

**From:** Scott Schierman (USA - Casper)  
**To:** [Striz, Elise](#)  
**Subject:** [External\_Sender] Ludeman Surety  
**Date:** Tuesday, November 21, 2017 12:16:38 PM  
**Attachments:** [Ludeman Restoration of WF 1 without GW restoration 6.6.17 rev1.pdf](#)

---

Elise

Please find the attached surety estimate for Ludeman first year of operations.

**Scott Schierman** | HSE Manager  
**Uranium One Americas, Inc. (U1 Americas)**  
**907 N Poplar | Suite 260 | Casper, WY 82601 | USA**  
Office: [307.234.8235 ext 330](tel:307.234.8235) | Cell: [307.840.1157](tel:307.840.1157)  
[scott.schierman@uranium1.com](mailto:scott.schierman@uranium1.com)  
[www.Uranium1.com](http://www.Uranium1.com)



This email, including any attachments, is confidential and may be privileged. Please check any attachments for viruses before opening them. If you are not the intended recipient, then any disclosure, copying, distribution or use of this email or any attachment, other than to or by the sender, is prohibited. If you received this email in error, please notify us immediately by returning it to the sender and delete this copy from your system.

RECURRING COST				
	Item	Amount (\$)	Units	Cost Basis
<b>ELECTRICAL</b>				
	Power Cost (actual costs)	\$0.05040	kw/hr	Current operating cost of electricity - Powder River Energy - Jan 2016
<b>LABOR RATES</b>				
	Supervisor	\$25.00	Hour	Operator Wage below + \$5.00 referenced in WDEQ Guideline 12, Section I
	Plant Operator	\$20.00	Hour	Based on current average wage structure for Willow Creek Operators
	Plant Operator	\$20.00	hour	Based on current average wage structure for Willow Creek Operators
	Laborers (Group 1)	\$15.93	hour	From 2015 State Wages Department of Transportation Prevailing Wages.
	Laborers (Group 2)	\$18.48	hour	From 2015 State Wages Department of Transportation Prevailing Wages.
<b>ANALYTICAL</b>				
	Guideline 8	\$390.00	batch	Current rate used in worksheet I
<b>TRANSPORTATION AND DISPOSAL</b>				
	Distance to Landfill	50	(miles)	The distance from Ludeman to Casper Landfill is ~50 miles
	Transportation Cost	\$0.15	(\$/Ton-Mile)	Estimate from trucking company (April 2016)
	Solid Waste landfill disposal cost .	\$59.20	Ton	Casper City landfill rates for outside of Natrona County commercial trailer over 8 feet in length.
	Quantity Per Truck Load	20	(Tons)	
	Quantity Per Truck Load	28.0	(Yds <sup>3</sup> )	
	11e2 disposal cost	\$175.00	cubic yard	Average cost of graduated fee schedule for disposal of soils, sands, rubble etc., at NRC Licensed Facility (White Mesa) (April 2016)
	11e2 disposal cost	\$6.11	cubic foot	Average cost of graduated fee schedule for disposal of soils, sands, rubble etc., at NRC Licensed Facility (White Mesa) (April 2016)
	11e2 disposal cost	\$6.48	cubic foot	Average cost of graduated fee schedule for disposal of sludge, resin beads, filter media, etc., at NRC Licensed Facility (White Mesa) (August 2016)
	11e2 disposal cost	\$174.96	cubic yard	Average cost of graduated fee schedule for disposal of sludge, resin beads, filter media, etc., at NRC Licensed Facility (White Mesa) (August 2016)
	Onsite Disposal	\$0.33	cubic foot	WDEQ Guideline 12, Appendix K, Concrete Disposal On Site $\$8.25\text{yd}^3 = \$0.31\text{ft}^3$
	11e2 Transportation Cost Per Truck	\$2,900.00		Cost per load based on 2016 quote with trucking company
<b>VEHICLE OPERATION</b>				
	Pick up 4X4 (diesel)	\$17.84	unit	Cost per WDEQ Guideline 12 Table D-1
<b>PLANT DISMANTLING</b>				
	Concrete Floor Demolition	\$0.80	square foot	Costs per WDEQ Guideline 12, Appendix K
	Cost of Demolition Per Ft <sup>3</sup>	\$0.28	Cubic foot	WDEQ Guideline 12, Appendix K
<b>PLANT/EQUIPMENT DECONTAMINATION AND DISPOSAL</b>				
	Decontamination	\$0.13	square foot	Based on actual costs
	Decontamination	\$435.00	truck load	Based on actual costs
<b>WELL PLUGGING AND ABANDONMENT</b>				
	Bentonite Chips	\$4.70	50# bag	Based on 2014 current costs from Casper Well Supply
	Cement Cones	\$10.00	per hole	Costs per WDEQ Guideline 12, App. L, Abandonment and Sealing of Drill and Monitor Wells
<b>EQUIPMENT</b>				
	Dozer	\$66.75	acre	Cost per WDEQ Guideline 12, App M, rough grading/backfill
	Backhoe Loader (Cat 430E 4WD)	\$23.12	hour	Cost per WDEQ Guideline 12, Table D-1
	Loader (Cat 980H)	\$73.32	hour	Cost per WDEQ Guideline 12, Table D-1
	Pick up 4X4 (gasoline)	\$14.86	hour	Cost per WDEQ Guideline 12, Table D-1
	Hose Reel	\$45.00	hour	Costs for equipment from operating ISR facility
<b>CULVERT REMOVAL</b>				
	20 foot culvert	\$103.50		Cost per WDEQ Guideline 12, Appendix J
	per foot	\$5.18	foot	
<b>ELECTRICAL POWERLINES &amp; TRANSFORMERS</b>				
	Distribution/Transmission Lines	\$0.00		Tri-County Electric will remove at no cost, WDEQ Guideline 12, Appendix H

Transformers	\$0.00		<i>Tri-County Electric will remove at no cost, WDEQ Guideline 12, Appendix H</i>
--------------	--------	--	--

**FENCING**

Removal	\$0.38	linear foot	<i>WDEQ Guideline 12, Appendix H</i>
---------	--------	-------------	--------------------------------------

**RECLAMATION**

Disking and Seeding	\$280	acre	<i>Operator Experience based on Current Contractor Pricing</i>
Top Soil Application	\$0.670	cu/yd	<i>Cost per WDEQ Guideline 12A, II(A) Average travel distance of 1000 feet</i>
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$0.670	cu/yd	<i>Cost per WDEQ Guideline 12A, II(A) Average travel distance of 1000 feet</i>
Unit Cost - Grading (\$/Ac)	\$66.75	acre	<i>Costs per WDEQ Guideline 12, Appendix M D9 dozer</i>

**References**

Guideline 12 Reclamation cost were updated using Feb. 2017 version

Ludeman ISR Project End Year 1  
 Uranium One, Americas

Restoration and Reclamation Cost Estimates at the End of Year 1  
 (no operation has occurred therefore no groundwater restoration  
 or 11.e.2 byproduct disposal is required)

No.	Leuenberger Satellite Plant Cost Item	Cost
1	GROUNDWATER RESTORATION COST	\$279,352
2a	PLANT EQUIPMENT REMOVAL AND DISPOSAL COST	\$225,795
2b	POND RECLAMATION COST	\$576,781
2c	BUILDING DEMOLITION AND DISPOSAL COST	\$456,900
3	SOIL REMOVAL & DISPOSAL COST	\$39,615
4	TOTAL WELL ABANDONMENT COST	\$198,239
5	WELLFIELD EQUIPMENT REMOVAL & DISPOSAL COST	\$213,500
6	TOPSOIL REPLACEMENT & REVEGETATION COST	\$328,121
7	MISCELLANEOUS RECLAMATION COST	\$43,753
	Subtotal Restoration and Reclamation Cost Estimate	\$2,362,056
	Administration,Overhead and Contingency (25%)	\$590,514
	<b>Total</b>	<b>\$2,952,570</b>

