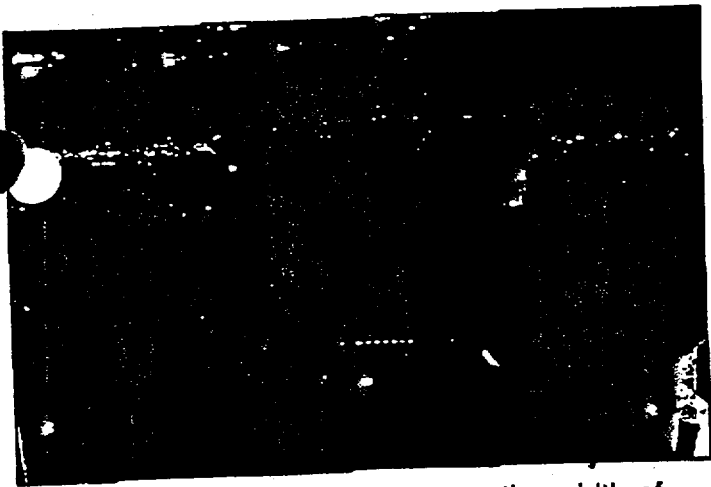
Side and rear discharge conveyors hydraulically fold out to the height of 14'.



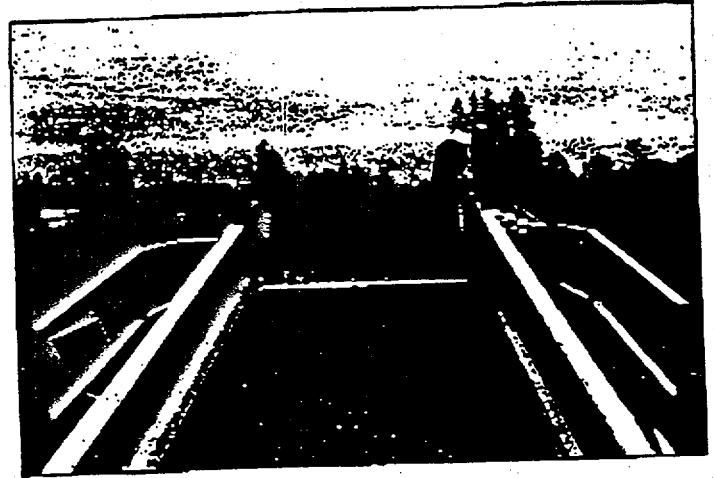
Feed conveyor moves up and forward hydraulically, while the hopper wing walls extend for operation.



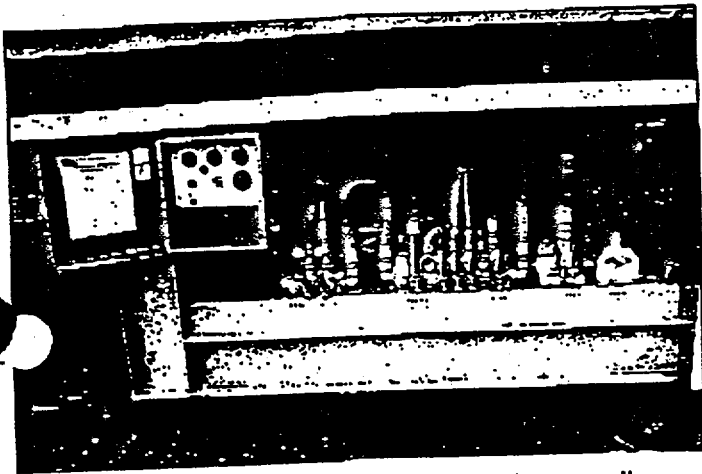
Feed conveyor hydraulically moves back and down for transport.



