



June 29, 2012

Mr. Doug Mandeville  
U.S. Nuclear Regulatory Commission  
11545 Rockville Pike  
#2 White Flint, T7E18  
Rockville, MD 20852-27381

**CAMECO RESOURCES**  
*Smith Ranch-Highland  
Operation*  
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RE: Smith Ranch-Highland Uranium Project, Doct No. 40-8964, License  
SUA-1548 2012-13 Surety Estimate Updates

Dear Mr. Mandeville:

Pursuant to License Condition 9.5 of Source Materials License SUA-1548, Power Resources, Inc. d/b/a/ Cameco Resources is herein providing two (2) paper copies of the Smith Ranch-Highland 2012-2013 Annual Report Surety Estimate Revisions for NRC review and approval. These updates result in propose surety amounts are for the Smith Ranch and Highland Uranium Projects, respectively.

If you have any questions, please contact me at (307) 316-7588.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Leftwich", written over a horizontal line.

Josh Leftwich  
*Director, Safety, Health, Environment, & Quality*

JL/es

Att Permit 633 Smith Ranch Uranium Project 2012-13 Surety Estimate Update  
Permit 603 Highland Uranium Project 2012-13 Surety Estimate Update

cc: File  
ec: CR-Cheyenne

**Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate**

**Smith Ranch 2012-13 Surety Estimate Update**

<b>I.</b>	<b>Groundwater Restoration (GW REST Sheet)</b>		<b>\$48,773,543</b>
<b>II.</b>	<b>Well Abandonment and Wellfield Reclamation (WA, WF REC and WF-SAT-SURF Sheets)</b>		<b>\$53,494,028</b>
<b>III.</b>	<b>Equipment and Building Costs (EQUIP, BLDGS Sheets)</b>		<b>\$ 14,994,657</b>
<b>IV.</b>	<b>Miscellaneous Site Reclamation (MISC REC Sheet)</b>		<b>\$2,473,719</b>
	<b>Subtotal Reclamation Cost</b>		<b>\$119,735,947</b>
		<b>Contingency 25%</b>	<b>\$29,933,987</b>
		<b>TOTAL</b>	<b>\$149,669,934</b>

Permit 633

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**Camco Resources**  
**Smith Ranch Livestock Project**  
**2012-13 Surety Estimate**  
**Well Abandonment**

	Mine Unit-1	Mine Unit-2	Mine Unit-3	Mine Unit-4	Mine Unit-15	Mine Unit-15A	Mine Unit K	Mine Unit K-North	Mine Unit 9	Mine Unit 10	Mine Unit 27	Mine Unit 7	Totals
<b>I. Well Abandonment (Wellfields)</b>													
# of Production Wells	106	145	225	108	211	211	237	244	270	270	220	100	2497
# of Injection Wells	172	232	350	413	453	388	361	151	401	480	420	320	4137
# of Monitoring Wells	62	50	81	90	83	49	85	79	80	113	95	65	931
# of Previously Abandoned Wells Pending Release	210	103	171	122	121	0	154	155	95	0	42	0	
Total Number of Wells	550	530	827	808	868	644	837	628	846	809	777	545	8744
Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5	
Production, Injection and Former Water Well Average Depth (ft)	900	450	790	850	450	500	950	804	950	900	800	825	740
Total Mine Unit Well Depth (ft), production wells	530,000	123,250	108,750	108,000	349,500	105,500	223,150	210,814	254,550	243,900	179,000	120,000	1490,216
Total Mine Unit Well Depth (ft), all others	222,000	327,250	451,500	331,250	205,600	216,000	570,000	331,776	547,200	330,100	445,000	317,625	
Well Abandonment Unit Cost (\$/ft. of well)	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	
Well Abandonment (per pump) Unit Cost (\$/ft. of well)	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	
<b>Subtotal Abandonment Cost per Wellfield</b>	<b>\$789,400.00</b>	<b>\$1,165,125.00</b>	<b>\$1,061,250.00</b>	<b>\$1,799,465.00</b>	<b>\$1,064,965.00</b>	<b>\$526,600.00</b>	<b>\$1,855,420.00</b>	<b>\$1,419,724.80</b>	<b>\$2,886,300.00</b>	<b>\$2,828,150.00</b>	<b>\$1,686,800.00</b>	<b>\$1,165,662.50</b>	<b>\$17,468,832.30</b>
<b>II. Removal of Contaminated Soil Around Wells</b>													
# of Production and Injection Wells	6534												
Cost per well (\$/well)	\$138.40												
<b>Subtotal Removal of Soil Around Wells</b>		<b>\$918,145.60</b>											
<b>III. Delineation Hole Abandonment</b>													
<b># of Holes with Veg Retainer (pre-2007)</b>													
Vegetation Retainer (\$/hole)													
<b># of Holes Pending Bond Release (2007-06)</b>													
Site Location (\$/hole)													
Sealing of Holes using High Solids Bentonite Grout													
average average depth per hole =													
Concrete Plug Cap, pre-cast	800												
Mud pit backfill, Rough site grading													
Subtotal Drill Hole Reclamation													
<b># of Holes Pending Bond Release (2008-09)</b>													
Site Location (\$/hole)													
Sealing of Holes using High Solids Bentonite Grout													
average average depth per hole =													
Concrete Plug Cap, pre-cast	895												
Mud pit backfill, Rough site grading													
Subtotal Drill Hole Reclamation													
<b># of Holes Pending Bond Release (2009-10)</b>													
Site Location (\$/hole)													
Sealing of Holes using High Solids Bentonite Grout													
average average depth per hole =													
Concrete Plug Cap, pre-cast	950												
Mud pit backfill, Rough site grading													
Subtotal Drill Hole Reclamation													
<b># of Holes Pending Bond Release (2010-11)</b>													
Site Location (\$/hole)													
Sealing of Holes using High Solids Bentonite Grout													
average average depth per hole =													
Concrete Plug Cap, pre-cast	935												
Mud pit backfill, Rough site grading													
Subtotal Drill Hole Reclamation													
<b># of Projected Holes (2011-12)</b>													
Site Location (\$/hole)													
Sealing of Holes using High Solids Bentonite Grout													
average average depth per hole =													
Concrete Plug Cap, pre-cast	925												
Mud pit backfill, Rough site grading													
Subtotal Drill Hole Reclamation													
<b># of Projected Holes (2012-13)</b>													
Site Location (\$/hole)													
Sealing of Holes using High Solids Bentonite Grout													
average average depth per hole =													
Concrete Plug Cap, pre-cast	925												
Mud pit backfill, Rough site grading													
Subtotal Drill Hole Reclamation													
<b>Subtotal Hole Abandonment per Wellfield</b>													<b>\$28,482,965.60</b>
<b>IV. Waste Disposal Well Abandonment</b>													
<b>A. Well Sealing</b>													
Total Depth of Well	10,087	9,096	9,096	9,096	9,096	9,096	9,096	9,096	9,096	9,096	9,096	9,096	
Sealing cost per foot (in UIC permit)	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	\$11.91	
Subtotal Plugging Costs per Well (in UIC permit)	\$120,255	\$110,052	\$114,336	\$114,336	\$114,336	\$114,336	\$114,336	\$114,336	\$114,336	\$114,336	\$114,336	\$114,336	
<b>B. Pump Dismantling and Decommission</b>													
Number of Pumps	2	2	2	2	2	2	2	2	2	2	2	2	
Pumps/Day	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Number of Days	4	4	4	4	4	4	4	4	4	4	4	4	
\$/Day/Person	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	
Subtotal Dismantling and Decom Costs per Well	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	\$2,413	
<b>C. Tubing String Disposal (NRC-Licensed Facility)</b>													
Length of Tubing String (ft)	8,271	8,257	8,910	8,217	8,860	8,860	8,860	8,860	8,860	8,860	8,860	8,860	
Diameter of Tubing String (inches)	2.875	2.875	2.875	2.875	2.875	2.875	2.875	2.875	2.875	2.875	2.875	2.875	
Volume of Tubing String (ft³)	199	192	207	191	205	205	205	205	205	205	205	205	
Transportation and Disposal Unit Cost (\$/ft³)	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	\$7.34	
Subtotal Tubing String Disposal Costs per Well	\$1,491	\$1,480	\$1,507	\$1,407	\$1,492	\$1,492	\$1,492	\$1,492	\$1,492	\$1,492	\$1,492	\$1,492	
Subtotal Waste Disposal Well Abandonment Costs per Well	\$124,150.07	\$122,954.16	\$118,355.80	\$122,309.30	\$117,740.30	\$117,740.30	\$117,740.30	\$117,740.30	\$117,740.30	\$117,740.30	\$117,740.30	\$117,740.30	
<b>Total Waste Disposal Well Abandonment Costs</b>	<b>\$847,118.23</b>												
<b>Total Wellfield Abandonment Costs</b>		<b>\$39,717,062</b>											

Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate

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TOTAL WELL FIELD BUILDINGS AND EQUIPMENT REMOVAL	\$12,858,350
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**Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate**

Wellfield and Satellite Surface Reclamation		Mine Unit-1	Mine Unit-2	Mine Unit-3	Mine Unit-3 2nd Comp.	Mine Unit-4	Mine Unit-4A	Mine Unit-15	Mine Unit-15A	Mine Unit-K	Mine Unit K-North	Mine Unit-9	Mine Unit-10	Mine Unit-27	Mine Unit-7
I.	Wellfield Pattern Area, and Road Reclamation Area (acres)	29.3	60.0	57.4	71.9	71.9	35.0	67.4	25.6	47.9	37.6	66.5	79.8	60.8	\$1.3
	Disking/Seeding Unit Cost (\$/acre)	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606
	Subtotal Pattern Area and Road Reclamation Costs	\$17,740	\$36,399	\$34,810	\$43,625	\$43,625	\$21,223	\$40,891	\$15,529	\$29,037	\$22,810	\$40,330	\$48,397	\$36,837	\$31,116
	Total Wellfield Area Reclamation Costs	\$462,329													
II.	Wellfield Road Reclamation														
	Road Construction														
	Length of Wellfield Roads (1000 ft)	6.2	10.1	11.2	0	86.3	6.1	19.8	13.6	9.6	2.8	12.7	16.2	16.2	16.2
	Wellfield Road Reclamation Unit Cost (\$/1000 ft)	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337
	Wellfield Road Reclamation Costs	\$8,289	\$13,504	\$14,974	\$0	\$115,383	\$8,156	\$26,475	\$18,183	\$12,835	\$3,744	\$16,980	\$21,659	\$21,659	\$21,659
	Total Wellfield Road Reclamation Costs	\$238,521													
III.	Laydown area reclamation														
	Area of Disturbance (acres)	1	1	1	1	1	1	1	1	2	2	1	1	1	1
	Average Depth of Stripped Topsoil (ft)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
	Surface Grade: Level Ground														
	Average Length of Topsoil Haul (ft)	500	500	500	500	500	500	500	500	500	500	500	500	500	500
A.	Ripping Overburden with Dozer														
	Ripping Unit Cost per WDEQ Guideline No.12, App.11 (\$/acre)	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195
	Subtotal Ripping Costs	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,195	\$1,793	\$1,793	\$1,195	\$1,195	\$1,195
B.	Topsoil Application with Scraper														
	Volume of Topsoil Removed (cy)	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,081	1,621	1,621	1,081	1,081	1,081	1,081
	Application Unit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07
	Subtotal Topsoil Application Costs	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,730	\$1,730	\$1,153	\$1,153	\$1,153	\$1,153
C.	Disking and Seeding														
	Disking/Seeding Unit Cost (\$/acre)	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606
	Subtotal Disking/Seeding Costs	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$910	\$910	\$606	\$606	\$606	\$606
	Subtotal Surface Reclamation Costs per WF laydown area	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$4,433	\$4,433	\$2,954	\$2,954	\$2,954	\$2,954
	Total Wellfield Laydown Area Reclamation Costs	\$44,314													
	SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	\$28,983	\$52,817	\$52,738	\$46,579	\$161,962	\$32,333	\$70,318	\$36,666	\$46,305	\$30,987	\$60,264	\$73,010	\$61,450	\$55,729
IV.	Satellite & DDW Area Reclamation	SR-1	SR-2	Reynolds Ranch	SRHUP #1 DDW	SRHUP #2 DDW	SRHUP #6 DDW	SRHUP #10 DDW	SRHUP #7 DDW	SRHUP #8 DDW					
	Assumptions:														
	Area of Disturbance (acres)	2.05	3.00	3.00	1.00	2.00	2.00	2.00	2.00	2.00					
	Average Depth of Stripped Topsoil (ft)	1	1	1	1	1	1	1	1	1					
	Surface Grade: Level Ground														
	Average Length of Topsoil Haul (ft)	1000	500	500	500	500	400	400	400	400					
A.	Ripping Overburden with Dozer														
	Ripping Unit Cost per WDEQ Guideline No.12, App.11 (\$/acre)	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44					
	Subtotal Ripping Costs	\$2,451	\$3,586	\$3,586	\$1,195	\$2,391	\$2,391	\$2,391	\$2,391	\$2,391					
B.	Topsoil Application with Scraper														
	Volume of Topsoil Removed (cy)	3307	4840	4840	1613	3227	3227	3227	3227	3227					
	Application Unit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$1.27	\$1.27	\$1.27	\$1.27	\$1.27	\$1.27	\$1.27	\$1.27	\$1.27					
	Subtotal Topsoil Application Costs	\$4,214	\$6,166	\$6,166	\$2,055	\$4,111	\$4,111	\$4,111	\$4,111	\$4,111					
C.	Disking and Seeding														
	Disking/Seeding Unit Cost (\$/acre)	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606					
	Subtotal Disking/Seeding Costs	\$1,243	\$1,819	\$1,819	\$606	\$1,213	\$1,213	\$1,213	\$1,213	\$1,213					
	Subtotal Surface Reclamation Costs per Location	\$7,908	\$11,571	\$11,571	\$3,856	\$7,715	\$7,715	\$7,715	\$7,715	\$7,715					
	Total Satellite Building Area Reclamation Costs	\$73,481													
	Total	\$818,645													