No.	North Platte Wellfield Cost Item	Cost
1	GROUNDWATER RESTORATION COST	\$0
2a	EQUIPMENT REMOVAL AND DISPOSAL COST	\$0
2b	POND RECLAMATION COST	\$0
2c	DEMOLITION AND DISPOSAL COST	\$0
3	SOIL REMOVAL & DISPOSAL COST	\$0
4	TOTAL WELL ABANDONMENT COST	\$0
5	WELLFIELD EQUIPMENT REMOVAL & DISPOSAL COST	\$0
6	TOPSOIL REPLACEMENT & REVEGETATION COST	\$0
7	MISCELLANEOUS RECLAMATION COST	\$0
	Subtotal Restoration and Reclamation Cost Estimate	\$0
	Administration,Overhead and Contingency (25%)	\$0
	<b>Total</b>	<b>\$0</b>

No.	Peterson Wellfield Cost Item	Cost
1	GROUNDWATER RESTORATION COST	\$0
2a	EQUIPMENT REMOVAL AND DISPOSAL COST	\$0
2b	POND RECLAMATION COST	\$0
2c	DEMOLITION AND DISPOSAL COST	\$0
3	SOIL REMOVAL & DISPOSAL COST	\$0
4	TOTAL WELL ABANDONMENT COST	\$0
5	WELLFIELD EQUIPMENT REMOVAL & DISPOSAL COST	\$0
6	TOPSOIL REPLACEMENT & REVEGETATION COST	\$0
7	MISCELLANEOUS RECLAMATION COST	\$0
	Subtotal Restoration and Reclamation Cost Estimate	\$0
	Administration,Overhead and Contingency (25%)	\$0
	<b>Total</b>	<b>\$0</b>

**TOTAL RESTORATION COST** **\$2,952,570**

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc

Worksheet 1, No. 1 – **GROUNDWATER RESTORATION**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>Technical Assumptions</b>					
Wellfield Area (Ft <sup>2</sup> )	1,112,257	0	0		
Wellfield Area (Acres)	25.5	0.0	0.0		
Affected Ore Zone Area (Ft <sup>2</sup> )	1,112,257	0	0		
Avg Completed Thickness (Ft)	20	20	20		Confirm completed thickness
Factor for Flare	1.44	1.44	1.44		Confirm FlareFactor
Affected Volume:	32,033,002	0	0		
Porosity	0.25	0.25	0.25		Confirm Porosity
Gallons per Cubic Foot	7.48	7.48	7.48		
Gallon per Pore Volume	59,901,713	0	0		
Number of Wells in Unit(s)	341	119	0		
Production Wells	111	47	0		
Injection Wells	170	72	0		Confirm number of Injection Wells
Monitor Wells	60	0	0		Confirm number of Monitoring Wells
Average Well Spacing (Ft)	71	71	71		
Average Well Depth (Ft)	400	275	400		Confirm average well depth
<b>I Groundwater Sweep</b>					
A. Plant & Office					
Operating Assumptions:					
Flowrate (gpm)	500	500	500		Confirm flowrate
PV's Required	1.00	1.00	0.00		
Total Gallons for Treatment	59,901,713	0	0		
Total Kgals for Treatment	59,902	0	0		
Cost Assumptions:					
Power					
Avg Connected Hp	100	100	100		Confirm Hp
Kwh's/Hp	0.75	0.75	0.75		
\$/Kwh	0.05	0.05	0.05		\$.02 plus demand charges per quote
Gallons per Minute	500	500	500		
Gallons per Hour	30000	30000	30000		
Cost per Hour	\$3.75	\$3.75	\$3.75		
Cost per Kgal (\$)	\$0.125	\$0.125	\$0.125		
Chemicals					
Barium Chloride (\$/Kgals)	\$0.041	\$0.041	\$0.041		Costs from operating ISR facility experience (Cogema)
Antiscalant (\$/Kgals)	\$0.000	\$0.000	\$0.000		Costs from operating ISR facility experience (Cogema)
Elution (\$/Kgals)	\$0.099	\$0.099	\$0.099		Costs from operating ISR facility experience (Cogema)
Repair & Maintenance (\$/Kgals)	\$0.061	\$0.061	\$0.061		Costs from operating ISR facility experience (Cogema)
Analysis (\$/Kgals)	\$0.164	\$0.164	\$0.164		Costs from operating ISR facility experience (Cogema)
Total Cost per Kgal	\$0.49	\$0.49	\$0.49		
Total Treatment Cost	\$29,352	\$0	\$0		
Utilities					
Power (\$/Month)	1,148				plant building only, i.e., lights, etc. (12,996 sf at \$0.05/sf.) & maint building at Leuenberger (10000 sf)
Propane (\$/Month)	800	400	400		
Time for Treatment					
Minutes for Treatment	119,803	0	0		
Hours for Treatment	1,997	0	0		
Days for Treatment	83	0	0		
Average Days per Month	30.4	30.4	30.4		
Months for Treatment	2.8	0.0	0.0		
Years for Treatment	0.23	0.00	0.00		
Utilities Cost (\$)	\$5,402	\$0	\$0		
<b>TOTAL PLANT &amp; OFFICE COST</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>B. WELLFIELD</b>					
Cost Assumptions:					
Power					
Avg Flow/Pump (gpm)	5	5	5		
Avg Hp/Pump	5	5	5		
Avg # of Pumps Required	100	100	100		
Avg Connected Hp	500	500	500		
Kwh's/Hp	0.75	0.75	0.75		
\$/Kwh	0.05	0.05	0.05		
Gallons per Minute	500	500	500		
Gallons per Hour	30000	30000	30000		
Costs per Hour (\$)	\$18.75	\$18.75	\$18.75		
Costs per Gallon (\$)	\$0.0006	\$0.0006	\$0.0006		
Costs per Kgal (\$)	\$0.63	\$0.63	\$0.63		
Repair & Maintenance (\$/Kgals)	\$0.016	\$0.016	\$0.016		
Total Cost per Kgal	\$0.641	\$0.641	\$0.641		
<b>TOTAL WELLFIELD COST</b>	<b>\$38,397</b>	<b>\$0</b>	<b>\$0</b>		
<b>TOTAL GROUNDWATER SWEEP COST</b>	<b>\$29,351.84</b>	<b>\$0</b>	<b>\$0</b>	<b>\$29,352</b>	

Ludeman ISR Project 1st Year of Operations  
Uranium One USA, Inc.