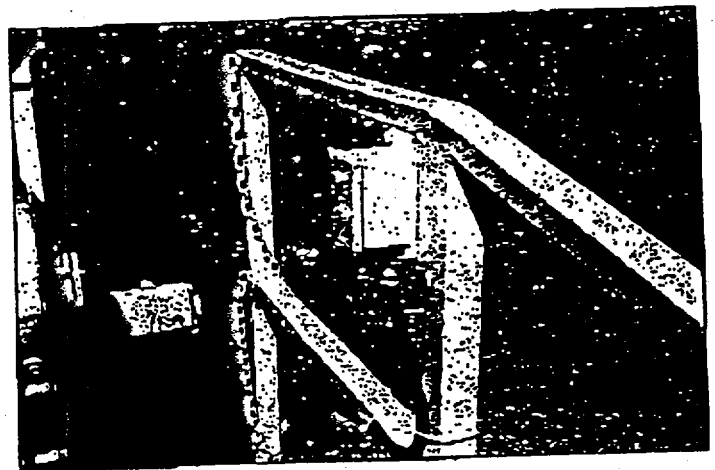
The charging hopper folds out to the width of 14' while in its working position.



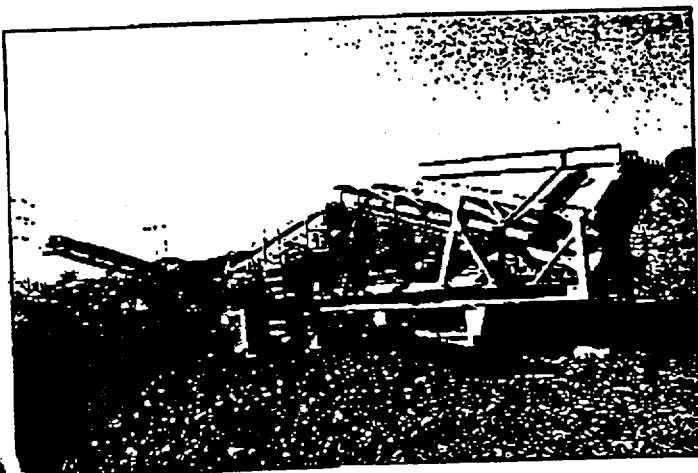
A 48" wide variable feed conveyor with 20" rubber lagged head pulley feeds a 5 x 12 2 Deck screen.



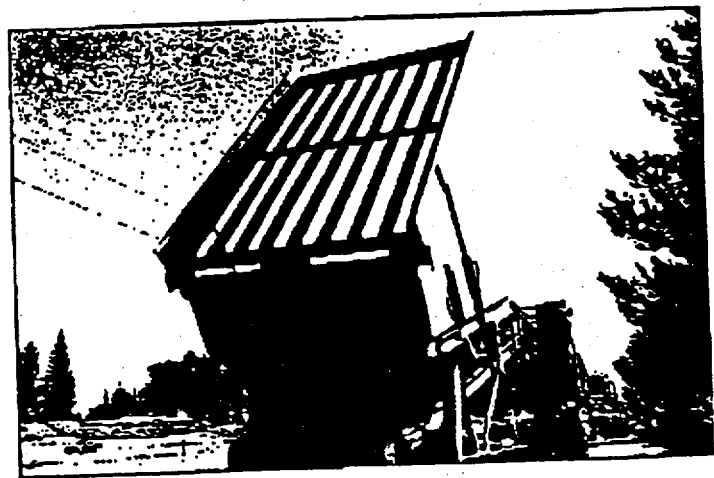
Control panel and hydraulic controls are all located in turnkey area. Powered by a Deutz 4 cylinder, 70 HP diesel engine.



Actuator switch to control speed of feed conveyor is located on the catwalk platform along with kill switch. Actuator switch also located at control panel.



The SCREEN IT has an optional 14 foot long by 8 foot wide hydraulic dumping grizzly. An operator controlled remote dumping system is also available.