Comco Resources										
Smith Ranch Uranium Project										
CPP Ion Ex. Plant										
Equipment Removal and Loading										
I. Removal and Loading Costs										
A. Tankage										
Number of Tanks	14	51	0	12	15	3	3	10	10	
Volume of Tank Construction Material (ft <sup>3</sup> )	998	1340	300	450	260	164	164	397	397	
1. Labor										
Number of Persons	3	3	3	3	3	3	3	3	3	
ft <sup>3</sup> /Day	25	25	25	25	25	25	25	25	25	
Number of Days	36	54	12	18	18	7	7	16	16	
\$/Day/Person	\$267	\$267	\$267	\$267	\$267	\$267	\$267	\$267	\$267	
Subtotal Labor Costs	\$28,814	\$43,222	\$9,605	\$14,407	\$8,004	\$5,603	\$5,603	\$12,806	\$12,806	
2. Equipment										
Number of Days	36	54	12	18	18	7	7	16	16	
\$/Day	\$1,115	\$1,115	\$1,115	\$1,115	\$1,115	\$1,115	\$1,115	\$1,115	\$1,115	
Subtotal Equipment Costs	\$40,153	\$60,220	\$13,384	\$20,076	\$11,544	\$7,808	\$7,808	\$17,840	\$17,840	
Subtotal Tankage Removal and Loading Costs	\$68,967	\$103,451	\$22,989	\$34,483	\$19,548	\$13,411	\$13,411	\$30,652	\$30,652	
B. PVC/Steel Pipe										
PVC Pipe Footage	4800	5000	0	5000	1500	0	0	4000	4000	
Average PVC Pipe Diameter (inches)	3	3	3	3	3	3	3	3	3	
Shredded PVC Pipe Volume Reduction (ft <sup>3</sup> /ft)	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	
Volume of Shredded PVC Pipe (ft <sup>3</sup> )	112	116	0	116	35	0	0	93	93	
Steel Pipe Footage	1100	0	0	0	0	80	0	0	0	
Average Steel Pipe Diameter (inches)	6	0	0	0	0	8	0	0	0	
Volume (ft <sup>3</sup> )	216	0	0	0	0	30	0	0	0	
Labor										
Number of Persons	2	2	2	2	2	2	2	2	2	
ft <sup>3</sup> /Day	300	300	300	300	300	300	300	300	300	
Number of Days	20	17	0	17	5	0	0	13	13	
\$/Day/Person	\$267	\$267	\$267	\$267	\$267	\$267	\$267	\$267	\$267	
Subtotal PVC/Steel Pipe Labor Costs	\$10,672	\$9,071	\$0	\$9,071	\$2,668	\$0	\$0	\$6,937	\$6,937	
Subtotal PVC/Steel Pipe Removal and Loading Costs	\$10,672	\$9,071	\$0	\$9,071	\$2,668	\$0	\$0	\$6,937	\$6,937	
C. Pumps										
Number of Pumps	22	43	0	13	12	2	0	13	13	
Average Volume (ft <sup>3</sup> /pump)	4.93	4.93	0	4.93	4.93	4.93	4.93	4.93	4.93	
Volume of Pumps (ft <sup>3</sup> )	108	212	0	64	59	10	0	64	64	
1. Labor & Equipment										
Number of Persons	2	2	2	2	2	2	0	1	1	
ft <sup>3</sup> /Day	2	2	2	2	2	2	2	2	2	
Number of Days	11	21.5	0	6.5	6	1	0	6.5	6.5	
\$/Day/Person	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	\$302	
\$/Day/Equipment	\$444	\$444	\$444	\$444	\$444	\$444	\$444	\$444	\$444	
Subtotal Labor & Equipment Costs	\$11,517	\$22,510	\$0	\$6,805	\$6,282	\$1,047	\$0	\$4,845	\$4,845	
D. Dryer										
Dryer Volume (ft <sup>3</sup> )	0	0	1,000	0	0	0	0	0	0	
1. Labor										
Number of Persons	0	0	5	0	0	0	0	0	0	
ft <sup>3</sup> /Day	0	0	175	0	0	0	0	0	0	
Number of Days	0	0	2	0	0	0	0	0	0	
\$/Day/Person	\$267	\$267	\$267	\$267	\$267	\$267	\$267	\$267	\$267	
Total Labor Cost	\$0	\$0	\$1,335	\$0	\$0	\$0	\$0	\$0	\$0	
Subtotal Dryer Dismantling and Loading Cost	\$0	\$0	\$1,335	\$0	\$0	\$0	\$0	\$0	\$0	
E. RO Units										
Number of RO Units (500 gpm)	0	1	0	1	0	0	0	0	0	
Planned	0	0	0	0	0	0	0	0	0	
Number of Degasser Units	0	0	0	0	0	0	0	0	0	
Planned	0	0	0	0	0	0	0	0	0	
RO/Degasser Average Volume (ft <sup>3</sup> /Unit)	250	250	250	250	250	250	250	250	250	
Labor										
Number of Persons	2	2	2	2	2	2	2	2	2	
Number of Days	0	2	0	2	0	0	0	2	2	
\$/Day/Person	\$266.80	\$266.80	\$266.80	\$266.80	\$266.80	\$266.80	\$266.80	\$266.80	\$266.80	
Subtotal RO Unit Removal and Loading Costs	\$0.00	\$1,067.20	\$0.00	\$1,067.20	\$0.00	\$0.00	\$0.00	\$1,067.20	\$1,067.20	
Subtotal Equipment Removal and Loading Costs per Facility	\$91,156	\$136,099	\$25,657	\$51,426	\$28,108	\$14,458	\$13,411	\$43,501	\$43,501	
Total Equipment Removal and Loading Costs	\$447,318									
II. Transportation and Disposal Costs (NRC-Licensed Facility)										
A. Tankage										
Volume of Tank Construction Material (ft <sup>3</sup> )	998	1340	300	450	260	164	164	397	397	
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	998	1474	330	495	286	180	180	436	437	
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	
Subtotal Tankage Transportation and Disposal Costs	\$11,031	\$16,424	\$3,677	\$5,515	\$3,187	\$2,006	\$2,006	\$4,858	\$4,859	
B. PVC/Steel Pipe										
Volume of Shredded PVC Pipe (ft <sup>3</sup> )	111.8	116.4	0.0	116.4	34.9	0.0	0.0	93.1	93.1	
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	123	128	0	128	38	0	0	102	102	
Volume of Steel Pipe (ft <sup>3</sup> )	216	0	0	0	0	0	0	0	0	
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	238	0	0	0	0	0	0	0	0	
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	
Subtotal PVC Pipe Transportation and Disposal Costs	\$2,795	\$991	\$0	\$991	\$264	\$256	\$0	\$700	\$700	
C. Pumps										
Volume of Pumps (ft <sup>3</sup> )	108	212	0	64	59	10	0	64	64	
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	119	233	0	70	65	11	0	70	70	
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	
Subtotal Pump Transportation and Disposal Costs	\$921	\$1,804	\$0	\$542	\$503	\$85	\$0	\$542	\$542	
D. Dryer										
Dryer Volume (ft <sup>3</sup> )	0	0	1,000	0	0	0	0	0	0	
Volume for Disposal Assuming Dryer Remains Intact (ft <sup>3</sup> )	0	0	1,000	0	0	0	0	0	0	
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	
Total Dryer Transportation and Disposal Costs	\$0	\$0	\$7,743	\$0	\$0	\$0	\$0	\$0	\$0	
E. RO/Degasser Units										
Volume of RO Units (ft <sup>3</sup> )	0	250	0	250	0	0	0	250	250	
Volume for Disposal Assuming 50% Volume Reduction (ft <sup>3</sup> )	0	250	0	250	0	0	0	250	250	
Transportation and Disposal Unit Cost	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	
Subtotal RO Unit Transportation and Disposal Costs	\$0	\$1,936	\$0	\$1,936	\$0	\$0	\$0	\$1,936	\$1,936	
Subtotal Equipment Transportation and Disposal Costs per Facility	\$14,747	\$21,155	\$11,420	\$9,984	\$3,984	\$2,347	\$2,006	\$8,126	\$8,137	
Total Equipment Transportation and Disposal Costs	\$80,965									
III. Health and Safety Costs										
Radiation Safety Equipment										
Total Health and Safety Costs										
Accounted for on GW REST										
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	\$105,903	\$157,254	\$37,077	\$60,410	\$32,092	\$16,805	\$15,417	\$51,627	\$51,638	
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	\$528,223									