Worksheet 1, No. II  
GROUNDWATER RESTORATION

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1-80 Sand	Wellfield 2-90 Sand	Wellfield 3	Sub Total	
<b>II GW Treatment - RO</b>					
A. PLANT					
Operating Assumptions:					
Flowrate (gpm)	250	250	250		
PV's Required	6.00	6.00	6.00		
Total Gallons for Treatment	359,410,278	0	0		
Total Kgals for Treatment	359,410	0	0		
Feed to RO (gpm)	300	300	300		
Permeate Flow (gpm)	225	225	225		
Brine Flow (gpm)	75	75	75		
Average RO Recovery	75%	75%	75%		
Cost Assumptions:					
Power					
Avg Connected Hp	20	20	20		
kWh/Hp	0.75	0.75	0.75		
\$/Kwh	0.05	0.05	0.05		\$.02 plus demand charges per quote
Gallons per Minute	250	250	250		
Gallons per Hour	15000	15000	15000		
Cost per Hour (\$)	\$0.75	\$0.75	\$0.75		
Cost per Gallon (\$)	\$0.0001	\$0.0001	\$0.0001		
Cost per Kgal (\$)	\$0.05	\$0.05	\$0.05		
Chemicals					
Sulfuric Acid (\$/Kgals)	\$0.076	\$0.076	\$0.076		Costs from operating ISR facility experience (Cogema)
Caustic Soda (\$/Kgals)	\$0.111	\$0.111	\$0.111		Costs from operating ISR facility experience (Cogema)
Hydrochloric Acid (\$/Kgals)	\$0.009	\$0.009	\$0.009		Costs from operating ISR facility experience (Cogema)
Hydrochloric Sulfide (\$/Kgals)	\$0.304	\$0.304	\$0.304		Costs from operating ISR facility experience (Cogema)
Repair & Maintenance (\$/Kgals)	\$0.279	\$0.279	\$0.279		Costs from operating ISR facility experience (Cogema)
Sampling & Analysis (\$/Kgals)	\$0.164	\$0.164	\$0.164		Costs from operating ISR facility experience (Cogema)
Total Cost per Kgal (\$)	\$0.99	\$0.99	\$0.99		
Total Pumping Cost (\$)	\$356,894	\$0	\$0		
Utilities					
Power (\$/Month)	1,148	648	648		plant building only, i.e., lights, etc. (12,966 SF at \$0.05/sf.)
Propane (\$/Month)	800	400	400		
Time for Treatment					
Months for Treatment	27.7	15.5			Years of restoration for 6 pore volumes based on 300 gpm per wellfield for 1.29 years when the 90 sand will be restored. Then an additional 1.02 years at 600 gpm for the 80 sand restoration to be complete.
Utilities Cost (\$)	\$53,999	\$16,223	\$0		
<b>TOTAL PLANT COST</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
B. WELLFIELD					
Cost Assumptions:					
Power					
Avg Flow/Pump (gpm)	5	5	5		
Avg Hp/Pump	5	5	5		
Avg # of Pumps Required	281	119	0		Using Recovery Pumps
Avg Connected Hp	1404.84375	594.84375	0		
Kwh's/Hp	0.75	0.75	0.75		
\$/Kwh	0.05	0.05	0.05		
Gallons per Minute	250	250	250		
Gallons per Hour	15000	15000	15000		
Costs per Hour (\$)	\$52.68	\$22.31	\$0.00		
Costs per Gallon (\$)	\$0.0035	\$0.0015	\$0.0000		
Costs per Kgal (\$)	\$3.51	\$1.49	\$0.00		
Repair & Maintenance (\$/Kgals)	\$0.016	\$0.016	\$0.016		
Total Cost per Kgal	\$3.528	\$1.503	\$0.016		
MIT cost (\$150/well)	\$51,145	\$17,845	\$0		
<b>TOTAL WELLFIELD COST</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>TOTAL GW TREATMENT RO COST</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

**Worksheet 1, No III --  
GROUNDWATER RESTORATION**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>III Deep Disposal Well</b>					
Operating Assumptions:					
Total Disposal Requirement					
RO Brine Total Gallons	89,852,569	0	0		
RO Brine Total Kgallons	89,853	0	0		
Brine Concentration Factor	1	1	1		
Total Concentrated Brine (Gals)	89,852,569	0	0		
Months of RO Operation	27.7	15.5	0.0		
Average Monthly Req'm't (Gallons)	3,241,435	0	0		
Average Brine Flow (gpm)	62.5	62.5	62.5		
Total DDW Disposal (Gallons)	89,852,569	0	0		
Total DDW Disposal (Kgallons)	89,853	0	0		
Cost Assumptions:					
Avg Connected Hp	150	150	150		
Kwh's/Hp	0.75	0.75	0.75		
\$/Kwh	0.05	0.05	0.05		\$0.02 plus demand charges per quote
Gallons per Minute	62.5	62.5	62.5		
Gallons per Hour	3750	3750	3750		
Cost per Hour (\$)	\$5.63	\$5.63	\$5.63		
Cost per Gallon (\$)	\$0.0015	\$0.0015	\$0.0015		
Cost per Kgal (\$)	\$1.50	\$1.50	\$1.50		
Chemicals					
RO Antiscalent (\$/Kgals)	\$0.192	\$0.192	\$0.192		Costs from operating ISR facility experience (Cogema)
WDW Antiscalent (\$/Kgals)	\$0.226	\$0.226	\$0.226		Costs from operating ISR facility experience (Cogema)
Sulfuric Acid (\$/Kgals)	\$0.280	\$0.280	\$0.280		Costs from operating ISR facility experience (Cogema)
Corrosion Inhibitor	\$0.217	\$0.217	\$0.217		Costs from operating ISR facility experience (Cogema)
Algacide	\$0.080	\$0.080	\$0.080		Costs from operating ISR facility experience (Cogema)
Other	\$0.000	\$0.000	\$0.000		Costs from operating ISR facility experience (Cogema)
Repair & Maint. (\$/Kgals)	\$0.230	\$0.230	\$0.230		Costs from operating ISR facility experience (Cogema)
Total Cost per Kgal	\$2.725	\$2.725	\$2.725		
<b>TOTAL DEEP DISPOSAL WELL COST</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

**Worksheet 1, Nos. IV & V --  
GROUNDWATER RESTORATION**

Cost Item	Labor Cost Factors			Ludeman Satellite Plant		Notes
				Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	
<b>IV STABILIZATION MONITORING</b>						
Operating Assumptions:						
Time of Stabilization (mos)				12.0	12.0	
Frequency of Analysis (mos)				3	3	
Total Sets of Analysis				4	4	
Cost Assumptions:						
Power (\$/Month)				\$1,600	\$1,600	
Total Power Cost				\$19,200	\$19,200	
Sampling & Analysis (each set)				\$19,800	\$0	No. of Monitoring Wells @ \$330 per event
Total Sampling & Analysis Cost (\$)				\$79,200	\$0	
Utilities (\$/Month)				\$400	\$400	
Total Utilities Cost (\$)				\$4,800	\$4,800	
<b>TOTAL STABILIZATION COST</b>				<b>\$0</b>	<b>\$0</b>	
<b>V LABOR</b>						
Cost Assumptions:	Cost/Hour	Hours/Year	Cost	No.		
Crew:						
1. Supervisor	29	2080	\$60,320	1		
2. Operators	19	2080	\$158,080	4		
3. Maintenance	19	2080	\$158,080	4		
4. Vehicles	20.21	1000	\$101,050	5		WDEQ Guideline No.12, Table D-1
Cost per Year			\$477,530			
Time Required - Years				3.54	2.29	
<b>TOTAL RESTORATION LABOR COST</b>				<b>\$0</b>	<b>\$0</b>	



Ludeman ISR Project 1st year Operations  
Uranium One USA, Inc.

**Worksheet 1, Nos. VI, VII & Summary --  
GROUNDWATER RESTORATION**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>VI RESTORATION CAPITAL REQUIREMENTS</b>					
I Deep Disposal Well(s)	0	0	0		
II Plug and Abandon DDW	\$250,000	0	0		
III Reverse Osmosis Unit	\$0	0	0		
<b>TOTAL RESTORATION CAPITAL REQUIREMENTS</b>	<b>\$250,000</b>	<b>\$0</b>	<b>\$0</b>		
<b>VII RESTORATION OF EXCURSION WELLS</b>					
I Overlying Sand Well(s)					
Total Wells in Excursion	0	0	0		Assume no excursions during Year 1
Cost of Clean-Up	\$100,000	\$100,000	\$100,000		
Total Overlying Sand Cleanup	\$0	\$0	\$0		
II Ore Zone Wells					
Total Wells in Excursion	0	0	0		
Cost of Clean-Up	\$100,000	\$100,000	\$100,000		
Total Ore Zone Cleanup	\$0	\$0	\$0		
III Underlying Sand Wells					
Total Wells in Excursion	0	0	0		
Cost of Clean-Up	\$100,000	\$100,000	\$100,000		
Total Underlying Sand Well Cleanup	\$0	\$0	\$0		
<b>TOTAL WELLFIELD COST</b>					
<b>TOTAL EXCURSION CLEANUP COST</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>SUMMARY:</b>					
I GROUNDWATER SWEEP	\$29,352	\$0	\$0		
II REVERSE OSMOSIS	\$0	\$0	\$0		
III WASTE DISPOSAL WELL	\$0	\$0	\$0		
IV STABILIZATION	\$0	\$0	\$0		
<b>SUB TOTAL</b>	<b>\$29,352</b>	<b>\$0</b>	<b>\$0</b>		
V LABOR	\$0	\$0	\$0		Included in OPEX costs
VI CAPITAL	\$250,000	\$0	\$0		
VII EXCURSION CLEANUP	\$0	\$0	\$0		
<b>TOTAL GROUNDWATER RESTORATION COST</b>	<b>\$279,352</b>	<b>\$0</b>	<b>\$0</b>	<b>\$279,352</b>	

Ludeman ISR Project 1st Year Operations  
 Uranium One USA, Inc.