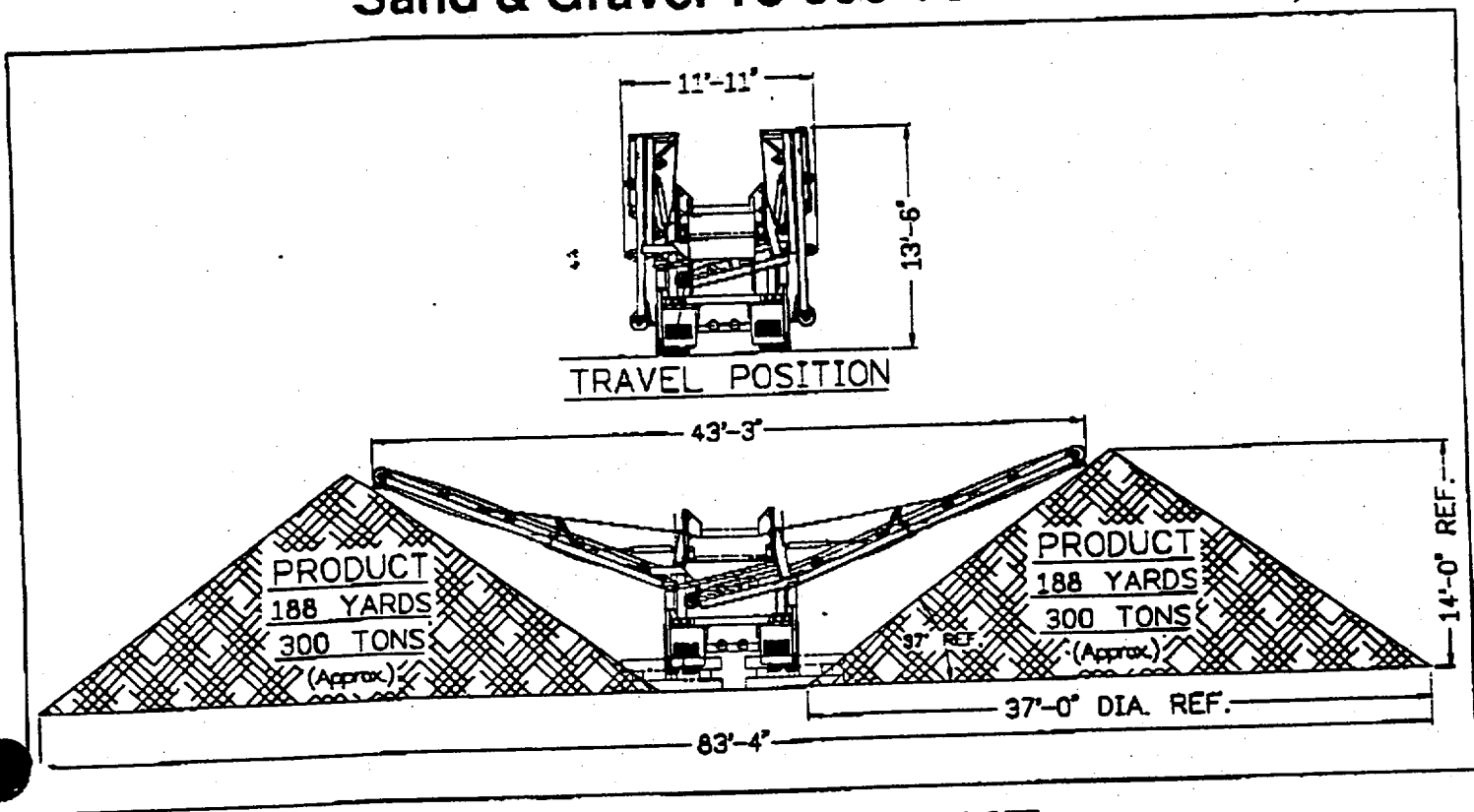


The optional grizzly dumps to the rear of the plant.

SCREENING,

Topsoil To 250 yds./hr.
Sand & Gravel To 600 Tons/hr.

7 of 7



HYDRAULIC DRIVE

TRANSPORT

Height: 13' 6"
Width: 11' 11"
Length: 43' 0"
Weight: 38,600

Fifth wheel pull
Spring suspension, air brakes
Lights, oil filled hubs
Transport speed 65 mph

HOPPER

14.5 cu. yard charging hopper
Height to load 13' 6"
Width at rear 14' - Working position
Width at rear 8' - Travel position

ENGINE

4 cylinder Deutz
70 HP • Air Cooled
65 gallon fuel tank
110 gallon hydraulic tank

SCREEN

5 x 12, 2 Deck with step deck
Hydraulic drive with 3/8" to 5/8" throw
Rubber spring suspension