Caneco Resources  
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	CPF Inc Ex. Plant	Central Plant	Dryer Building	Office Building	Storage Buildings	Water Treatment Plant	Shop Building	P&ID Bldg	Fresh Water Pumps	BOW I Buildings	BOW II Buildings	BOW Reynolds Buildings	BOW Wellhead Buildings	Satellite SR-I	Yellowknife Warehouse	Satellite SR-2	Satellite Reynolds	Construction Shop	CPF Lab Addition	BOW I Buildings	BOW II Buildings
	16/90	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24	20/24
I. Demolition and Disposal																					
A. Wall Demolition Costs																					
Area to be Demolitized (#'s)	10,810	15,900	8,600	0	1,152	570	4,826	12,000	0	720	704	704	0	0	3100	0	0	0	0	1300	704
HCl Acid Wash, including labor (\$/B')	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07
Subtotal Wall Demolition Costs	\$10,640	\$15,385	\$9,280	\$0	\$1,178	\$557	\$4,826	\$11,612	\$0	\$607	\$681	\$681	\$0	\$0	\$1,000	\$0	\$0	\$0	\$0	\$1,258	\$681
B. Concrete Floor Demolition Costs																					
Area to be Demolitized (#'s)	11,150	16,500	5,500	0	1,678	830	7,028	17,477	0	450	480	302	0	0	10200	2750	10200	0	0	1600	480
HCl Acid Wash, including labor (\$/B')	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70
Subtotal Concrete Floor Demolition Costs	\$8,075	\$11,550	\$3,847	\$0	\$1,173	\$587	\$4,914	\$12,219	\$0	\$315	\$336	\$214	\$0	\$114.24	\$1,923	\$1,924	\$0	\$0	\$609	\$336	\$336
C. Deep Well Injection Costs																					
Total Gals for Injection (1 gal used per B2)	22.36	32.4	12.41	0	2.83	1.415	11,854	29,477	0	1.17	1.184	1.066	0	0	10.2	5.85	10.2	0	0	2.3	1.184
Deep Well Injection Unit Cost (\$/K gals)	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07
Subtotal Deep Well Injection Costs	\$46	\$67	\$27	\$0	\$6	\$3	\$25	\$61	\$0	\$2	\$2	\$2	\$0	\$40	\$12	\$40	\$0	\$0	\$5	\$2	\$2
Subtotal Demolition Costs per Building	\$18,581	\$26,988	\$11,763	\$0	\$2,294	\$1,147	\$9,699	\$23,892	\$0	\$1,034	\$1,010	\$897	\$0	\$134.64	\$4,835	\$13,484	\$0	\$0	\$1,662	\$1,010	\$1,010
<b>Total Demolition Costs</b>	<b>\$153,137</b>																				
II. Demolition Costs																					
A. Building																					
Height of Building (ft)	30	55	35	15	10	10	25	18	10	8	10	10	10	24	20	24	24	20	25	10	10
Volume of Building (B')	346,500	577,500	122,500	170,000	16,780	8,390	175,700	314,580	8,320	3000	4800	3020	4480	440,800	55,000	400,800	400,800	80,000	25,000	4800	4800
Demolition Unit Cost per WDEQ Guideline No.12, App.K (B'/B')	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26
Subtotal Building Demolition Costs	\$90,348	\$155,247	\$32,063	\$11,428	\$4,395	\$2,197	\$46,616	\$92,300	\$2,178	\$747	\$1,257	\$1,007	\$1,173	\$120,480	\$14,400	\$120,480	\$20,952	\$6,548	\$1,257	\$1,257	
B. Concrete Floor																					
Area of Concrete Floor (B')	11,150	16,500	5,500	8,000	1,678	830	7,028	17,477	832	450	480	302	448	10,200	2,750	10,200	10,200	4,000	1,600	480	480
Demolition Unit Cost per WDEQ Guideline No.12, App.K (B'/B')	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
Subtotal Concrete Floor Demolition Costs	\$60,435	\$88,007	\$29,435	\$42,137	\$8,938	\$4,419	\$37,017	\$92,653	\$4,382	\$2,370	\$2,578	\$2,065	\$2,360	\$101,128	\$14,485	\$101,128	\$101,128	\$21,668	\$5,528	\$2,578	\$2,578
C. Concrete Footing																					
Length of Concrete Footing (ft)	430	514	237	358	104	116	335	520	115	85	88	70	85	554	210	554	554	253	126	88	88
Demolition Unit Cost per WDEQ Guideline No.12, App.K (B'/B')	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25
Subtotal Concrete Footing Demolition Costs	\$8,277	\$9,891	\$4,556	\$6,889	\$2,035	\$2,231	\$6,487	\$10,182	\$2,222	\$1,624	\$1,687	\$1,325	\$1,180	\$10,749	\$4,072	\$10,742	\$10,742	\$4,871	\$2,486	\$1,687	\$1,687
Subtotal Demolition Costs per Building	\$158,860	\$248,047	\$55,074	\$80,454	\$16,388	\$8,647	\$59,600	\$108,225	\$6,789	\$3,647	\$4,242	\$3,563	\$4,234	\$123,484	\$19,209	\$123,484	\$123,484	\$46,801	\$14,251	\$5,472	\$5,472
<b>Total Demolition Costs</b>	<b>\$167,424</b>																				
III. Disposal Costs																					
A. Building																					
Volume of Building (cu yd)	12833	21189	4537	4444	621	311	6507	11651	308	133	178	145	166	17067	2037	17067	17067	2063	626	178	178
Off-site County Facility Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Volume for Disposal (cubic yards)	12833	21189	4537	4444	621	311	6507	11651	308	133	178	145	166	17067	2037	17067	17067	2063	626	178	178
Disposal Unit Cost (\$/yd)	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02
Subtotal Building Disposal Costs	\$101,703	\$168,560	\$31,856	\$31,222	\$4,356	\$2,187	\$45,651	\$81,631	\$2,162	\$933	\$1,245	\$1,015	\$1,161	\$119,522	\$14,266	\$119,522	\$119,522	\$23,480	\$7,396	\$1,245	\$1,245
B. Concrete Floor																					
Area of Concrete Floor (B')	11,150	16,500	5,500	8,000	1,678	830	7,028	17,477	832	450	480	302	448	10,200	2,750	10,200	10,200	4,000	1,600	480	480
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (B')	8652.5	12375	2625	6000	1258.5	629.25	5371	13107.75	624	337.5	360	294	336	14400	2062.5	14400	14400	3000	760	360	360
Volume of Concrete Floor (cu yd)	321	458	97	222	47	23	195	485	23	13	13	11	12	533	76	533	533	111	28	13	13
Off-site County Facility Percentage (%)	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Volume for Disposal (cu yd)	241	344	73	167	35	17	146	364	17	10	10	8	9	400	61	400	400	83	21	10	10
Disposal Unit Cost per WDEQ Guideline No.12, App.K (B'/B')	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02
Subtotal Concrete Floor Disposal Costs	\$1,697	\$2,424	\$578	\$1,161	\$309	\$185	\$1,347	\$2,885	\$183	\$94	\$79	\$65	\$90	\$3,170	\$434	\$3,170	\$3,170	\$181	\$108	\$79	\$79
C. NRC-Licensed Facility																					
Volume of Concrete Floor (B')	21	25	25	0	0	0	0	25	0	25	25	25	0	25	25	25	25	0	0	25	25
Volume for Disposal (B')	2100	3004	656	0	0	0	0	3277	0	84	80	0	0	3000	516	3000	3000	0	75	0	0
Demolition and Disposal Unit Cost (\$/B')	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14
Subtotal NRC-Licensed Facility Disposal Costs	\$234,138	\$344,717	\$73,132	\$0	\$0	\$0	\$0	\$36,512	\$0	\$900	\$1,080	\$880	\$0	\$40,112	\$5,745	\$40,112	\$40,112	\$0	\$836	\$1,003	\$1,003
Subtotal Concrete Floor Disposal Costs	\$236,037	\$347,195	\$73,800	\$0	\$0	\$0	\$0	\$37,859	\$183	\$1,034	\$1,062	\$894	\$99	\$44,282	\$6,189	\$44,282	\$44,282	\$181	\$1,034	\$1,082	\$1,082
C. Concrete Footing																					
Length of Concrete Footing (ft)	430	514	237	358	104	116	335	520	115	85	88	70	85	554	210	554	554	253	126	88	88
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (B')	1720	2055	947	1431	655	465	1341	2115	462	330	351	317	330	2217	830	2217	2217	1012	500	351	351
Volume of Concrete Footing (cu yd)	64	76	35	53	24	17	50	80	17	13	13	12	13	82	31	82	82	37	19	13	13
Disposal Unit Cost per WDEQ Guideline No.12, App.K (B'/B')	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02	\$7.02
Subtotal Concrete Footing Disposal Costs	\$505	\$603	\$278	\$420	\$192	\$136	\$394	\$621	\$135	\$100	\$103	\$93	\$90	\$651	\$246	\$651	\$651	\$297	\$149	\$103	\$103
Subtotal Disposal Costs per Building	\$172,825	\$297,933	\$44,124	\$37,493	\$5,480	\$2,784	\$53,512	\$132,534	\$2,780	\$2,171	\$2,164	\$1,718	\$1,513	\$17,918	\$2,288	\$17,918	\$17,918	\$24,609	\$3,421	\$2,594	\$2,594
<b>Total Disposal Costs</b>	<b>\$172,826</b>																				
IV. Health and Safety Costs - As Reported for an O/W REEST																					
SubTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$306,088	\$442,138	\$110,961	\$117,887	\$24,168	\$12,778	\$125,621	\$160,471	\$11,563	\$8,132	\$9,085	\$17,702	\$6,676	\$425,133	\$60,452	\$425,133	\$443,669	\$71,550	\$24,734	\$9,085	\$9,085
<b>TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS</b>	<b>\$5,638,240</b>																				
Building Utility Costs																					
Number of years of operation required for replacement/reconstruction	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
SubTOTAL BUILDING ELECTRICAL COSTS (100% Electrical Power)	\$647,165.50	\$222,165.70					\$119,609.26		\$156,440.74	\$87,008.90	\$96,164.54	\$94,883.54		\$1,561,145.32		\$1,561,145.32	\$908,477.11				
<b>TOTAL BUILDING ELECTRICAL COSTS</b>	<b>\$5,603,581.61</b>																				
SubTOTAL PROPANE AND NATURAL GAS COSTS	\$ 1,626,745	\$ 30,347					\$ 17,327							\$ 971,137		\$ 3,320,176					
<b>TOTAL PROPANE AND NATURAL GAS COSTS</b>	<b>\$ 5,974,682</b>																				
<b>TOTAL UTILITY COSTS</b>	<b>\$11,438,185</b>																				





**Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate**

**WELLFIELD ROAD RECLAMATION**

**Assumptions**

1. Gravel road base removed at cost of \$0.85/cy/1000 ft (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
2. Gravel road base: average depth = 0.25 ft, average width = 10 ft
3. Roads scarified prior to topsoil application at cost of \$53.83/acre (WDEQ Guideline No. 12, Appendix P)
4. Grading of scarified roads prior to topsoil application at cost of \$58.69/acre (WDEQ Guideline No. 12, Appendix G)
5. Topsoil applied at cost of \$0.85/cy/1000 ft (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
6. Stripped topsoil: average depth = 0.67 ft, average width = 25 ft
7. Discing/seeding cost of acre is based on actual contractor costs as listed in the master costs

**Gravel Road Base Removal Costs per 1000 ft of Road**

<u>1000 ft</u>	X	<u>0.25 ft</u>	X	<u>10 ft</u>	X	<u>1 cy</u>	X	<u>\$1.27</u>	
						27 ft <sup>3</sup>		cy	= \$ 118

**Scarification Costs per 1000 ft of Road**

<u>1000 ft</u>	X	<u>25 ft</u>	X	<u>1 acre</u>	X	<u>\$67.68</u>	
				43,560	ft <sup>2</sup>	acre	= \$ 39

**Grading Costs per 1000 ft of Road**

<u>1000 ft</u>	X	<u>25 ft</u>	X	<u>1 acre</u>	X	<u>\$73.79</u>	
				43,560	ft <sup>2</sup>	acre	= \$ 42

**Topsoil Application Costs per 1000 ft of Road**

<u>1000 ft</u>	X	<u>0.67 ft</u>	X	<u>25 ft</u>	X	<u>1 cy</u>	X	<u>\$1.27</u>	
						27 ft <sup>3</sup>		cy	= \$ 790

**Discing/Seeding Costs per 1000 ft of Road**

<u>1000 ft</u>	X	<u>25 ft</u>	X	<u>1 acre</u>	X	<u>\$606</u>	
				43,560	ft <sup>2</sup>	acre	= \$ 348

**TOTAL WELLFIELD ROAD RECLAMATION COSTS PER  
1000 FT OF ROAD**

**= \$ 1,337**

**Cameco Resources  
Smith Ranch Uranium Project  
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**Groundwater Sweep (GWS) and Deep Disposal Well (DDW) Unit Costs**

**Assumptions:**

1. Wellfield pumps are:
 

5 hp  
25 gpm
2. Cost of electricity = \$0.0554 kwh
3. One 60 hp pump feeds 2 DDWs at 75 gpm
4. One 75 hp at each DDW
5. Each DDW can take 105 gpm
6. Antiscalant (ScaleTrol) added at a rate of 0.00001900 gal/gal at a cost of \$43.59

**Wellfield Pumping Electrical Costs per 1000 Gallons**

$$\frac{5 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{25 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{1 \text{ kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$ 0.14 \text{ per kgal}$$

**Plant or Satellite to DDW or Irrigator No. 2 Pumping Electrical Costs per 1000 Gallons**

$$\frac{60 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{75 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{1 \text{ kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$0.55$$

**DDW Pumping Costs per 1000 gallons**

$$\frac{75 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{75 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{1 \text{ kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$0.69$$

**AntiScalant ScaleTrol**

$$1000 \text{ gal} \times 0.000019000 \text{ gal antiscalant} \times \$43.59 \text{ gal antiscalant} = \$0.83$$

<b>TOTAL GWS COSTS PER 1000 GALLONS INCLUDES DISPOSAL</b>	<b>= \$ 2.21</b>
<b>TOTAL DDW INJECTION COSTS PER 1000 GALLONS</b>	<b>= \$ 2.07</b>

**Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate**

**Groundwater Reverse Osmosis (RO) and Bioremediation Unit Costs**

**Assumptions:**

1. Cost of electricity = \$0.0554 KW hr
2. RO System Capacity 250 gpm
3. RO System Horsepower:
 

RO Unit Pump	60 hp
Permeate/Injection pump	60 hp
Waste pump	15 hp
<b>TOTAL:</b>	<b>135 hp</b>
4. Chemical costs:
 

Sodium Sulfide =	\$0.51 gal
Antiscalant =	\$34.58 gal
5. Mix Rates
 

Sodium Sulfide	0.0001 gal/gal
Antiscalant	0.00000833 gal/gal
6. Based on wellfield 5 hp pumps doing 25 gpm 1,440 Kgal/day
7. RO Maintenance Costs

35 lbs tripolyphosphate	\$2.18 per pound					
85 lbs EDTA	\$3.95 per pound	=	\$412.05	x	2 times per year	\$824.10
						\$0.01
						per kgal

**Reverse Osmosis/Bioremediation Electrical Costs per 1000 Gallons**

135 hp	1 pump	1 hr	0.746 kW	\$0.0554	1000 gallons	
1 pump	x 250 gpm	x 60 min	x 1 hp	x kWh	x 1 kgal	= \$0.37
						per Kgal

**Treatment chemical costs per 1000 Gallons**

<b>Antiscalant:</b>						
1000 gal	X	0.000008330 gal antiscalant	X	\$34.58 gal antiscalant	= \$ 0.288	per Kgal
		1 gal				
<b>Sodium Sulfide</b>						
1000 gal	X	0.00010 pounds	X	\$0.51 pound sodium sulfide	= \$ 0.051	per Kgal
		1 gal				

<b>TOTAL RO COSTS PER 1000 GALLONS</b>	<b>= \$ 0.66</b>
<b>TOTAL RO WITH CHEMICAL COSTS PER 1000 GALLONS (NO BRINE DIS)</b>	<b>= \$ 0.71</b>



**Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate**

**FIVE YEAR MECHANICAL INTEGRITY TESTS (MIT)**

**Assumptions:**

- 1 Pulling Unit for 8 hr/day
- 2 MIT Unit for 8 hr/day
- 3 Labor for operation requires 2 workers (one for pulling unit and on

**MIT Costs per Well**

**Equipment and Labor:**

Pulling Unit					
	8 hours	X	\$ 37.83	per hour	= \$ 302.64
Laborer					
	8 hours	X	\$ 33.35	per hour	= \$ 533.60
MIT Unit					
	8 hours	X	\$ 30.42	per hour	= \$ 243.36

**TOTAL MIT COST PER DAY = \$ 1080.00**

Wells Completed 6 per day

**MIT COSTS PER WELL = \$ 180.00**

**Cameco Resources**  
**WELL ABANDONMENT PROJECT**  
**2012-13 Surety Estimate**

**Wells without pumps**

**Assumptions:**

- 1 Typical 8 hour working day
- 2 Average 700 feet per well
- 3 Plug four (4) Wells per day

	700 ft	X	4 =	2,800		
				\$ per day	\$ per foot	
<b>Cased Well Abandonment Costs</b>						
Cat 416 Backhoe	8 hours	X \$ 116.88	per hour	= \$	935.00	\$0.33
Water Truck	8 hours	X \$ 106.25	per hour	= \$	850.00	\$0.30
Hose Reel	8 hours	X \$ 62.50	per hour	= \$	500.00	\$0.18
Cement	8 hours	X \$ 100.00	per hour	= \$	800.00	\$0.29
<b>Materials per foot of well</b>						
Cement	0.085714 sacks/ft	X \$ 16.00	per sack	= \$	3,840.00	\$1.37
Bentonite	0.006 sacks/ft	X \$ 4.31	per sack	= \$	68.96	\$0.02
<b>Total Estimated Cost per Day</b>					\$ 6,993.96	
<b>Total Estimated Cost per Foot based on Tyler Exploration Quote #502 dated 3-11-11:</b>						<b>\$2.50</b>

**Wells with pumps**

**Assumptions:**

- 1 Typical 8 hour working day
- 2 Average 700 feet per well
- 3 Plug four (4) Wells per day

	700 ft	X	4 =	2,800		
				\$ per day	\$ per foot	
<b>Cased Well Abandonment Costs</b>						
Cat 416 Backhoe	8 hours	X \$ 116.88	per hour	= \$	935.00	\$0.33
Pulling Unit	8 hours	X \$ 106.25	per hour	= \$	850.00	\$0.30
Water Truck	8 hours	X \$ 106.25	per hour	= \$	850.00	\$0.30
Hose Reel	8 hours	X \$ 62.50	per hour	= \$	500.00	\$0.18
Cement	8 hours	X \$ 100.00	per hour	= \$	800.00	\$0.29
<b>Materials per foot of well</b>						
Cement	0.085714 sacks/ft	X \$ 16.00	per sack	= \$	3,840.00	\$1.37
Bentonite	0.006 sacks/ft	X \$ 4.31	per sack	= \$	68.96	\$0.02
<b>Total Estimated Cost per Day</b>					\$ 7,843.96	
<b>Total Estimated Cost per Foot based on Tyler Exploration Quote #503 dated 4-29-11:</b>						<b>\$2.80</b>

**REMOVAL OF CONTAMINATED SOIL AROUND WELLS Unit Cost**

**Assumptions:**

- 1 Use backhoe for 0.25 hr/well to dig
- 2 Radiation Technician measures extent of contamination for 0.25 hr/well

**Assessment/Removal Costs**

**Cost per well**

Cat 416 Backhoe	0.25 hours	X \$ 35.84	per hour		\$8.96
Radiation Technician	0.25 hours	X \$ 34.80	per hour		\$8.70
Laborer	0.25	X \$ 37.70	per hour		\$9.43

**Disposal and Transportation Costs**

Contaminated Soil per Well	0.370 cy per well				
Disposal and Transportation	\$ 300.84 per cy				\$111.31

<b>Total Estimated Cost per Well:</b>					<b>\$138.40</b>
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**DELINEATION HOLE ABANDONMENT Unit Costs**

**Assumptions:**

- 1 Per Guideline 12, Appendix L

**Hole Abandonment Costs**

Site Locating	\$	10.00	per hole
Sealing Costs per Guideline 12	\$	6.28	per linear foot
Hole Plug/Cap	\$	8.00	per hole
Site Grading & Seeding	\$	30.00	per site

**Cameco Resources**  
**Smith Ranch Uranium Project**  
**2012-13 Surety Estimate**  
**Wellfield Building/Clay Liner Removal**

**Cost per Well Head Cover**

Radiation Tech =		\$34.80 per hour
Operator =		\$37.70 per hour
HCl 35% Cost =	\$	0.200 per pound
Acid Usage Rate =		4.1 pounds per wellhead cover
Acid Unit Cost =	\$	0.82 per wellhead cover
Total Labor Rate =	\$	80.70 per hour
Cleaning Rate		10 wellheads per hour
<b>Survey / Decon.</b>	<b>\$</b>	<b>8.07 per wellhead cover</b>

**Cost per Header House**

Rad Technician =		\$34.80 per hour
Operator =		\$37.70 per hour
Number of Operators =		2
HCl 35% Cost =	\$	0.200 per pound
Acid Usage Rate =		20 pounds per header house
Acid Unit Cost =	\$	4.00 per header house
Total Labor Rate =	\$	670.00 per hour
Cleaning Rate		1 header house per day
<b>Survey / Decon.</b>	<b>\$</b>	<b>670.00 per header house</b>

**Clay Liner/Subsoil Removal Cost**

Operator =		\$37.70 per hour
Trackhoe =	\$	100.85 per hour
Loader =	\$	52.56 per hour
Loader Size =		1.5 cubic yards
Disposal Rate =		40 yards/hour
<b>Total Removal</b>	<b>\$</b>	<b>4.78 per cubic yard</b>

**Gameco Resources**  
**Smith Ranch Uranium Project**

**2012-13 Surety Estimate**

Assumption: 10% wash solution is used

0.25 gallon of acid wash is used per sq ft. to clean walls.

1 gallon of acid wash is used per sq ft. to clean floors.

Using the CPP square footages the assumption is as follows

**Acid Wash (Walls)**

Labor	2 Workers
Rate	\$33.35 hr.
Time	20 8hr. Days
Manlift	\$8,496.00 Month
CPP Wall Area	26,710 square feet
Labor and manlift	\$0.72 per square foot
Acid	\$0.20 pound
Consumables	\$0.05 per square foot
Total	\$0.97 per square foot

**Acid Wash (Floors)**

Labor	2 Workers
Rate	\$33.35 hr.
Time	15 8hr. Days
CPP Floor Area	17820 square feet
Labor	\$0.45 per square foot
Acid	\$0.20 pound
Consumables	\$0.05 per square foot
Total	\$0.70 per square foot



**Camco Resources**  
**Smith Ranch Uranium Project**  
**2012-13 Safety Estimate**

**Electrical Power Consumption and Costs - During Restoration**

Description	Operating Horsepower	Voltage	Lighting FT <sup>2</sup>	Lighting Watts (1.25 watts/FT <sup>2</sup> )	Electric Heat Kw	Electric Air Conditioning Kw	Kwh/HP	Kwh/HP hr	Operating Hours/yr	Kwh/yr	Power Cost \$/Kwh	Electrical Cost/yr
<b>CFF 500 Gallon RO and Support Equip.</b>												
RO Feed Pump (cost of power in RO operating cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Re-injection Pump (cost of power in RO operating)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Fan	5.0	480					0.746	0.746	8,760	32,675	0.05540	\$ 1,810.18
Misc. Equip. (entering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Air Compressors	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.25 watts/sqft)			28,050	1.25						307,148	0.05540	\$ 17,015.97
Laboratory Power	5.0									8,760	0.05540	\$ 1,810.18
CFF Electrical Power Cost per Year: Total										32,675	0.05540	\$ 36,971.98
<b>SR1 500 Gallon RO and Support Equip.</b>												
RO Feed Pump (cost of power in RO operating cost)	40.0	480					0.746	0.746	8,760	261,398	0.05540	\$ 14,481.47
Decarb-Re-injection Pump (cost of power in RO operating)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Compressor	5.0	480					0.746	0.746	8,760	32,675	0.05540	\$ 1,810.18
Decarb Booster Pump	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
DDW 2 Injection Pump	75.0	480					0.746	0.746	8,760	490,122	0.05540	\$ 27,152.76
Misc. Equip. (entering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Air Compressors	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.25 watts/sqft)			19,200	1.25						8,760	0.05540	\$ 11,647.30
SR1 500 Gallon RO and Support Equip. Total										210,240	0.05540	\$ 65,047.72
<b>SR2 500 Gallon RO and Support Equip.</b>												
RO Feed Pump (cost of power in RO operating cost)	40.0	480					0.746	0.746	8,760	261,398	0.05540	\$ 14,481.47
Decarb-Re-injection Pump (cost of power in RO operating)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Compressor	5.0	480					0.746	0.746	8,760	32,675	0.05540	\$ 1,810.18
Decarb Booster Pump	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
DDW SRIRUP 6 Injection Pump	75.0	480					0.746	0.746	8,760	490,122	0.05540	\$ 27,152.76
Misc. Equip. (entering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Air Compressors	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.25 watts/sqft)			19,200	1.25						8,760	0.05540	\$ 11,647.30
SR2 500 Gallon RO and Support Equip. Total										210,240	0.05540	\$ 65,047.72
<b>Reynolds Ranch 1 500 Gallon RO and Support Equip.</b>												
RO Feed Pump (cost of power in RO operating cost)	40.0	480					0.746	0.746	8,760	261,398	0.05540	\$ 14,481.47
Decarb-Re-injection Pump (cost of power in RO operating)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Compressor	5.0	480					0.746	0.746	8,760	32,675	0.05540	\$ 1,810.18
Decarb Booster Pump	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Misc. Equip. (entering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Air Compressors	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.25 watts/sqft)			19,200	1.25						8,760	0.05540	\$ 11,647.30
SR1 500 Gallon RO and Support Equip. Total										210,240	0.05540	\$ 65,047.72
<b>DDW 1</b>												
DDW PD Injection Pump (is in DDW disposal cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (entering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480								43,200	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			450	1.25	12.5					4,928	0.05540	\$ 272.98
DDW 1 Injection Pump Support Equip. Total												\$ 3,626.62
<b>DDW SRIRUP #7</b>												
DDW PD Injection Pump (is in DDW disposal cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (entering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480								54,000	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			480	1.25	12.5					5,256	0.05540	\$ 291.18
DDW SRIRUP 10 Injection Pump Support Equip. Total												\$ 4,006.86
<b>DDW SRIRUP #8</b>												
DDW PD Injection Pump (is in DDW disposal cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (entering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480								43,200	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			480	1.25	12.5					5,256	0.05540	\$ 291.18
DDW SRIRUP 10 Injection Pump Support Equip. Total												\$ 4,006.86
<b>DDW SRIRUP #10</b>												
DDW PD Injection Pump (is in DDW disposal cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (entering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480								43,200	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			480	1.25	12.5					5,256	0.05540	\$ 291.18
DDW SRIRUP 10 Injection Pump Support Equip. Total												\$ 4,006.86
<b>DDW Reynolds Ranch</b>												
DDW PD Injection Pump (is in DDW disposal cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (entering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480								43,200	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			392	1.25	12.5					4,292	0.05540	\$ 237.80
Reynolds Ranch Injection Pump Support Equip. Total												\$ 3,953.47
<b>Maintenance Shop Building</b>												
Misc. Equip. (fans, sump pumps)	2.0	480					0.746	0.746	8,760	13,070	0.05540	\$ 724.07
Lighting (1.25 watts/sqft)			7,028	1.25						8,760	0.05540	\$ 4,263.40
Maintenance Shop Building Total												\$ 4,987.47
<b>Fresh Water Pumphouse</b>												
Water Pumps, fans, and metering pumps	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Lighting (1.25 watts/sqft)			832	1.25						8,760	0.05540	\$ 304.72
Heater - electric Kw	-	480								43,200	0.05540	\$ 2,393.28
Fresh Water Pumphouse Total												\$ 6,318.36
<b>Office Building</b>												
Water Pumps, fans	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.00 watts/sqft)			8,000	1.00						8,760	0.05540	\$ 3,882.43
Air conditioning - electric Kw	-	480								1,800	0.05540	\$ 2,659.20
Office Building Total												\$ 9,256.91
<b>Header house</b>												
Heater - electric Kw	-	480								43,200	0.05540	\$ 2,991.60