Worksheet 2 a  
**SATELLITE PLANT EQUIPMENT REMOVAL AND DISPOSAL**

Cost Item	Leuenberger Satellite Plant						Notes
	Satellite Process Building	Maintenance Building	Resin	External Tanks	Header Houses	Sub Total	
Volume (Yds <sup>3</sup> )	100	25	110	20	80		Leuenberger costs based on 6 HH in WF1 and 3 HH in WF 2.
Quantity per Truck Load (Yds <sup>3</sup> )	20	20	20	20	20		
Number of Truck Loads	5.0	1.25	5.5	1	4.0		
I Decontamination Cost							
Decontamination Cost (\$/Load)	\$900	\$900	\$900	\$900	\$900		
Percent Requiring Decontamination	100%	50%	0%	50%	100%		
Total Cost	\$4,500	\$563	\$0	\$450	\$3,600		
II Dismantle and Loading Cost							
Cost per Truck Load (\$)	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000		
Total Cost	\$50,000	\$12,500	\$55,000	\$10,000	\$40,000		
III Oversize Charges							
Percent Requiring Permits	40%	50%	0%	50%	40%		
Cost per Truck Load (\$)	\$500	\$500	\$500	\$500	\$500		
Total Cost	\$1,000	\$313	\$0	\$250	\$800		
IV Transportation & Disposal							
A. Landfill							
Percent to be Shipped	100%	100%	100%	100%	100%		
Distance (Miles)	50	50	50	50	50		
Transport Cost (\$/Ton-Mile)	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22		
Transportation Cost	\$1,188	\$297	\$1,307	\$238	\$950		
Disposal Fee per Cubic Yard	\$58	\$58	\$58	\$58	\$58		
Disposal Cost (\$)	\$5,800	\$1,450	\$6,380	\$1,160	\$4,640		
Total Cost	\$6,988	\$1,747	\$7,687	\$1,398	\$5,590		
B. Licensed Site							
Percent to be Shipped	0%	0%	0%	0%	0%		
Distance (Miles)	160	160	160	160	160		
Transport Cost (\$/Ton-Mile)	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22		
Transport Cost	\$0	\$0	\$0	\$0	\$0		
Disposal Cost (\$/Ton)	\$300	\$300	\$300	\$300	\$300		
Quantity per Truck Load (Yds <sup>3</sup> )	20	20	20	20	20		
Quantity per Truck Load (Tons)	21.6	21.6	21.6	21.6	21.6		Based on avg 80lbs per cf
Disposal Cost	\$0	\$0	\$0	\$0	\$0		
Total Cost	\$6,988	\$1,747	\$7,687	\$1,398	\$5,590		
Total Cost	\$13,976	\$3,494	\$15,374	\$2,795	\$11,181		
<b>TOTAL COST</b>	<b>\$69,476</b>	<b>\$16,869</b>	<b>\$70,374</b>	<b>\$13,495</b>	<b>\$55,581</b>	<b>\$225,795</b>	

Worksheet 2 b Pond Reclamation Cost			
Cost Item	Leuenberger Satellite Plant		Notes
	Cell GW-1	Cell PR-1	
<b>POND SLUDGE:</b>			
Average Sludge Depth (Ft)		0.02	
Average Area of Sludge (F <sup>2</sup> )		520,106	
Volume of Sludge (F <sup>3</sup> )		10,402	
Volume of Sludge (Yds <sup>3</sup> )		385	
Volume of Sludge Per Truck Load (Yds <sup>3</sup> )		25.0	
# of Truck Loads of Sludge		15.4	
Sludge Handling Cost Per Load (\$)		\$240	
<b>Total Sludge Handling Cost (\$)</b>		<b>\$3,696</b>	
<b>Transportation &amp; Disposal</b>			
Percent To Be Shipped to Licensed Site		100%	
Transportation Cost per Truckload		\$2,900	
Transportation Cost (\$)		\$44,660	
Disposal Cost Per Cubic Foot (\$)		\$6.11	
Quantity Per Truck Load (Yds <sup>3</sup> )		20	
Quantity Per Truck Load (F <sup>3</sup> )		540	
Disposal Cost (\$)		\$50,811	
<b>Total Transportation &amp; Disposal (\$)</b>		<b>\$95,471</b>	
<b>TOTAL SLUDGE COST (\$)</b>		<b>\$99,167</b>	
<b>Pond Liner</b>			
Total Pond Area (Acres)	2.3	16	
Total Pond Area (F <sup>2</sup> )	100,188	696,960	
Factor For Sloping Sides	20%	20%	
Total Liner Area (F <sup>2</sup> )	120,226	836,352	
Liner Thickness (Mil)	0	45	
Liner Thickness (Inches)	0	0.0450	
Liner Thickness (Ft)	\$0	0.0038	
"Swell" Factor	21.6	25%	
Liner Volume (F <sup>3</sup> )	0.0	47,045	
Truck Loads of Liner	60	87	
<b>Liner Handling Cost (\$)</b>			
Labor Crew Cost per Hour (\$)		\$118	
Hours per Load		2.0	
Liner Handling Cost Per Load (\$)		\$237	
<b>Total Liner Handling Cost (\$)</b>		<b>\$20,611</b>	
<b>Transportation &amp; Disposal</b>			
Percent To Be Shipped to Licensed Site		50%	
Transportation Cost per Truckload		\$2,900	
Transportation Cost (\$)		\$126,295	
Disposal Cost Per Cubic Foot (\$)		\$6.48	
Quantity Per Truck Load (F <sup>3</sup> )		540	
Disposal Cost (\$)		\$152,390	
<b>Total Transportation &amp; Disposal (\$)</b>		<b>\$278,685.16</b>	
<b>TOTAL LINER COST (\$)</b>		<b>\$299,296.16</b>	
<b>POND BACKFILL:</b>			
Backfill required (Yds <sup>3</sup> )	12,798	203,071	
Backfill Cost (\$/Yd <sup>3</sup> )	0.67	0.67	
<b>TOTAL BACKFILL COST (\$)</b>	<b>\$8,575</b>	<b>\$136,058</b>	
<b>RADIATION SURVEY</b>			
Areal required (acres)	2.3	16	
Survey Cost (\$/acre)	\$520	\$520	
<b>TOTAL SURVEY COST (\$)</b>	<b>\$1,196</b>	<b>\$8,320</b>	
<b>LEAK DETECTION SYSTEM REMOVAL</b>			
Volume of Gravel and Piping (F <sup>3</sup> ) (Assume 6" gravel)	No leak detect	9,500	Assumes 4850ft3 of plastic pipe at 3 lbs per foot. Assumes gravel 1240ft3 of gravel at weight of 12.6 pounds ft3.
Weight for Plastic piping (tons)		7	
Weight for gravel (tons)		8	
Quantity per Truckload (F <sup>3</sup> )		1,350	
Quantity to be Shipped to Landfill Site (Loads)		7	
Transportation Cost per Truckload		\$150	
Transportation Cost (\$)		\$1,000	
Total Handling Cost per load		\$1,665	
Disposal Fee per ton at landfill		\$59.20	
Disposal Cost (\$)		\$893	
<b>TOTAL LEAK DETECTION SYSTEM REMOVAL</b>	<b>\$9,771</b>	<b>\$3,558.39</b>	
<b>TOTAL POND RECLAMATION COST</b>		<b>\$576,781.31</b>	