OPTIONS

4 individual jacking legs
Shredder
Grizzly Dump
Stacking conveyors
79 HP Turbo Diesel (Water Cooled)
98 HP Turbo Diesel (Air Cooled)

CONVEYORS

48" wide feed conveyor 23' 10" long
42" wide under screen conveyor
30" side discharge conveyor 18' 4" long
30" rear discharge conveyor 18' 4" long

LABOR COSTS

Specified Wages

Heavy Construction

2002 Estimated Labor Rates**

13.97%

21.28%

Labor Burden
(FICA, SUI,
FUI, etc.)

Company
Benefits
(medical, life
insure, etc)

Labor Classification	Base Rate	Mandated Fringe	Labor Burden (FICA, SUI, FUI, etc.)	Company Benefits (medical, life insure, etc)	Fringe Costs	Labor Cost/HR
Boiler Makers	\$19.60	\$8.76	\$2.74	no added cost	\$11.50	\$31.10
Millwrights	\$20.82	\$4.28	\$2.91	\$0.15	\$7.34	\$28.16
Ironworkers	\$20.52	\$8.11	\$2.87	no added cost	\$10.98	\$31.50
Carpenters	\$10.81		\$1.51	\$2.30	\$3.81	\$14.62
Cement Masons	\$11.52		\$1.61	\$2.45	\$4.06	\$15.58
Electricians	\$14.52	\$2.71	\$2.03	\$0.38	\$5.12	\$19.64
Ironworkers - Reinforcing	\$11.00		\$1.54	\$2.34	\$3.88	\$14.88
Laborers (including pipelayers)	\$7.65	\$1.60	\$1.07	\$0.03	\$2.70	\$10.35
Pipefitters	\$12.60		\$1.76	\$2.68	\$4.44	\$17.04
<u>POWER EQUIPMENT OPERATORS</u>						
Backhoes	\$10.00		\$1.40	\$2.13	\$3.53	\$13.53
Cranes	\$10.43		\$1.46	\$2.22	\$3.68	\$14.11
Dozers	\$13.10		\$1.83	\$2.79	\$4.62	\$17.72
Graders	\$12.67		\$1.77	\$2.70	\$4.47	\$17.14
Loaders	\$11.26		\$1.57	\$2.40	\$3.97	\$15.23
Scrapers	\$10.00		\$1.40	\$2.13	\$3.53	\$13.53
Trackhoes	\$10.00		\$1.40	\$2.13	\$3.53	\$13.53
Tractors	\$9.42		\$1.32	\$2.00	\$3.32	\$12.74
Truck Drivers	\$9.42		\$1.32	\$2.00	\$3.32	\$12.74

Note: base rates do not include FICA, worker comp, unemployment, or company benefits which increase the cost per hour

** State of Utah - General Decision - Current Update UT010009, 3 pages, 11/16/2001

LABOR COSTS

<u>Nonspecified Wages</u>	Base Rate	Mandated Fringe	Labor Burden (FICA, SUI, FUI, etc.)	Company Benefits (medical, life insure, etc)	Fringe Costs	Labor Cost/HR
Survey Crew Member	\$9.85	\$0.00	\$1.38	\$2.10	\$3.47	\$13.32
Sample Crew Member	\$9.85	\$0.00	\$1.38	\$2.10	\$3.47	\$13.32
Mechanic (Demolition)	\$10.25	\$0.00	\$1.43	\$2.18	\$3.61	\$13.86
Manager/Engineer	\$36.00	\$0.00	\$5.03	\$7.66	\$12.69	\$48.69
Radiation Safety Officer	\$28.00	\$0.00	\$3.91	\$5.96	\$9.87	\$37.87
Secretary	\$11.50	\$0.00	\$1.61	\$2.45	\$4.05	\$15.55
Clerk	\$9.50	\$0.00	\$1.33	\$2.02	\$3.35	\$12.85
Engineer	\$28.00	\$0.00	\$3.91	\$5.96	\$9.87	\$37.87
Environmental Technician	\$15.00	\$0.00	\$2.10	\$3.19	\$5.29	\$20.29
Safety Engineer	\$15.00	\$0.00	\$2.10	\$3.19	\$5.29	\$20.29
Maintenance Foreman	\$20.50	\$0.00	\$2.86	\$4.36	\$7.23	\$27.73
Security Personnel	\$6.00	\$0.00	\$0.84	\$1.28	\$2.12	\$8.12
Chemist	\$16.75	\$0.00	\$2.34	\$3.56	\$5.90	\$22.65