**Cameco Resources  
Smith Ranch Uranium Project  
2012-13 Surety Estimate**

**Heating Costs By Building**

	Flooring Sq. Feet	Wall Sq. Feet	Number Of Fans	Fan CFM	AIR Exchange BTU/hr (ΔT=40)	Building BTU/hr (ΔT=40, R=20)	Combined BTU/hr	Heating Months	Determine Which Fuel is Used		
									\$\$ per Million BTUs (Fuel Specific)	Nat. Gas \$\$ / yr	Propane \$\$ / yr
CPP	31,500	26,710	5	70,000	2,882,674	116,420	2,999,094	5	\$4.94	\$67,781	
Maintenance Shop (est. 200 cfm)	7,028	4826	1	200	8,236	23,708	31,944	5	\$4.94	\$722	
SR-1	17,600	12800	3	42,000	1,729,604	60,800	1,790,404	5	\$4.94	\$40,464	
SR-2	19,200	11200	3	42,000	1,729,604	60,800	1,790,404	5	\$26.06		\$138,339
Office Building	8,000	7,680	5	1,000	41,181	31,360	72,541	5	\$4.94	\$1,639	
Reynolds Ranch Satellite	19,200	11200	3	42,000	1,729,604	60,800	1,790,404	5	\$26.06		\$138,339
					0	0	0	5		\$108,967	\$276,677
Smith Ranch Total (all restoration Bldings)										\$385,644	

# WELLFIELD PIPING REMOVAL Unit Costs

## Cameco Resources Smith Ranch Uranium Project 2012-13 Surety Estimate

### Assumptions:

1. Trenching with Trackhoe at 1000 ft per day
2. Pipeline extraction and backfilling with Trackhoe & loader at 20 1000 feet per day
4. Trackhoe operation requires 1 worker
5. Pipeline extraction requires 2 workers
6. Operating schedule: 8 hrs/day, 5 days/week

### Equipment

<b>Trackhoe</b>					
$\frac{\$ 100.9}{\text{hour}}$	X	$\frac{8 \text{ hours}}{\text{day}}$	$\times \frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.81	per foot
<b>Loader</b>					
$\frac{\$ 52.56}{\text{hour}}$	X	$\frac{8 \text{ hours}}{\text{day}}$	$\times \frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.42	per foot
<b>Pickup</b>					
$\frac{\$ 19.92}{\text{hour}}$	X	$\frac{8 \text{ hours}}{\text{day}}$	$\times \frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.16	per foot

### Labor

<b>Trackhoe Operation</b>					
$\frac{\$ 37.7}{\text{man hr}}$	X	$\frac{8 \text{ man hrs}}{1 \text{ day}}$	$\times \frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.30	per foot
<b>Loader Operation</b>					
$\frac{\$ 37.7}{\text{man hr}}$	X	$\frac{8 \text{ man hrs}}{1 \text{ day}}$	$\times \frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.30	per foot
<b>Pipeline Extraction Laborer</b>					
$\frac{\$ 33.35}{\text{man hr}}$	X	$\frac{8 \text{ man hrs}}{1 \text{ day}}$	$\times \frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.27	per foot

<b>MAIN PIPELINE REMOVAL COST</b>	<b>= \$ 2.260</b>	<b>per foot</b>
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### Chipped Pipe Volume Calculations

Pipe Diam Inches	SDR	OD	ID	Wall Thickness	Area of Plastic in Crossection (ft <sup>2</sup> )	Volume of Plastic per Linear Foot (ft <sup>3</sup> )
1.5	11	1.900	1.534	0.183	0.0069	0.0069
2	11	2.375	1.917	0.229	0.0107	0.0107
3	11	3.500	2.825	0.3375	0.0233	0.0233
4	11	4.500	3.633	0.4335	0.0385	0.0385
6	11	6.625	5.348	0.6385	0.0834	0.0834
8	11	8.625	6.963	0.831	0.1413	0.1413
10	11	10.750	8.678	1.036	0.2196	0.2196
12	11	12.750	10.293	1.2285	0.3088	0.3088
14	11	14.000	11.302	1.349	0.3723	0.3723
16	11	16.000	12.916	1.542	0.4864	0.4864
18	11	18.000	14.531	1.7345	0.6155	0.6155

Company Performance										
Table 1 of 10: Summary of Financial Performance										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	100	105	110	115	120	125	130	135	140	145
Expenses	(40)	(42)	(44)	(46)	(48)	(50)	(52)	(54)	(56)	(58)
Profit	60	63	66	69	72	75	78	81	84	87
Assets	100	105	110	115	120	125	130	135	140	145
Liabilities	(40)	(42)	(44)	(46)	(48)	(50)	(52)	(54)	(56)	(58)
Equity	60	63	66	69	72	75	78	81	84	87
Revenue Growth	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Expense Growth	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Profit Growth	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Assets Growth	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Liabilities Growth	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Equity Growth	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Revenue per Share	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
Expense per Share	(4)	(4.2)	(4.4)	(4.6)	(4.8)	(5)	(5.2)	(5.4)	(5.6)	(5.8)
Profit per Share	6	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7
Assets per Share	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
Liabilities per Share	(4)	(4.2)	(4.4)	(4.6)	(4.8)	(5)	(5.2)	(5.4)	(5.6)	(5.8)
Equity per Share	6	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7
Revenue per Share	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
Expense per Share	(4)	(4.2)	(4.4)	(4.6)	(4.8)	(5)	(5.2)	(5.4)	(5.6)	(5.8)
Profit per Share	6	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7
Assets per Share	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
Liabilities per Share	(4)	(4.2)	(4.4)	(4.6)	(4.8)	(5)	(5.2)	(5.4)	(5.6)	(5.8)
Equity per Share	6	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7

Table 2 of 10: Summary of Financial Performance	
Revenue	100
Expenses	(40)
Profit	60
Assets	100
Liabilities	(40)
Equity	60
Revenue Growth	5%
Expense Growth	2%
Profit Growth	3%
Assets Growth	5%
Liabilities Growth	2%
Equity Growth	3%
Revenue per Share	10
Expense per Share	(4)
Profit per Share	6
Assets per Share	10
Liabilities per Share	(4)
Equity per Share	6

Table 3 of 10: Summary of Financial Performance	
Revenue	100
Expenses	(40)
Profit	60
Assets	100
Liabilities	(40)
Equity	60
Revenue Growth	5%
Expense Growth	2%
Profit Growth	3%
Assets Growth	5%
Liabilities Growth	2%
Equity Growth	3%
Revenue per Share	10
Expense per Share	(4)
Profit per Share	6
Assets per Share	10
Liabilities per Share	(4)
Equity per Share	6

Table 4 of 10: Summary of Financial Performance	
Revenue	100
Expenses	(40)
Profit	60
Assets	100
Liabilities	(40)
Equity	60
Revenue Growth	5%
Expense Growth	2%
Profit Growth	3%
Assets Growth	5%
Liabilities Growth	2%
Equity Growth	3%
Revenue per Share	10
Expense per Share	(4)
Profit per Share	6
Assets per Share	10
Liabilities per Share	(4)
Equity per Share	6

Table 5 of 10: Summary of Financial Performance	
Revenue	100
Expenses	(40)
Profit	60
Assets	100
Liabilities	(40)
Equity	60
Revenue Growth	5%
Expense Growth	2%
Profit Growth	3%
Assets Growth	5%
Liabilities Growth	2%
Equity Growth	3%
Revenue per Share	10
Expense per Share	(4)
Profit per Share	6
Assets per Share	10
Liabilities per Share	(4)
Equity per Share	6

Table 6 of 10: Summary of Financial Performance	
Revenue	100
Expenses	(40)
Profit	60
Assets	100
Liabilities	(40)
Equity	60
Revenue Growth	5%
Expense Growth	2%
Profit Growth	3%
Assets Growth	5%
Liabilities Growth	2%
Equity Growth	3%
Revenue per Share	10
Expense per Share	(4)
Profit per Share	6
Assets per Share	10
Liabilities per Share	(4)
Equity per Share	6



**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Highland Uranium Project 2012-13 Surety Estimate Update**

<b>I.</b>	<b>Groundwater Restoration (GW REST Sheet)</b>			<b>\$40,637,924</b>
<b>II.</b>	<b>Well Abandonment (WA Sheet)</b>			<b>\$14,906,922</b>
<b>III.</b>	<b>Wellfield Reclamation (WF REC Sheet)</b>			<b>\$12,997,512</b>
<b>IV.</b>	<b>Wellfield and Satellite Surface Reclamation (WF-SAT-SURF Sheet)</b>			<b>\$497,578</b>
<b>V.</b>	<b>Equipment Costs (EQUIP Sheet)</b>			<b>\$628,991</b>
<b>VI.</b>	<b>Building Costs (BLDGS Sheets)</b>			<b>\$4,212,662</b>
<b>VII.</b>	<b>Miscellaneous Site Reclamation (MISC REC Sheet)</b>			<b>\$13,736,557</b>
	<b>Subtotal Reclamation Cost</b>			<b>\$87,618,146</b>
		<b>Contingency</b>	<b>25%</b>	<b>\$21,904,537</b>
			<b>TOTAL</b>	<b>\$109,522,683</b>

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Ground Water Restoration**

	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J
<b>I. Ground Water Sweep Costs</b>													
Estimated PV's	0	0	0	0	0	0	0	1	1	1	1	1	1
Total Kgal for GWS	0	0	0	0	0	0	0	81688	233691	94815	115820	75937	86995
Bleed to Deep Disposal Well (%)	100	100	100	100	100	100	100	100	100	100	100	100	100
Groundwater Sweep Unit Cost (\$/Kgal)	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21	\$2.21
<b>Subtotal Ground Water Sweep Costs per Wellfield</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$180,077</b>	<b>\$515,350</b>	<b>\$209,092</b>	<b>\$255,414</b>	<b>\$167,461</b>	<b>\$191,847</b>
<b>Total Ground Water Sweep Costs</b>	<b>\$1,519,241</b>												
<b>II. Reverse Osmosis Costs</b>													
Estimated PV's	0	0	0	0	0	0.5	0.5	4.5	4.5	4.5	4.5	4.5	4.5
Total Kgal for RO	0	0	0	0	0	14,023	8,648	367,461	1,051,610	426,668	\$21,190	341,717	391,478
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Reverse Osmosis Unit Cost (\$/Kgal)	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67	\$0.67
Brine volume for disposal	0	0	0	0	0	2,805	1,730	73,492	210,322	85,334	104,238	68,343	78,296
DDW Disposal Cost (\$/Kgal)	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07
Disposal Cost per wellfield	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,798.67	\$3,576.05	\$151,949.35	\$434,852.62	\$176,431.92	\$215,518.06	\$141,303.70	\$161,880.45
<b>Subtotal Reverse Osmosis Costs per Wellfield</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15,194</b>	<b>\$9,370</b>	<b>\$398,148</b>	<b>\$1,139,431</b>	<b>\$462,299</b>	<b>\$564,715</b>	<b>\$370,254</b>	<b>\$424,170</b>
<b>Total Reverse Osmosis Costs</b>	<b>\$3,383,582</b>												
<b>III. Reverse Osmosis with Chemical Reductant Costs</b>													
Estimated PV's	0	0	3	1	1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Kgal for RO	0	0	206,883	19,691	0	98,161	60,536	285,803	817,919	331,853	405,370	265,780	304,483
Bleed to Deep Disposal Well (%)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Reverse Osmosis with chemical reductant Unit Cost (\$/Kgal)	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72	\$0.72
Brine volume for disposal	0	0	41,377	3,938	0	19,632	12,107	57,161	163,584	66,371	81,074	53,156	60,897
DDW Disposal Cost (\$/Kgal)	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07
Disposal Cost per wellfield	\$0.00	\$0.00	\$85,548.50	\$8,142.45	\$0.00	\$40,590.70	\$25,032.33	\$118,182.83	\$338,218.70	\$137,224.82	\$167,625.16	\$109,902.88	\$125,907.01
<b>Subtotal Reverse Osmosis Chemical Reductant &amp; Disposal Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$233,900</b>	<b>\$22,262</b>	<b>\$0</b>	<b>\$110,980</b>	<b>\$68,441</b>	<b>\$323,126</b>	<b>\$924,730</b>	<b>\$375,189</b>	<b>\$458,307</b>	<b>\$300,487</b>	<b>\$344,245</b>
<b>Total Reverse Osmosis Chemical Reductant Costs</b>	<b>\$3,161,667</b>												
<b>IV. Bioremediation</b>													
Estimated PV's	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Kgal for Treatment	0	0	0	0	0	0	0	0	0	0	0	0	0
Bleed to Deep Disposal Well (%)	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Bioremediation Unit Cost (\$/Kgal)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Subtotal Bioremediation Costs per Wellfield</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Total Bioremediation Costs</b>	<b>\$0.00</b>												
<b>V. Selenium Plant Operation</b>													
Years	19												
\$/year	\$281,964												
<b>Subtotal Selenium Plant Operation Costs</b>	<b>\$5,357,309.84</b>												
<b>VI. MIT Costs</b>													
MIT Costs per Well	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00
Restoration period, plus stabilization (months)	12	12	36	12	12	36	24	60	168	72	96	96	144
Number of MIT's req'd for Prod & Inj Wells	0	66	313	0	0	100	17	507	4,192	558	576	368	845
<b>Subtotal MIT Mine Unit</b>	<b>\$0.00</b>	<b>\$11,844.00</b>	<b>\$56,376.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$17,928.00</b>	<b>\$3,024.00</b>	<b>\$91,260.00</b>	<b>\$754,488.00</b>	<b>\$100,440.00</b>	<b>\$103,680.00</b>	<b>\$66,240.00</b>	<b>\$152,064.00</b>
5-year MIT Costs for Disposal Wells		\$41,986.80											
*MIT Cost is from ACTUAL cost of an MIT on DDW by Petrotek on Q2 of 2012													
Number of DDWs	3												
Years of Restoration	19												
Number of MIT's per DDW	4												
<b>Subtotal MIT DDW Costs</b>	<b>\$503,841.60</b>												
<b>Total MIT Costs</b>	<b>\$1,861,185.60</b>												
<b>VII. Monitoring and Sampling Costs</b>													
Modified Guideline 8 - 6 parameter contract laboratory analysis	\$337.00 analysis												
Total monitor wells	9	69	104	0	0	38	15	72	109	86	34	55	46
Groundwater sweep duration (months)	0	0	0	0	0	0	0	24	48	24	36	36	48
Reverse Osmosis duration (months)	0	0	24	0	0	24	12	24	108	36	48	48	84
Stabilization duration (months)	12	12	12	12	12	12	12	12	12	12	12	12	12
<b>A. Monitor Well Sampling</b>													
1. Well Sampling prior to restoration start													
# of Wells	9	69	104	0	0	38	15	72	109	86	34	55	46
\$/sample	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00
2. Groundwater Sweep Sampling (quarterly)													
# of Wells	9	69	104	0	0	38	15	72	109	86	34	55	46
Total # samples	0	0	0	0	0	0	0	576	1744	688	408	660	736
\$/sample	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Ground Water Restoration**