Worksheet 2 c  
 SATELLITE PLANT BUILDING DEMOLITION AND DISPOSAL

Cost Item	Leuenberger Satellite Plant				Notes
	Satellite Process Building	Maintenance Building	Header Houses	Sub Total	
<b>STRUCTURE DEMOLITION &amp; DISPOSAL</b>					
Structural Character					
Demolition Volume (Ft <sup>3</sup> )	337,116	180,000	21,600		Satellite plant building is 12,966 sf
Unit Cost of Demolition (\$/ Ft <sup>3</sup> )	\$0.300	\$0.300	\$0.300		Leuenberger costs based on 6 HH in WF1 and 3 HH in WF 2.
Total Demolition Cost	\$101,135	\$54,000	\$6,480		
Weight of Disposal Material in Tons	152	81	10		
Factor for Gutting	1	0.8			
Cost for Gutting (\$)	\$101,135	\$43,200	\$6,480		
Quantity per Truck Load (Ton)	21.6	21.6	21.6		
Number of Truckloads	7.0	3.8	0.5		
Distance to Landfill	60	60	60		
Unit Cost (Ton-Mile)	\$0.22	\$0.22	\$0.22		
Transportation Cost	\$2,002.47	\$1,069.20	\$128.30		
Disposal Cost (\$/ton)	\$58.00	\$58.00	\$58.00		
Disposal Cost (\$)	\$8,798.73	\$4,698.00	\$563.76		
<b>TOTAL STRUCTURE DEMO &amp; DISPOSAL</b>	<b>\$213,071</b>	<b>\$102,967</b>	<b>\$13,652</b>	<b>\$329,690</b>	
<b>CONCRETE DECONTAMINATION, DEMO &amp; DISPOSAL</b>					
Area	12966	8000	2160		
Average Thickness (Ft)	0.75	0.75	0.75		
Volume (Ft <sup>3</sup> )	9724.5	6000	1620		
Weight of Disposal Concrete Assuming 145lbs/cubic foot	1,410,053	870,000	234,900		
Weight of Disposal in Tons	705	435	117		
Percent Requiring Decontamination	100%	0%	10%		
Volume Decontaminated (Ft <sup>2</sup> )	9,725	0	162		
Decontamination (\$/Ft <sup>2</sup> )	\$0.4500	\$0.4500	\$0.4500		
Decontamination Cost	\$4,376	\$0	\$73		
Demolition (\$/Ft <sup>2</sup> )	\$5.10	\$5.10	\$5.10		
Demolition Cost	\$66,127	\$40,800	\$11,016		
Transportation & Disposal					
A. Onsite Disposal					
Percent to be Disposed Onsite	100%	100%	100%		
Transportation Cost	\$0	\$0	\$0		
Disposal Cost per Cubic Yard (\$)	\$7.50	\$7.50	\$7.50		On-site disposal
Disposal Cost (\$)	\$2,701	\$1,667	\$450		
B. Licensed Site					
Percent to be Shipped	0%	0%	0%		
Distance (Miles)	160	160	160		
Unit Cost (Ton-Mile)	\$0.22	\$0.22	\$0.22		
Transportation Cost (\$)	\$0	\$0	\$0		
Disposal Cost (\$/Ton)	\$300	\$300	\$300		
Disposal Cost (\$)	\$0	\$0	\$0		
<b>TOTAL TRANSPORT &amp; DISPOSAL COST</b>	<b>\$73,204</b>	<b>\$42,467</b>	<b>\$11,539</b>	<b>\$127,209</b>	
<b>TOTAL BUILDING DEMO &amp; DISPOSAL COST</b>	<b>\$286,275</b>	<b>\$145,434</b>	<b>\$25,191</b>	<b>\$456,900</b>	

Ludeman ISR Project 1st year Operations  
 Uranium One USA, Inc.

Worksheet 3  
 SOIL REMOVAL & DISPOSAL

Cost Item	Leuenberger Satellite Plant				Notes
	Satellite Plant	Maintenance Building	Header Houses	Sub Total	
<b>SOIL EXCAVATION, TRANSPORT &amp; DISPOSAL</b>					
Removal Under Building Footprints Excavation, Front End Loader	\$73.32	\$73.32	\$73.32		\$73.32/hr per WDEQ Guideline12 and 150 cy/hr Assume removal of 3" of Contaminated Soils under Header Houses and laydown yard included in Maintenance Building costs
Quantity to be Shipped (cu/yd)	25	150	25		
Weight in Tons	25	150	25		
Distance (Miles)	160	160	160		
Transportation Unit Cost (Ton/Mile)	\$0.150	\$0.150	\$0.150		
Transportation Cost	\$600	\$2,900	\$2,900		
Disposal Fee (\$/Ton)	\$59.20	\$175	\$175		
Disposal Cost (\$)	\$1,480	\$26,250	\$4,375	\$32,105	
Removal NPDES Pts.					
Quantity to be Shipped (Ft <sup>3</sup> )	0	0	0		Zero discharge facility
Weight in Tons	0	0	0		
Distance (Miles)	160	160	160		
Transportation Cost Ton/Mile (\$)	\$0.220	\$0.220	\$0.220		
Transportation Cost	\$0	\$0	\$0		
Disposal Fee (\$/Ton)	\$300	\$300	\$300		
Disposal Cost (\$)	\$0	\$0	\$0		
Total NPDES Removal Cost	\$0	\$0	\$0	\$0	
<b>TOTAL SOILS EXC., TRANSPORT &amp; DISPOSAL</b>	<b>\$1,480</b>	<b>\$26,250</b>	<b>\$4,375</b>	<b>\$32,105</b>	
<b>RADIATION SURVEY</b>					
Area Required (Acres)	1.00	4.25	4.00		
Survey Cost (\$/Acre)	\$520	\$520	\$520		
Number of Structures	1	1	10		
Cost per Structure (\$)	\$225	\$225	\$225		
<b>TOTAL RAD SURVEY COST</b>	<b>\$745</b>	<b>\$2,435</b>	<b>\$4,330</b>	<b>\$7,510</b>	
<b>TOTAL SOIL REMOVAL &amp; DISPOSAL COST</b>	<b>\$2,225</b>	<b>\$28,685</b>	<b>\$8,705</b>	<b>\$39,615</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

**Worksheet 4 --  
Well Abandonment**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
Number of Wells	341	0	0		Includes injection, recovery and monitor wells.
Average Depth (ft)	400	275	400		
Average Diameter (inch)	5	5	5		
Area of Annulus (ft <sup>2</sup> )	0.1364	0.1364	0.1364		
<b>Materials</b>					
Bentonite Chips Required (Ft <sup>3</sup> /Well)	34.1	34.1	34.1		250 feet of clay above water
Bags of Chips Required/Well	45	45	45		
Cost per Bag (\$)	\$6.45	\$6.45	\$6.45		
Cost/Well Bentonite Chips (\$)	\$290	\$290	\$290		
Gravel Fill Required (Ft <sup>3</sup> /Well)	20.5	3.4	20.5		Avg depth less 250 feet filled w/ gravel
Cost of Gravel/Yd <sup>3</sup> (\$)	\$20	\$20	\$21		
Cost/Well Gravel Fill (\$)	\$15	\$3	\$16		
Cement Cone/Markers Req'd/Well	1	1	1		
Cost of Cement Cones Markers (\$)	\$6	\$6	\$6		
Total Materials Cost per Well	\$311	\$299	\$312		
<b>Labor</b>					
Hours Required per Well	3	3	3		
Labor Cost per Hour	\$70	\$70	\$70		
Total Labor Cost per Well (\$)	\$210	\$210	\$210		
<b>Equipment Rental</b>					
Hours Required per Well	1	1	1		
Backhoe w/Operator Cost/Hr (\$)	\$60	\$60	\$60		
Total Equipment Cost per Well (\$)	\$60	\$60	\$60		
Total Cost per Well (\$)	\$581	\$569	\$582		
<b>TOTAL WELL ABANDONMENT COST (\$)</b>	<b>\$198,239</b>	<b>\$0</b>	<b>\$0</b>	<b>\$198,239</b>	

Ludeman ISR Project 1st Year Operations  
 Uranium One USA, Inc.