GENERAL DECISION UT010009 11/16/2001 UT9

Date: November 16, 2001

General Decision Number UT010009

Superseded General Decision No. UT000009

State: Utah

Construction Type:
HEAVY

County(ies):

BEAVER	IRON	SEVIER
CARBON	JUAB	UINTAH
DAGGETT	KANE	WASHINGTON
EMERY	PIUTE	WAYNE
GARFIELD	SAN JUAN	
GRAND	SAN PETE	

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/02/2001
1	11/16/2001

COUNTY(ies):

BEAVER	IRON	SEVIER
CARBON	JUAB	UINTAH
DAGGETT	KANE	WASHINGTON
EMERY	PIUTE	WAYNE
GARFIELD	SAN JUAN	
GRAND	SAN PETE	

BOIL0182B 04/01/1996

	Rates	Fringes
BOILERMAKERS	19.60	8.76

CARP2834D 10/01/1998

	Rates	Fringes
MILLWRIGHTS	20.82	4.28

* IRON0027G 07/01/2001

	Rates	Fringes
IRONWORKERS:		
Structural	20.52	8.11

SUUT2007A 03/01/1988

	Rates	Fringes
CARPENTERS	10.81	
CEMENT MASONS	11.52	
ELECTRICIANS	14.52	2.71
IRONWORKERS:		
Reinforcing	11.00	
LABORERS (including		
pipelayers)	7.65	1.60
PIPEFITTERS	12.60	

POWER EQUIPMENT OPERATORS:

Backhoes	10.00
Cranes	10.43
Dozers	13.10
Graders	12.67
Loaders	11.26
Scrapers	10.00
Trackhoes	10.00
Tractors	9.42
TRUCK DRIVERS	9.42

WELDERS - Receive rate prescribed for craft performing operation
to which welding is incidental.

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates
listed under that identifier do not reflect collectively
bargained wage and fringe benefit rates. Other designations
indicate unions whose rates have been determined to be
prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can
be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a
position on a wage determination matter
- * a conformance (additional classification and rate)
ruling

On survey related matters, initial contact, including requests
for summaries of surveys, should be with the Wage and Hour
Regional Office for the area in which the survey was conducted
because those Regional Offices have responsibility for the
Davis-Bacon survey program. If the response from this initial
contact is not satisfactory, then the process described in 2.)
and 3.) should be followed.

With regard to any other matter not yet ripe for the formal
process described here, initial contact should be with the Branch
of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an
interested party (those affected by the action) can request
review and reconsideration from the Wage and Hour Administrator
(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.
END OF GENERAL DECISION

LONG TERM CARE CALCULATION

Long Term Care Calculation

Base Amount (Starting in Dec. 1978)	\$250,000
CPI-U December, 1978	67.7
CPI-U December 2001	176.7

Adjusted Long Term Care = $\$250,000 \times (\text{CPI-U most recent} / \text{CPI-U Dec., 1978})$

Adjusted Long Term Care	\$652,511
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Consumer Price Index (CPI-U)