	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J
3. RO Sampling (quarterly)													
# of Wells	9	69	104	0	0	38	15	72	109	86	34	55	46
Total # samples	0	0	832	0	0	304	60	576	3924	1032	544	880	1288
\$/sample	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
4. Stabilization Sampling (Guideline 8, quarterly)													
# of Wells	6	56	44	6	2	19	16	28	89	69	33	6	33
Total # samples	24	224	176	24	8	76	64	112	356	276	132	24	132
\$/sample	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00	\$337.00
5. Stabilization Sampling (6 parameter bi-monthly)													
# of Wells	6	56	44	6	2	19	16	28	89	69	33	6	33
Total # samples	36	336	264	36	12	114	96	168	534	414	198	36	198
\$/sample	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
6. Monitor Well Sampling													
# of Wells	9	69	104	0	0	38	15	72	109	86	34	55	46
Total # samples	36	336	264	36	12	114	96	168	534	414	198	36	198
\$/sample	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
Total # samples (2.2/mo for entire period)	54	414	1872	0	0	684	180	2160	9156	3096	1632	2640	3312
7. Other Laboratory Costs													
Radon, etc. =	\$1,000.00 month												
Total for Other Laboratory Costs:	\$12,000.00	\$12,000.00	\$36,000.00	\$12,000.00	\$12,000.00	\$36,000.00	\$24,000.00	\$60,000.00	\$168,000.00	\$72,000.00	\$96,000.00	\$0.00	\$144,000.00
Subtotal Monitoring and Sampling Costs per Mine Unit	\$32,121.00	\$185,741.00	\$427,160.00	\$23,688.00	\$15,896.00	\$184,618.00	\$84,223.00	\$470,008.00	\$1,860,505.00	\$716,994.00	\$430,142.00	\$448,223.00	\$757,386.00
Total Monitoring and Sampling Costs	\$5,636,705.00												
VIII. Labor Cost (for all Reclamation)													
Environmental Manager/RSO Support	\$10,786.55 month												
Restoration Manager Support	\$8,779.75 month												
HP Technician support	\$6,020.40 month												
Total Restoration Period	19 years												
Manager support during restoration	\$4,461,116.40												
HP Technician support during restoration	\$1,372,631.20												
Labor Support 5 each	\$6,589,960.00												
Total Supervisory Labor Costs	\$12,423,727.60												
<b>TOTAL RESTORATION COST PER WELLFIELD</b>	<b>\$32,121.00</b>	<b>\$197,585.00</b>	<b>\$717,435.67</b>	<b>\$45,950.43</b>	<b>\$15,896.00</b>	<b>\$328,719.84</b>	<b>\$165,058.55</b>	<b>\$1,462,619.39</b>	<b>\$5,194,503.97</b>	<b>\$1,864,014.02</b>	<b>\$1,812,257.89</b>	<b>\$1,352,665.27</b>	<b>\$1,869,711.87</b>
	\$15,058,538.90												
Wellfield Refurbishment to Facilitate Restoration													
Well Replacement (#)	0	0	5	0	0	0	0	10	200	59	47	0	18
Replacement (\$/well)	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000	\$14,000
Wellhole Refurbishment (#)	0	0	0	0	0	0	0	15	22	19	6	0	0
Refurbishment (\$/wellhole)	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792	\$5,792
Header House Refurbishment (#)	0	0	0	0	0	0	0	5	31	10	6	0	9
Refurbishment (\$/header house)	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000	\$32,000
Subtotal Refurbishment Cost per Wellfield	\$0	\$0	\$70,000	\$0	\$0	\$0	\$0	\$386,880	\$3,919,424	\$1,256,048	\$884,752	\$0	\$540,000
Total Wellfield Refurbishment Cost	\$7,057,104												
Booster Pumping Costs (Wellfield to RO)	\$237,402												
Assumptions: 15 40 hp pumps													
\$12,494.84 annual operating cost													
<b>TOTAL GROUND WATER RESTORATION COSTS</b>	<b>\$40,637,924</b>												

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

Well Abandonment														
	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C 22	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-II	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J	Totals
<b>I. Well Abandonment (Wellfields)</b>														
# of Production Wells	0	141	148	0	0	56	13	134	594	136	129	80	117	1548
# of Injection Wells	0	188	374	0	0	110	29	373	903	329	231	150	235	2922
# of Monitoring Wells	0	69	104	0	0	38	15	72	109	86	34	55	46	637
# of Previously Abandoned Wells Pending Release	109	170	223	0	0	96	0	273	400	59	47	48	18	
Total Number of Wells	118	508	849	0	0	300	57	852	2006	610	441	333	416	6550
Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5	5	
Production, Injection and Perimeter Well Average Depth (ft)	500	450	550	550	550	600	600	550	650	500	650	650	540	565
Total Mine Unit Well Depth (ft), production wells	0	63,450	81,400	0	0	33,600	7,800	73,700	386,100	68,000	83,850	52,000	63,180	913,080
Total Mine Unit Well Depth (ft), all others	20,000	192,150	285,550	0	0	146,400	26,400	304,900	917,800	237,000	202,800	164,450	161,400	2,887,910
Well Abandonment Unit Cost (\$/ft. of well)	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	
Well Abandonment (w/pump) Unit Cost (\$/ft. of well)	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	
Subtotal Abandonment Cost per Wellfield	\$147,500	\$658,035	\$1,191,795	\$0	\$0	\$460,080	\$87,840	\$1,193,610	\$3,375,580	\$782,900	\$741,780	\$556,725	\$580,554	\$9,776,399
<b>III. Removal of Contaminated Soil Around Wells</b>														
# of Production and Injection Wells	4470													
Cost per well (\$/well)	\$138.39													
Subtotal Removal of Soil Around Wells		\$618,603.30												\$618,603.30
<b>IV. Delineation Hole Abandonment</b>														
	Unit Cost	Units	Quantity	Total										
# of Holes Pending Bond Release (2009-10)														
Site Location (\$10/site)	\$10.00	site	89	\$890										
Sealing of Holes using High Solids Bentonite Grout assume average depth per hole = 750	\$6.28	linear foot	89	\$419,190										
Concrete Plug Cap, pre-cast	\$8.00	plug	89	\$712										
Mud pit backfill, Rough site grading	\$30.00	site	89	\$2,670										
Subtotal Drill Hole Reclamation				\$423,462										
# of Holes Pending Bond Release (2010-11)														
Site Location (\$10/site)	\$10.00	site	133	\$1,330										
Sealing of Holes using High Solids Bentonite Grout assume average depth per hole = 725	\$6.28	linear foot	133	\$605,540										
Concrete Plug Cap, pre-cast	\$8.00	plug	133	\$1,064										
Mud pit backfill, Rough site grading	\$30.00	site	133	\$3,990										
Subtotal Drill Hole Reclamation				\$611,924										
# of Projected Holes (2011-12)														
Site Location (\$10/site)	\$10.00	site	300	\$3,000										
Sealing of Holes using High Solids Bentonite Grout assume average depth per hole = 750	\$6.28	linear foot	300	\$1,413,000										
Concrete Plug Cap, pre-cast	\$8.00	plug	300	\$2,400										
Mud pit backfill, Rough site grading	\$30.00	site	300	\$9,000										
Subtotal Drill Hole Reclamation				\$1,427,400										
# of Projected Holes (2012-13)														
Site Location (\$10/site)	\$10.00	site	305	\$3,050										
Sealing of Holes using High Solids Bentonite Grout assume average depth per hole = 850	\$6.28	linear foot	305	\$1,628,090										
Concrete Plug Cap, pre-cast	\$8.00	plug	305	\$2,440										
Mud pit backfill, Rough site grading	\$30.00	site	305	\$9,150										
Subtotal Drill Hole Reclamation				\$1,642,790										
Subtotal Hole Abandonment				\$4,105,525.00										
<b>V. Waste Disposal Well Abandonment</b>														
	Morton No. 1-20	Vollman No. 33-27	SRHUP # 9											
<b>A. Well Sealing</b>														
Total Depth of Well	9206	14412	9500											
Sealing cost per foot (in UIC permit)	\$11.91	\$11.91	\$11.91											
Subtotal Plugging Costs per Well	\$109,643	\$171,647	\$113,145											
<b>B. Pump Dismantling and Decontamination</b>														
Number of Persons	2	2	2											
Number of Pumps	2	2	2											
Pumps/Day	0.5	0.5	0.5											
Number of Days	4	4	4											
\$/Day/Person	\$302	\$302	\$302											
Subtotal Dismantling and Decon Costs per Well	\$2,413	\$2,413	\$2,413											
<b>C. Tubing String Disposal (NRC-Licensed Facility)</b>														
Length of Tubing String (ft)	8,408	8,869	8,820											
Diameter of Tubing String (inches)	2.875	2.875	2.875											
Volume of Tubing String (ft³)	198	207	205											
Transportation and Disposal Unit Cost (\$/ft³)	\$7.74	\$7.74	\$7.74											
Subtotal Tubing String Disposal Costs per Well	\$1,532	\$1,599	\$1,590											
Subtotal Waste Disposal Well Abandonment Costs per Well	\$113,588.26	\$175,658.72	\$117,147.80											
Total Waste Disposal Well Abandonment Costs	\$406,394.78													
<b>Total Wellfield Abandonment Costs</b>														\$14,906,922