Worksheet 5, No. 1 --  
**WELLFIELD EQUIPMENT REMOVAL & DISPOSAL**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>I Wellfield Piping</b>					
<b>A. Removal</b>					
Total Number of Wells	341	0	0		Includes total injection and recovery wells
Feeder lines from HH to Injection wells 1" HDPE (Ft)	125,251	0	0		From Preliminary Design- MR Wellfield 1 & Wellfield 2 takeoffs
Pregnant solution feeder lines from production wells to HH 1" HDPE (Ft)	40,760	0	0		From Preliminary Design- MR Wellfield 1 & Wellfield 2 takeoffs
Total Quantity of 1" HDPE Piping (Ft)	166,011	0	0		
Plastic Volume (Ft <sup>3</sup> )	544.42	0.00	0.00		ISCO specs. for 1" HDPE DR 11
Chipped Volume Assuming 30% Void Space (Ft <sup>3</sup> )	707.75	0.00	0.00		
Disposal Weight (tons)	28.31	0.00	0.00		Year 1 buildout only to include Wellfield 1
Quantity per Truck Load (Tons)	21.6	21.6	22.6		Based on 20 cy per truckload and 80lbs per cf
Total Number of Truck Loads	2	0	0		
Total Length of Feeder line Trench (ft)	38,733	0	0		Includes Shared Trenches
Pipeline Removal Unit Cost (\$/ft of trench)	\$2.25	\$2.25	\$3.25		Quote - Jordan Construction
Total Cost for Trunkline Removal (\$)	\$87,150	\$0	\$0		
<b>Total Cost - Removal</b>	<b>\$87,150</b>	<b>\$0</b>	<b>\$0</b>	<b>\$87,150</b>	
<b>B. Survey &amp; Decontamination</b>					
Percent Requiring Decontamination	0	0	0		No survey or decon needed. Total volume to low level disposal
Loads for Decontamination	0	0	0		
Cost for Decontamination (\$/Load)	\$600	\$600	\$600		
Cost for Decontamination (\$)	\$0	\$0	\$0	<b>\$0</b>	
<b>C. Transport &amp; Disposal</b>					
<b>1.) Landfill</b>					
<b>a. Transportation</b>					
Percent to be Shipped	0%	0%	100%		
Loads to be Shipped	0	0	0		
Distance (Miles)	50	50	50		
Transportation Cost (Ton/Mile) (\$)	\$0.22	\$0.15	\$0.15		
Transportation Cost (\$)	\$0	\$0	\$0	<b>\$0</b>	
<b>b. Disposal</b>					
Disposal Fee per Yd <sup>3</sup>	\$58	\$58	\$58		
Yds <sup>3</sup> per Load	20	20	20		
Disposal Cost (\$)	\$0	\$0	\$0		
<b>Total Cost - Landfill</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>2.) Licensed Site</b>					
<b>a. Transportation</b>					
Percent to be Shipped	100%	100%	200%		
Loads to be Shipped	2	0	0		
Tons to be Shipped	28.31	0.00	0.00		
Distance (Miles)	160	160	160		
Transportation Ton/Mile (\$)	\$0.220	\$0.220	\$0.220		
Transportation Cost (\$)	\$997	\$0	\$0		
<b>b. Disposal</b>					
Disposal Fee per ton	\$300	\$300	\$301		
Disposal Cost (\$)	\$8,493	\$0	\$0		
<b>Total Cost - Licensed Site</b>	<b>9,490</b>	<b>0</b>	<b>0</b>		
<b>Total Cost - Transport &amp; Disposal</b>	<b>9,490</b>	<b>0</b>	<b>0</b>		
<b>Total Cost - WF Piping Removal &amp; Disposal</b>	<b>\$96,639</b>	<b>\$0</b>	<b>\$0</b>	<b>\$96,639</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

Worksheet 5, No. II  
WELLFIELD EQUIPMENT REMOVAL & DISPOSAL

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1 80 Sand	Wellfield 2 90 Sand	Wellfield 3	Sub Total	
<b>II Production Well Pumps</b>					
A. Pump and Tubing Removal					
Number of Production Wells	111	0	0		
Cost of Removal (\$/well)	\$200	\$201	\$201		
Cost of Removal (\$)	\$22,200	\$0	\$0		
Number of Pumps per Truck Load	180	180	180		
Number of Truck Loads (Pumps)	0.62	0.00	0.00		
Weight of Pumps	20.62	20.00	20.00		Assume 20 T per truck
B. Survey & Decontamination (Pumps)					
Percent Requiring Decontamination	50%	50%	50%		
Loads for Decontamination	0.31	0.00	0.00		
Cost for Decontamination (\$/Load)	\$600	\$600	\$600		
Cost for Decontamination (\$)	\$185	\$0	\$0		
C. Tubing Volume Reduction & Loading					
Length per Well (Ft)	400	275	400		
Total Quantity (Ft <sup>3</sup> )	145.6	0.0	0.0		Thickness Based on ISCO DR 11 1" HDPE PSI 160 (R1=.05479', R2=.04425')
Chipped Volume Assuming 30% Void Space (Ft <sup>3</sup> )	189.3	0.0	0.0		
Cost of Removal (\$/Ft)	\$0.03	\$0.03	\$0.03		
Cost of Removal (\$)	\$1,332.00	\$0.00	\$0.00		
Quantity per Truck Load (Ft <sup>3</sup> )	540	540	540		
Number of Truck Loads	1	0	0		
D. Transport & Disposal					
1.) Landfill					
a. Transportation					
Percent to be Shipped (Pumps)	50%	50%	50%		
Loads to be Shipped	0.3	0.0	0.0		
Distance (Miles)	50	50	50		
Transportation Ton/Mile (\$)	\$0.22	\$0.22	\$0.22		
Transportation Cost (\$)	\$73	\$0	\$0		
b. Disposal					
Disposal Fee per Yd <sup>3</sup>	\$58	\$58	\$58		
Yds <sup>3</sup> per Load	20	20	20		
Disposal Cost (\$)	\$358	\$0	\$0		
Total Cost - Landfill	\$431	\$0	\$0		
2.) Licensed Site					
a. Transportation					
Percent to be Shipped (Pumps)	50%	50%	50%		
Percent to be Shipped (Tubing)	100%	100%	100%		
Loads to be Shipped	2.00	0.00	0.00		
Distance (Miles)	50	50	50		
Transportation Ton/Mile (\$)	\$0.22	\$0.22	\$0.22		
Transportation Cost (\$)	\$475	\$0	\$0		
b. Disposal					
Disposal Cost per Ft <sup>3</sup>	\$300	\$300	\$300		
Disposal Fee per Yd <sup>3</sup>	20	20	20		
Quantity Per Truck Load (Yds <sup>3</sup> )	\$12,000	\$0	\$0		
Disposal Cost (\$)	\$12,475	\$0	\$0		
Total Cost - Licensed Site	\$12,950	\$0	\$0		
Total Cost - Transport & Disposal	\$13,381	\$0	\$0		
<b>Total Cost - Pump Removal &amp; Disposal</b>	<b>\$37,098</b>	<b>\$0</b>	<b>\$0</b>	<b>\$37,098</b>	