For All Urban Consumers

U.S. City Average

All Items 1982-84=100

**U.S. Department of Labor
Bureau of Labor Statistics**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
1950	23.5	23.5	23.6	23.6	23.7	23.8	24.1	24.3	24.4	24.6	24.7	25.0	24.1
51	25.4	25.7	25.8	25.8	25.9	25.9	25.9	25.9	26.1	26.2	26.4	26.5	26.0
52	26.5	26.3	26.3	26.4	26.4	26.5	26.7	26.7	26.7	26.7	26.7	26.7	26.5
53	26.5	26.6	26.5	26.6	26.7	26.8	26.8	26.9	26.9	27.0	26.9	26.9	26.7
54	26.9	26.9	26.9	26.8	26.9	26.9	26.9	26.9	26.8	26.8	26.8	26.7	26.9
55	26.7	26.7	26.7	26.7	26.7	26.7	26.8	26.8	26.8	26.8	26.8	26.9	26.8
56	26.8	26.8	26.8	26.9	27.0	27.2	27.4	27.3	27.4	27.5	27.5	27.6	27.2
57	27.6	27.7	27.8	27.9	28.0	28.1	28.3	28.3	28.3	28.3	28.4	28.4	28.1
58	28.6	28.6	28.8	28.9	28.9	28.9	29.0	28.9	28.9	28.9	29.0	28.9	28.9
59	29.0	28.9	28.9	29.0	29.0	29.1	29.2	29.2	29.3	29.4	29.4	29.4	29.1
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
1960	29.3	29.4	29.4	29.5	29.5	29.6	29.6	29.6	29.6	29.8	29.8	29.8	29.6
61	29.8	29.8	29.8	29.8	29.8	29.8	30.0	29.9	30.0	30.0	30.0	30.0	29.9
62	30.0	30.1	30.1	30.2	30.2	30.2	30.3	30.3	30.4	30.4	30.4	30.4	30.2
63	30.4	30.4	30.5	30.5	30.5	30.6	30.7	30.7	30.7	30.8	30.8	30.9	30.6
64	30.9	30.9	30.9	30.9	30.9	31.0	31.1	31.0	31.1	31.1	31.2	31.2	31.0
65	31.2	31.2	31.3	31.4	31.4	31.6	31.6	31.6	31.6	31.7	31.7	31.8	31.5
66	31.8	32.0	32.1	32.3	32.3	32.4	32.5	32.7	32.7	32.9	32.9	32.9	32.4
67	32.9	32.9	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	33.4
68	34.1	34.2	34.3	34.4	34.5	34.7	34.9	35.0	35.1	35.3	35.4	35.5	34.8
69	35.6	35.8	36.1	36.3	36.4	36.6	36.8	37.0	37.1	37.3	37.5	37.7	36.7
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
1970	37.8	38.0	38.2	38.5	38.6	38.8	39.0	39.0	39.2	39.4	39.6	39.8	38.8
71	39.8	39.9	40.0	40.1	40.3	40.6	40.7	40.7	40.8	40.9	40.9	41.1	40.5
72	41.1	41.3	41.4	41.5	41.6	41.7	41.9	42.0	42.1	42.3	42.4	42.5	41.8
73	42.6	42.9	43.3	43.6	43.9	44.2	44.3	45.1	45.2	45.6	45.9	46.2	44.4

74	46.6	47.2	47.8	48.0	48.6	49.0	49.4	50.0	50.6	51.1	51.5	51.9	49.3
75	52.1	52.5	52.7	52.9	53.2	53.6	54.2	54.3	54.6	54.9	55.3	55.5	53.8
76	55.6	55.8	55.9	56.1	56.5	56.8	57.1	57.4	57.6	57.9	58.0	58.2	56.9
77	58.5	59.1	59.5	60.0	60.3	60.7	61.0	61.2	61.4	61.6	61.9	62.1	60.6
78	62.5	62.9	63.4	63.9	64.5	65.2	65.7	66.0	66.5	67.1	67.4	67.7	65.2
79	68.3	69.1	69.8	70.6	71.5	72.3	73.1	73.8	74.6	75.2	75.9	76.7	72.6
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
1980	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3	82.4
81	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0	90.9
82	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6	96.5
83	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3	99.6
84	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9
85	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6
86	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6
87	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6
88	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	118.3
89	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7
91	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2
92	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3
93	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5
94	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2
95	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4
96	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.6	156.9
97	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2	161.6	161.5	161.3	160.5
98	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0
99	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2
2001	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1
2002	177.1												
% Chg*	1.1%												

** Percent change from year ago*

Note: A recorded message providing the latest CPI data is available by calling (617) 565-2325. For further assistance, contact the Boston office of the Bureau of Labor Statistics at (617) 565-2327.

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