**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

Wellfield Buildings and Equipment Removal and Disposal		Mine Unit-A	Mine Unit-B	Mine Unit-C	19N	Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J	
I. Wellfield Piping		Not Used, Included w/MU-C													
Number of Header Houses per Wellfield		5	18	20	0	0	4	3	15	45	10	6	4	9	
Approximate Length of Piping per Header House (ft)		13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	13800	
*Average 46 wells per with 300 ft pipeline/well															
Approximate Total Length of Piping (ft)		69000	248400	276000	0	0	55200	41400	207000	621000	138000	82800	55200	124200	1918200
A. Removal and Loading															
Wellfield Piping Removal Unit Cost (\$/ft of pipe)		\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26
Subtotal Wellfield Piping Removal and Loading Costs		\$155,940	\$561,384	\$623,760	\$0	\$0	\$124,752	\$93,564	\$467,820	\$1,403,460	\$311,880	\$187,128	\$124,752	\$280,692	
B. Transport and Disposal Costs (NRC-Licensed Facility)															
Average Diameter of Piping (inches)		2	2	2	2	2	2	2	2	2	2	2	2	2	2
Chipped Volume Reduction (ft³/ft)		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Chipped Volume per Wellfield (ft³)		740	2663	2959	0	0	592	444	2219	6658	1480	888	592	1332	
Volume for Disposal Assuming 10% Void Space (ft³)		814	2930	3255	0	0	651	488	2441	7324	1628	977	651	1465	
Transportation and Disposal Unit Cost (\$/ft³)		\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal Wellfield Piping Transport and Disposal Costs		\$6,303	\$22,687	\$25,203	\$0	\$0	\$5,041	\$3,779	\$18,901	\$56,709	\$12,606	\$7,565	\$5,041	\$11,343	
Wellfield Piping Costs per Wellfield		\$162,243	\$584,071	\$648,963	\$0	\$0	\$129,793	\$97,343	\$486,721	\$1,460,169	\$324,486	\$194,693	\$129,793	\$292,035	
Total Wellfield Piping Costs		\$4510,310													
II. Well Pumps and Downhole Tubing		Assumptions:													
60% of production/injection wells contain pumps and/or tubing															
A. Pump and Tubing Transportation and Disposal															
Number of Production Wells		0	141	148	0	0	56	13	134	594	136	129	80	117	
Number of Injection Wells		0	188	374	0	0	110	29	373	903	329	231	150	235	
Number of Monitor Wells		9	69	104	0	0	38	15	72	109	86	34	55	46	
1. Pump Volume															
Number of Production Wells with Pumps		0	141	148	0	0	56	13	134	594	136	129	80	117	
Average Pump Volume (ft³) 66"X 3.8" Diam =		5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	
Pump Volume per Wellfield (ft³)		0.0	732.9	769	0	0	291	68	697	3088	707	671	416	608	
2. Tubing Volume															
Assumptions:															
Average tubing length/wellfield based on average well depth minus 25 ft															
Number of Production & Monitor Wells with Tubing		9	210	252	0	0	94	28	206	703	222	163	135	163	
Number of Injection Wells with Tubing		0	141	148	0	0	56	13	134	594	136	129	80	117	
Average Tubing Length per Well (ft)		475	425	525	525	525	575	575	525	625	475	625	625	515	
Tubing Length per Wellfield (ft)		4,275	149,175	210,000	0	0	86,250	23,575	178,500	810,625	170,050	182,500	134,375	144,200	
Diameter of Production Well Fiberglass Tubing (inches)		2	2	2	2	2	2	2	2	2	2	2	2	2	
Diameter of Injection Well HDPE Tubing (inches)		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Chipped Volume Reduction (ft³/ft)		0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	
Chipped Volume per Wellfield (ft³)		46	1599	2251	0	0	925	253	1914	6691	1823	1957	1441	1546	
Volume of Pump and Tubing (ft³)		46	2332	3020	0	0	1216	321	2611	11779	2530	2628	1857	2154	
Volume for Disposal Assuming 10% Void Space (ft³)		51	2565	3322	0	0	1338	353	2872	12956	2783	2890	2043	2370	
Transportation and Disposal Unit Cost (\$/ft³)		\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	
Pump and Tubing Transport and Disposal Costs Per Wellfield		\$395	\$19,861	\$25,722	\$0	\$0	\$10,360	\$2,733	\$22,238	\$100,318	\$21,549	\$22,377	\$15,819	\$18,351	
Total Pump and Downhole Tubing Costs		\$259,723													
III. Buried Trunkline (Includes \$ for fiber optic cable removal)		Assumptions:													
Length of Trunkline Trench (ft)		6500	0	5900	0	0	12000	5500	0	11700	13200	10750	0	2500	68050
inc w/MU-A															
inc w/MU-C															
inc w/MU-D															
A. Removal and Loading															
Main Pipeline Removal Unit Cost (\$/ft of trench)		\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	\$2.26	
Subtotal Trunkline Removal and Loading Costs		\$14,690	\$0	\$13,334	\$0	\$0	\$27,120	\$12,430	\$0	\$26,442	\$29,832	\$24,295	\$0	\$5,650	
B. Transport and Disposal Costs (NRC-Licensed Facility)															
1. 1" Carbon Steel Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume (ft³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. 1.5" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume per Lft (ft³/ft)		0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0
Chipped Volume (ft³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. 3" HDPE Trunkline															
Piping Length (ft)		6500	0	5900	0	0	12000	5500	0	11700	13200	10750	0	0	29900
Chipped Volume per Lft (ft³/ft)		0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0
Chipped Volume (ft³)		151	0	137	0	0	279	128	0	272	307	250	0	0	0
4. 6" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	11000	0	0	0	3000	0	0	14000
Chipped Volume per Lft (ft³/ft)		0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0
Chipped Volume (ft³)		0	0	0	0	0	0	917	0	0	0	250	0	0	0
5. 8" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume per Lft (ft³/ft)		0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0
Chipped Volume (ft³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. 10" HDPE Trunkline															
Piping Length (ft)		13000	0	0	0	0	0	0	0	0	0	750	0	2000	13750
Chipped Volume per Lft (ft³/ft)		0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0
Chipped Volume (ft³)		2854	0	0	0	0	0	0	0	0	0	165	0	439	0
7. 12" HDPE Trunkline															
Piping Length (ft)		0	0	11800	0	0	24000	0	0	0	0	0	0	2000	35800
Chipped Volume per Lft (ft³/ft)		0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0
Chipped Volume (ft³)		0	0	3644	0	0	7411	0	0	0	0	0	0	618	0
8. 14" HDPE Trunkline															
Piping Length (ft)		0	0	0	0	0	0	0	0	23400	26400	8500	0	0	23400
Chipped Volume per Lft (ft³/ft)		0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

Wellfield Buildings and Equipment Removal and Disposal													
	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C 19N	Mine Unit-C Haul Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-G	Mine Unit-H	Mine Unit-I	Mine Unit-I Ext
Chipped Volume (ft³)	0	0	0	0	0	0	0	0	0	8712	9829	3165	0
9. 16" HDPE Trunkline													
Piping Length (ft)	0	0	0	0	0	0	0	0	23400	26400	8500	0	23400
Chipped Volume per Lft (ft³/ft)	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486
Chipped Volume (ft³)	0	0	0	0	0	0	0	0	11381	12841	4134	0	0
10. 18" HDPE Trunkline													
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Chipped Volume per Lft (ft³/ft)	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
Chipped Volume (ft³)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Trunkline Chipped Volume (ft³)	3006	0	3781	0	0	7691	1045	0	20366	22977	7964	0	1057
Volume for Disposal Assuming 10% Void Space (ft³)	3306	0	4159	0	0	8460	1150	0	22403	25275	8761	0	1162
Transportation and Disposal Unit Cost (\$/ft³)	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal Trunkline Transport and Disposal Costs	\$25,598	\$0	\$32,203	\$0	\$0	\$65,505	\$8,904	\$0	\$173,466	\$195,703	\$67,836	\$0	\$8,997
Trunkline Decommissioning Costs per Wellfield	\$40,288	\$0	\$45,537	\$0	\$0	\$92,625	\$21,334	\$0	\$199,908	\$225,535	\$92,131	\$0	\$14,647
<b>Total Trunkline Decommissioning Costs</b>	<b>\$732,005</b>												
IV. Well Head Covers													
			Inc w/MU-C	Inc w/MU-C									
Total Quantity	0	329	522	0	0	166	42	507	1497	465	360	230	352
Average Well Head Cover Volume (ft³)	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86
A. Removal													
Total Volume (ft³)	0	611.94	970.9	0	0	308.76	78.12	943.02	2784.42	864.9	669.6	427.8	654.72
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft³)	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262
Subtotal Well Head Cover Demolition Costs	\$0	\$160	\$254	\$0	\$0	\$81	\$20	\$247	\$729	\$227	\$175	\$112	\$171
B. Survey and Decontamination													
Cost per Wellhead cover	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07	\$8.07
Subtotal Survey and Decontamination Costs	\$0	\$2,655	\$4,213	\$0	\$0	\$1,340	\$339	\$4,091	\$12,081	\$3,753	\$2,905	\$1,856	\$2,841
C. Disposal at County landfill facility													
Total Volume (cy)	0	23	36	0	0	11	3	35	103	32	25	16	24
Volume for disposal assuming 10% void space (cy)	0	25	40	0	0	13	3	38	113	35	27	17	27
Transportation and Disposal Unit Cost (\$/cy)	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66	\$7.66
Subtotal Disposal Costs	\$0	\$192	\$307	\$0	\$0	\$100	\$23	\$291	\$866	\$268	\$207	\$130	\$207
Well Head Covers Removal and Disposal Costs per Mine Unit	\$0	\$3,007	\$4,774	\$0	\$0	\$1,521	\$382	\$4,629	\$13,676	\$4,248	\$3,287	\$2,098	\$3,219
<b>Total Well Head Cover Removal and Disposal Costs</b>	<b>\$40,841</b>												
V. Header Houses (Includes Booster Stations)													
Total Quantity	5	18	20	0	0	4	3	15	45	10	6	4	9
Average Header House Volume (ft³)	800	800	800	800	800	800	800	800	800	800	800	800	800
A. Removal													
Total Volume (ft³)	4000	14400	16000	0	0	3200	2400	12000	36000	8000	4800	3200	7200
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft³)	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262	\$0.262
Subtotal Building Demolition Costs	\$1,048	\$3,771	\$4,190	\$0	\$0	\$838	\$629	\$3,143	\$9,428	\$2,095	\$1,257	\$838	\$1,886
B. Survey and Decontamination													
Cost per Header House	\$670	\$670	\$670	\$670	\$670	\$670	\$670	\$670	\$670	\$670	\$670	\$670	\$670
Subtotal Survey and Decontamination Costs	\$3,350	\$12,060	\$13,400	\$0	\$0	\$2,680	\$2,010	\$10,050	\$30,150	\$6,700	\$4,020	\$2,680	\$6,030
C. Disposal													
Total Volume (cy)	148	533	593	0	0	119	89	444	1333	296	178	119	267
Volume for Disposal Assuming 10% Void Space (cy)	163	587	652	0	0	130	98	489	1467	326	196	130	293
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal County Landfill Disposal Costs	\$1,292	\$4,652	\$5,167	\$0	\$0	\$1,030	\$777	\$3,875	\$11,626	\$2,584	\$1,553	\$1,030	\$2,322
Headerhouse Soil Removal Volume ft³ (assumes 10'Wx20'Lx2.5'D)	500	500	500	500	500	500	500	500	500	500	500	500	500
11e(2) Disposal Unit Cost (\$/ft³)	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14
Subtotal 11e(2) Disposal Costs	\$27,855	\$100,277	\$111,418	\$0	\$0	\$22,284	\$16,713	\$83,564	\$250,691	\$55,709	\$33,426	\$22,284	\$50,138
Header House Removal and Disposal Costs per Wellfield	\$33,545	\$120,760	\$134,175	\$0	\$0	\$26,832	\$20,129	\$100,632	\$301,895	\$67,088	\$40,256	\$26,832	\$60,376
<b>Total Header House Removal and Disposal Costs</b>	<b>\$932,519</b>												
<b>TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD</b>	<b>\$236,471</b>	<b>\$727,699</b>	<b>\$859,171</b>	<b>\$0</b>	<b>\$0</b>	<b>\$261,131</b>	<b>\$141,921</b>	<b>\$614,220</b>	<b>\$2,075,966</b>	<b>\$642,906</b>	<b>\$352,744</b>	<b>\$174,542</b>	<b>\$388,628</b>
VI. Vehicle Operation Costs													
Number of Pickup Trucks/Pulling Units (Gas)	10												
Unit Cost in \$/hr (UC-Equipment Costs)	\$19.92												
Average Operating Time (Hrs/Year)	1000												
Total Number of Years (Average)	19												
<b>Total Vehicle Operation Costs</b>	<b>\$3,784,800</b>												
VII. Header Houses (Includes Booster Stations)													
Years of Active Restoration	5	18	20	0	0	4	3	15	45	10	6	4	9
Heating Cost per Year per header house	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992	\$2,992
Heating Costs per year	\$0	\$0	\$119,664	\$0	\$0	\$23,913	\$8,975	\$179,496	\$1,750,086	\$149,580	\$125,647	\$83,765	\$296,168
<b>Total Header Heating cost</b>	<b>\$2,737,314</b>												
<b>TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL</b>	<b>\$12,997,512</b>												