Closure Cost Estimate  
Ludeman ISR Project  
Uranium One USA, Inc

Worksheet 5, No. III  
WELLFIELD EQUIPMENT REMOVAL & DISPOSAL

Cost Item	Leuenerger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>III Buried Trunkline</b>					
<b>A. Removal</b>					
Trunk lines from Satellite Plant to HH HDPE Pipe (Ft)	9,510	0	0		
Pregnant solution trunk lines form HH to Satellite Plant 8" HDPE Pipe (Ft)	9,510	0	0		
Total Quantity of HDPE Piping (Ft)	19,020	0	0		assume avg 8-in dia.
Plastic Volume (Ft <sup>3</sup> )	12,830	0	0		Thickness Based on ISCO DR 11 8" PSI 160 (R1=.7188', R2=.5494')
Chipped Volume Assuming 30% Void Space (Ft <sup>3</sup> )	16,679	0	0		
Disposal Tons	124	0	0		13.089lb/ft per ISCO
Quantity per Truck Load (Tons)	21.6	21.6	22.6		
Total Number of Truck Loads	6	0	0		
Total Length of Trunkline Trench (ft)	9,510	0	0		
Pipeline Removal Unit Cost (\$/ft of trench)	\$4.00	\$4.00	\$5.00		
Total Cost for Trunkline Removal (\$)	\$38,039	\$0	\$0	\$38,039	
<b>B. Survey &amp; Decontamination</b>					
Percent Requiring Decontamination	0	0	0		No survey or decon needed.
Loads for Decontamination	0	0	0		Total volume to low level disposal
Cost for Decontamination (\$/Load)	\$600	\$600	\$600		
Cost for Survey & Decontamination (\$)	\$0	\$0	\$0	\$0	
<b>C. Transportation &amp; Disposal</b>					
1.) Landfill					
a. Transportation					
Percent to be Shipped	0%	0%	0%		
Loads to be Shipped	0	0	0		
Distance (Miles)	50	50	50		
Transportation Cost (Ton/Mile) (\$)	\$0.22	\$0.22	\$0.22		
Transportation Cost (\$)	\$0	\$0	\$0		
b. Disposal					
Disposal Fee per Yd <sup>3</sup>	\$58	\$58	\$58		
Yds <sup>3</sup> per Load	20	20	20		
Disposal Cost (\$)	\$0	\$0	\$0		
Total Cost - Landfill	\$0	\$0	\$0		
2.) Licensed Site					
a. Transportation					
Percent to be Shipped	100%	100%	100%		
Loads to be Shipped	6	0	0		
Tons to be Shipped	124.47	0.00	0.00		
Distance (Miles)	160	160	160		
Transportation Ton/Mile (\$)	\$0.220	\$0.220	\$0.220		
Transportation Cost (\$)	\$4,381	\$0	\$0		
b. Disposal					
Disposal Fee per ton	\$300	\$300	\$300		
Disposal Cost (\$)	\$37,342	\$0	\$0		
Total Cost - Licensed Site	\$41,724	\$0	\$0	\$41,724	
<b>Total Cost Transportation &amp; Disposal</b>	<b>\$41,724</b>	<b>\$0</b>	<b>\$0</b>	<b>\$41,724</b>	
<b>Total Cost - Buried Trunkline Removal &amp; Disposal</b>	<b>\$79,763</b>	<b>\$0</b>	<b>\$0</b>	<b>\$79,763</b>	
<b>TOTAL WELLFIELD EQUIPMENT REMOVAL &amp; DISPOSAL COST</b>	<b>\$213,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$213,500</b>	

Ludeman ISR Project 1st Year Operations  
 Uranium One USA, Inc.

**Worksheet 6, No. 1**

**TOPSOIL REPLACEMENT & REVEGETATION**

Cost Item	Satellite Plant		Notes
	Leuenberger	Sub Total	
<b>I Satellite Plant Building &amp; Maint Bldg (Leuenberger only)</b>			
A. Topsoil Handling & Grading			
Affected Area (Acres)	0.0		Assume disturbed area is 4 times area of bldg
Average Affected Thickness (Ins)	12		
Topsoil Volume (Yds <sup>3</sup> )	0		
Unit Cost	\$5		Price from Dragstrip Soil Cover Project MT
Sub Total - Topsoil	\$0		
B. Radiation Survey & Soil Analysis			
Unit Cost (\$/Ac)	\$800		
Sub Total - Survey & Analysis	\$0		
C. Revegetation			
Fertilizer (\$/Ac)	\$232.00		Price from Dragstrip Soil Cover Project MT
Seeding Prep & Seeding (\$/Ac)	\$227.00		Price from Dragstrip Soil Cover Project MT
Mulching & Crimping (\$/Ac)	\$100.00		Price from Dragstrip Soil Cover Project MT
Sub Total Cost/Acre	\$559.00		
Sub Total Revegetation	\$0		
<b>TOTAL PLANT AND OFFICE BUILDING</b>			
<b>TOPSOIL REPLACEMENT &amp; REVEG COST</b>	<b>\$0</b>	<b>\$0</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

**Worksheet 6, Nos. II & III  
TOPSOIL REPLACEMENT & REVEGETATION**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>II Wellfields</b>					
<b>A. Topsoil Handling &amp; Grading</b>					
Affected Area (Acres)	17	0	0		Equals trench length times 15 feet wide
Average Affected Thickness (Inch)	12	12	12		
Topsoil Volume (Yds <sup>3</sup> )	26,802	0	0		
Unit Cost - Haul/Place/Grading (\$/cy)	\$5.00	\$5.00	\$5.00		Price from Dragstrip Soil Cover Project MT
Sub Total - Topsoil	\$134,008	\$0	\$0		
<b>B. Radiation Survey &amp; Soil Analysis</b>					
Unit Cost (\$/Ac)	\$800	\$800	\$800		
Sub Total - Survey & Analysis	\$13,290	\$0	\$0		
<b>C. Spill Cleanup</b>					
Affected Area (Acres)	0	0	0		
Affected Area (Ft <sup>2</sup> )	0	0	0		
Affected Area Thickness (Ft)	0.5	0.5	0.5		
Affected Volume (Ft <sup>3</sup> )	0	0	0		
Quantity per Truckload (Ft <sup>3</sup> )	540	540	540		
Quantity to be Shipped (Loads)	0	0	0		
Distance (Miles)	160	160	160		
Transportation Cost (Ton/Mile) (\$)	\$0.22	\$0.22	\$0.22		
Transportation Cost (\$)	\$0	\$0	\$0		
Handling Cost (\$/Load)	\$400	\$400	\$400		
Handling Cost (\$)	\$0	\$0	\$0		
Disposal Fee (\$/Ton)	\$300	\$300	\$300		
Disposal Cost (\$)	\$0	\$0	\$0		
Sub Total - Spill Cleanup	\$0	\$0	\$0		
<b>D. Revegetation</b>					
Fertilizer (\$/Ac)	\$232.00	\$232.00	\$232.00		Price from Dragstrip Soil Cover Project MT
Seeding Prep & Seeding (\$/Ac)	\$227.00	\$227.00	\$227.00		Price from Dragstrip Soil Cover Project MT
Mulching & Crimping (\$/Ac)	\$100.00	\$100.00	\$100.00		Price from Dragstrip Soil Cover Project MT
Sub Total Cost/Acre	\$559.00	\$559.00	\$559.00		
Sub Total Revegetation	\$9,286	\$0	\$0		
<b>Sub Total - Wellfields</b>	<b>\$156,585</b>	<b>\$0</b>	<b>\$0</b>		
<b>TOTAL WELLFIELDS COST</b>	<b>\$156,585</b>	<b>\$0</b>	<b>\$0</b>	<b>\$156,585</b>	
<b>III Roads</b>					
<b>A. Topsoil Handling &amp; Grading</b>					
Affected Area (Acres)	0.91	0.00	0.00		3305 feet by 12 feet wide- 2 track access
Average Affected Thickness (Ins)	12	12	12		
Topsoil Volume (Yds <sup>3</sup> )	1,469	0	0		
Unit Cost - Haul/Place/Grading (\$/cy)	\$5.00	\$5.00	\$5.00		Price from Dragstrip Soil Cover Project MT
Sub Total - Topsoil	\$7,344	\$0	\$0		
<b>B. Radiation Survey &amp; Soil Analysis</b>					
Unit Cost (\$/Ac)	\$800	\$800	\$800		
Sub Total - Survey & Analysis	\$728	\$0	\$0		
<b>C. Revegetation</b>					
Fertilizer (\$/Ac)	\$232	\$232	\$232		Price from Dragstrip Soil Cover Project MT
Seeding Prep & Seeding (\$/Ac)	\$227	\$227	\$227		Price from Dragstrip Soil Cover Project MT
Mulching & Crimping (\$/Ac)	\$100	\$100	\$100		Price from Dragstrip Soil Cover Project MT
Sub Total Cost/Acre	\$559	\$559	\$559		
Sub Total Revegetation	\$509	\$0	\$0		
Sub Total - Roads	\$8,582	\$0	\$0		
<b>TOTAL ROADS COST</b>	<b>\$8,581.77</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$8,582</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

**Worksheet 6, Nos IV & V**  
**TOPSOIL REPLACEMENT & REVEGETATION**

Cost Item	Leuenberger Satellite Plant				Notes
	Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>IV Other</b>					
A. Topsoil Handling & Grading					
Affected Area (Acres)	4	0	0		
Average Affected Thickness (Ins)	6	6	6		
Topsoil Volume (Yds <sup>3</sup> )	3,227	0	0		
Unit Cost - Haul/Place/Grading (\$/Ac)	\$5.00	\$5.00	\$5.00		Price from Dragstrip Soil Cover Project MT
Sub Total - Topsoil	\$16,133	\$0	\$0		
B. Radiation Survey & Soil Analysis					
Unit Cost (\$/Ac)	\$800	\$800	\$800		
Sub Total - Survey & Analysis	\$3,200	\$0	\$0		
C. Revegetation					
Fertilizer (\$/Ac)	\$232.00	\$232.00	\$232.00		Price from Dragstrip Soil Cover Project MT
Seeding Prep & Seeding (\$/Ac)	\$227.00	\$227.00	\$227.00		Price from Dragstrip Soil Cover Project MT
Mulching & Crimping (\$/Ac)	\$100.00	\$100.00	\$100.00		Price from Dragstrip Soil Cover Project MT
Sub Total Cost/Acre	\$559.00	\$559.00	\$559.00		
Sub Total Revegetation	\$2,236	\$0	\$0		
Sub Total - Other	\$21,569	\$0	\$0		
<b>TOTAL OTHER COST</b>	<b>\$21,569</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,569</b>	
<b>V Remedial Action</b>					
A. Topsoil Handling & Grading					
Affected Area (Acres)	15	0	0		Verify Affected area
Average Affected Thickness (Ins)	12	12	12		
Topsoil Volume (Yds <sup>3</sup> )	24,200	0	0		
Unit Cost - Haul/Place/Grading (\$/cy)	\$5.00	\$5.00	\$5.00		Price from Dragstrip Soil Cover Project MT
Sub Total - Topsoil	\$121,000	\$0	\$0		
B. Radiation Survey & Soil Analysis					
Unit Cost (\$/Ac)	\$800	\$800	\$800		
Sub Total - Survey & Analysis	\$12,000	\$0	\$0		
C. Revegetation					
Fertilizer (\$/Ac)	\$232.00	\$232.00	\$232.00		Price from Dragstrip Soil Cover Project MT
Seeding Prep & Seeding (\$/Ac)	\$227.00	\$227.00	\$227.00		Price from Dragstrip Soil Cover Project MT
Mulching & Crimping (\$/Ac)	\$100.00	\$100.00	\$100.00		Price from Dragstrip Soil Cover Project MT
Sub Total Cost/Acre	\$559.00	\$559.00	\$559.00		
Sub Total Revegetation	\$8,385	\$0	\$0		
<b>TOTAL REMEDIAL ACTION</b>	<b>\$141,385</b>	<b>\$0</b>	<b>\$0</b>	<b>\$141,385</b>	
<b>TOTAL TOPSOIL REPLACEMENT &amp; REVEGETATION COST (Total of 6I through 6V)</b>	<b>\$328,121</b>	<b>\$0</b>	<b>\$0</b>	<b>\$328,121</b>	

Ludeman ISR Project 1st Year Operations  
Uranium One USA, Inc.

**Worksheet 7, Nos I - VII**  
**MISCELLANEOUS RECLAMATION**

Cost Item		Leuenberger Satellite Plant				Notes
		Wellfield 1- 80 Sand	Wellfield 2- 90 Sand	Wellfield 3	Sub Total	
<b>I</b>	<b>Fence Removal &amp; Disposal</b>					
	Quantity (Ft)	11,637	0	0		Based on Perimeter Monitoring Wells
	Cost of Removal/Disposal (\$/Ft)	\$0.31	\$1.50	\$1.50		
	Cost of Removal/Disposal (\$)	\$3,607	\$0	\$0	<b>\$3,607</b>	
<b>II</b>	<b>Powerline Removal &amp; Disposal</b>					
	Quantity (Ft)	44,292	0	0		Power to Wells, header houses. Other power already in place by CBM companies
	Cost of Removal/Disposal (\$/Ft)	\$0.50	\$0.50	\$1.50		
	Cost of Removal/Disposal (\$)	\$22,146	\$0	\$0	<b>\$22,146</b>	
<b>III</b>	<b>Powerpole Removal &amp; Disposal</b>					
	Quantity	0	0	0		Overhead powerpoles and lines will remain in place for future gas production
	Cost of Removal/Disposal (\$/Each)	0	0	0		
	Cost of Removal/Disposal (\$)	\$0.00	\$0.00	\$0.00	<b>\$0</b>	
<b>IV</b>	<b>Transformer Removal &amp; Disposal</b>					
	Quantity	4	0	0		Tri-County Electric will remove at no cost, WDEQ Guideline No.12, App. H
	Cost of Removal/Disposal (\$/Each)	4500	4500	4500		
	Cost of Removal/Disposal (\$)	18000	0	0	<b>\$18,000</b>	
<b>V</b>	<b>Culvert Removal &amp; Disposal</b>					
	Quantity (Ft)	0	0	0		None
	Cost of Removal/Disposal (\$/Ft)	\$4.56	\$4.56	\$4.56		(\$91.24/20') WDEQ Guideline No.12, App. J
	Cost of Removal/Disposal (\$)	\$0.00	\$0.00	\$0.00	<b>\$0</b>	
<b>VI</b>	<b>Guardrail Removal</b>					
	Quantity (Ft)	0	0	0		None
	Cost of Removal/Disposal (\$/Ft)	\$6.50	\$6.50	\$6.50		
	Cost of Removal/Disposal (\$)	\$0	0	0	<b>\$0</b>	
<b>VII</b>	<b>Low Water Stream Crossing</b>					
	Quantity	0	0	0		None
	Cost of Removal/Disposal (\$/Each)	\$8,000	\$8,000	\$8,000		
	Cost of Removal/Disposal (\$)	\$0	\$0	\$0	<b>\$0</b>	
	<b>TOTAL MISCELLANEOUS COST</b>	<b>\$43,753</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,753</b>	