**Camco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

Wellfield and Satellite Surface Reclamation										
	Mine Unit-A/B	Mine Unit-C	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-D Ext.	Mine Unit-I	Mine Unit-I Ext	Mine Unit-J
<b>I. Wellfield Pattern Area Reclamation</b>										
Pattern Area (acres)	42.75	67.5	12.375	49.5	171	56.25	9	26.33	17.5	60.75
Discing/Seeding Unit Cost (\$/acre)	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606
Subtotal Pattern Area Reclamation Costs per Wellfield	\$25,922	\$40,930	\$7,504	\$30,015	\$103,689	\$34,108	\$5,457	\$15,966	\$10,611	\$36,837
<b>Total Wellfield Pattern Area Reclamation Costs</b>	<b>\$311,039</b>									
<b>II. Wellfield Road Reclamation</b>										
Road Construction										
Length of Wellfield Roads (1000 ft)	12.8	11.3	2.4	13.3	18	15.7	5	5	5	5
Wellfield Road Reclamation Unit Cost (\$/1000 ft)	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337	\$1,337
Wellfield Road Reclamation Costs	\$17,114	\$15,108	\$3,209	\$17,782	\$24,066	\$20,991	\$6,685	\$6,685	\$6,685	\$6,685
<b>Total Wellfield Road Reclamation Costs</b>	<b>\$126,347</b>									
<b>III. Laydown area reclamation</b>										
Area of Disturbance (acres)	1	1	1	1	1	1	1	1	1	1
Average Depth of Stripped Topsoil (ft)	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	500	500	500	500	500	500	500	500	500	500
A. Ripping Overburden with Dozer										
Ripping Unit Cost per WDEQ Guideline No.12, App.11 (\$/acre)	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44
Subtotal Ripping Costs	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00	\$1,195.00
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	1081	1081	1081	1081	1081	1081	1081	1081	1081	1081
Application Unit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07	\$1.07
Subtotal Topsoil Application Costs	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153	\$1,153
C. Discing and Seeding										
Discing/Seeding Unit Cost (\$/acre)	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606
Subtotal Discing/Seeding Costs	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606	\$606
Subtotal Surface Reclamation Costs per WF laydown area	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954	\$2,954
<b>Total Wellfield Laydown Area Reclamation Costs</b>	<b>\$32,494</b>									
<b>SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD</b>	<b>\$45,990</b>	<b>\$58,992</b>	<b>\$13,667</b>	<b>\$50,751</b>	<b>\$130,709</b>	<b>\$58,053</b>	<b>\$15,096</b>	<b>\$25,605</b>	<b>\$20,250</b>	<b>\$46,476</b>
<b>TOTAL WELLFIELD SURFACE RECLAMATION COSTS</b>	<b>\$469,880</b>									
<b>IV. Satellite Area Reclamation</b>	<b>Satellite No.1</b>	<b>Satellite No.2</b>	<b>Satellite No.3</b>	<b>Se Plant</b>						
Assumptions:										
Area of Disturbance (acres)	1	.3	2.5	2						
Average Depth of Stripped Topsoil (ft)	1	0.67	0.67	0.67						
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	1000	500	500	500						
A. Ripping Overburden with Dozer										
Ripping Unit Cost per WDEQ Guideline No.12, App.11 (\$/acre)	\$1,195.44	\$1,195.44	\$1,195.44	\$1,195.44						
Subtotal Ripping Costs	\$1,195.00	\$3,586.00	\$2,989	\$2,391						
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	1613	3243	2702	2162						
Application Unit Cost per WDEQ Guideline No.12, App.C (\$/cy)	\$1.27	\$1.27	\$1.27	\$1.27						
Subtotal Topsoil Application Costs	\$2,055	\$4,131	\$3,443	\$2,754						
C. Discing and Seeding										
Discing/Seeding Unit Cost (\$/acre)	\$606	\$606	\$606	\$606						
Subtotal Discing/Seeding Costs	\$606	\$1,819	\$1,516	\$1,213						
Subtotal Surface Reclamation Costs per Satellite	\$3,856	\$9,536	\$7,948	\$6,358						
<b>Total Satellite Building Area Reclamation Costs</b>	<b>\$27,698</b>									
<b>TOTAL WELLFIELD AND SATELLITE SURFACE RECLAMATION COSTS</b>	<b>\$497,578</b>									



**Cameco Resources**  
**Highland Uranium Project**  
**2012-13 Surety Estimate**

**Equipment Removal and Loading**

**I. Removal and Loading Costs**

**A. Tankage**

Number of Tanks	26	8	14	18	7
Volume of Tank Construction Material (ft <sup>3</sup> )	1028	162	290	397	290
Labor					
Number of Persons	4	4	4	4	4
Ft <sup>3</sup> /Day	25	25	25	25	25
Number of Days	41	6	12	16	12
\$/Day/Person	\$302	\$302	\$302	\$302	\$302
Subtotal Labor Costs	\$49,607	\$7,817	\$13,994	\$19,158	\$13,994
Equipment					
Number of Days	41	6	12	16	12
\$/Day	\$2,251	\$2,251	\$2,251	\$2,251	\$2,251
Subtotal Equipment Costs	\$92,543	\$14,584	\$26,106	\$35,739	\$26,106
Subtotal Tankage Removal and Loading Costs	\$142,150	\$22,401	\$40,100	\$54,897	\$40,100

**B. PVC/Steel Pipe**

PVC Pipe Footage	10000	1000	4000	4000	4000
Average PVC Pipe Diameter (inches)	3	3	3	3	3
Shredded PVC Pipe Volume Reduction (ft <sup>3</sup> /ft)	0.023	0.023	0.023	0.023	0.023
Volume of Shredded PVC Pipe (ft <sup>3</sup> )	233	23	93	93	93
Steel Pipe Footage	2000	0	0	0	0
Average Steel Pipe Diameter (inches)	2	0	0	0	0
Volume (ft <sup>3</sup> )	0	0	0	0	0
Labor & Equipment					
Number of Persons	4	4	4	4	4
Ft/Day	300	300	300	300	300
Number of Days	40.00	3	13.33	13.33	13.33
\$/Day/Person	\$302	\$302	\$302	\$302	\$302
\$/Day Equipment	\$1,324	\$1,324	\$1,324	\$1,324	\$1,324
Subtotal PVC/Steel Pipe Labor & Equipment Costs	\$101,219	\$8,435	\$33,740	\$33,740	\$33,740
Subtotal PVC/Steel Pipe Removal and Loading Costs	\$101,219	\$8,435	\$33,740	\$33,740	\$33,740

**C. Pumps**

Number of Pumps	50	10	14	13	14
Average Volume (ft <sup>3</sup> /pump)	4.93	4.93	4.93	4.93	4.93
Volume of Pumps (ft <sup>3</sup> )	246.5	49.3	69.02	64.09	69.02
Labor & Equipment					
Number of Persons	2	2	2	2	2
Pumps/Day	2	2	2	2	2
Number of Days	25	5	7	6.5	7
\$/Day/Person	\$302	\$302	\$302	\$302	\$302
\$/Day Equipment	\$444	\$444	\$444	\$444	\$444
Subtotal Labor & Equipment Costs	\$26,174	\$5,235	\$7,329	\$6,805	\$7,329
Subtotal Pump Removal and Loading Costs	\$26,174	\$5,235	\$7,329	\$6,805	\$7,329

**D. Dryer**

Dryer Volume (ft <sup>3</sup> )	885	0	0	0	0
Labor & Equipment					
Number of Persons	4	0	0	0	0
Ft <sup>3</sup> /Day	125	0	0	0	0
Number of Days	7.08	0	0	0	0
\$/Day/Person	\$302	\$302	\$302	\$302	\$302
\$/Day Equipment (includes crane with operator)	\$2,086	\$2,086	\$2,086	\$2,086	\$2,086
Total Labor Cost	\$23,311	\$0	\$0	\$0	\$0
Total Dryer Dismantling and Loading Cost	\$23,311	\$0	\$0	\$0	\$0

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

<b>Equipment Removal and Loading</b>	<b>Central Plant</b>	<b>Satellite No. 1</b>	<b>Satellite No. 2</b>	<b>Satellite No. 3</b>	<b>Se Plant</b>
<b>E. RO Units</b>					
Number of RO Units (500 gpm)					
Current	0	0	2.5	0	0
Planned	0	0	0	0	0
Number of Degasser Units					
Current	0	0	0	0	0
Planned	0	0	0	0	1
RO/Degasser Average Volume (ft <sup>3</sup> /Unit)	250	250	250	250	250
<b>Labor &amp; Equipment</b>					
Number of Persons	2	2	2	2	2
Number of Days	0	0	2	0	2
\$/Day/Person	\$301.60	\$301.60	\$301.60	\$301.60	\$301.60
\$/Day/Equipment	\$598.48	\$598.48	\$598.48	\$598.48	\$598.48
Subtotal RO Unit Removal and Loading Costs	\$0	\$0	\$2,403	\$0	\$2,403
Subtotal Equipment Removal and Loading Costs per Facility	\$292,854	\$36,071	\$83,572	\$95,442	\$83,572
<b>Total Equipment Removal and Loading Costs</b>	<b>\$591,511</b>				
<b>II. Transportation and Disposal Costs (NRC-Licensed Facility)</b>					
<b>A. Tankage</b>					
Volume of Tank Construction Material (ft <sup>3</sup> )	1028	162	290	397	290
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	1131	178	319	437	319
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal Tankage Transportation and Disposal Costs	\$8,757	\$1,378	\$2,470	\$3,384	\$2,470
<b>B. PVC / Steel Pipe</b>					
Volume of Shredded PVC Pipe (ft <sup>3</sup> )	233	23	93	93	93
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	256	25	102	102	102
Volume of Steel Pipe (ft <sup>3</sup> )	0	0	0	0	0
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal PVC Pipe Transportation and Disposal Costs	\$1,982	\$194	\$790	\$790	\$790
<b>C. Pumps</b>					
Volume of Pumps (ft <sup>3</sup> )	246.5	49.3	69.02	64.09	69.02
Volume for Disposal Assuming 10% Void Space (ft <sup>3</sup> )	271	54	76	70	76
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal Pump Transportation and Disposal Costs	\$2,098	\$418	\$588	\$542	\$588
<b>D. Dryer</b>					
Dryer Volume (ft <sup>3</sup> )	885	0	0	0	0
Volume for Disposal Assuming Dryer Remains Intact (ft <sup>3</sup> )	885	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Total Dryer Transportation and Disposal Costs	\$6,853	\$0	\$0	\$0	\$0
<b>E. RO/Degasser Units</b>					
Volume of RO/Degasser Units (ft <sup>3</sup> )	0	0	625	0	250
Volume for Disposal Assuming 50% Volume Reduction (ft <sup>3</sup> )	0	0	312.5	0	125
Transportation and Disposal Unit Costs	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal RO Unit Transportation and Disposal Costs	\$0	\$0	\$2,420	\$0	\$968
Subtotal Equipment Transportation and Disposal Costs per Facility	\$19,690	\$1,990	\$6,268	\$4,716	\$4,816
<b>Total Equipment Transportation and Disposal Costs</b>	<b>\$37,480</b>				
<b>III. Health and Safety Costs</b>					
Radiation Safety Equipment	Accounted for on GW REST				
<b>Total Health and Safety Costs</b>					
<b>SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY</b>	<b>\$312,544</b>	<b>\$38,061</b>	<b>\$89,840</b>	<b>\$100,158</b>	<b>\$88,388</b>
<b>TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS</b>	<b>\$628,991</b>				

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

<b>Building Demolition and Disposal (Highland Uranium Project Buildings)</b>	<b>Central Plant</b>	<b>Dryer Building</b>	<b>Satellite No. 1</b>	<b>Satellite No. 2</b>	<b>Satellite No. 3</b>	<b>Sat. No. 3 Fab Shop</b>	<b>Yellowcake Warehouse</b>	<b>South Warehouse</b>	<b>Suspended Walkway</b>
<b>I. Decontamination Costs</b>									
A. Wall Decontamination									
Area to be Decontaminated (ft <sup>2</sup> )	131,000	20,000	0	0	0	0	0	0	0
HCl Acid Wash, including labor (\$/ft <sup>2</sup> )	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97
Subtotal Wall Decontamination Costs	\$126,760	\$19,353	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. Concrete Floor Decontamination									
Area to be Decontaminated (ft <sup>2</sup> )	17,820	0	6,000	9,600	9,600	0	0	0	0
HCl Acid Wash, including labor (\$/ft <sup>2</sup> )	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70
Subtotal Concrete Floor Decontamination Costs	\$12,459	\$0	\$4,195	\$6,712	\$6,712	\$0	\$0	\$0	\$0
C. Deep Well Injection Costs									
Total Kgals for Injection (1 gal used per ft <sup>2</sup> )	148.82	20	6	9.6	9.6	0	0	0	0
Deep Well Injection Unit Cost (\$/Kgals)	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07
Subtotal Deep Well Injection Costs	\$308	\$41	\$12	\$20	\$20	\$0	\$0	\$0	\$0
Subtotal Decontamination Costs per Building	\$139,527	\$19,394	\$4,207	\$6,732	\$6,732	\$0	\$0	\$0	\$0
<b>Total Decontamination Costs</b>	<b>\$191,623</b>								
<b>II. Demolition Costs</b>									
A. Building									
Height of Building (ft)	24	24	24	25	25	25	14	19	0
Volume of Building (ft <sup>3</sup> )	794,000	30,720	192,000	320,000	320,000	37,560	91,000	333,000	5,600
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft <sup>3</sup> )	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26
Subtotal Building Demolition Costs	\$207,949	\$8,046	\$50,285	\$83,808	\$83,808	\$9,837	\$23,833	\$87,213	\$1,467
B. Concrete Floor									
Area of Concrete Floor (ft <sup>2</sup> )	23,760	500	8,000	12800	12800	0	6500	18000	0
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft <sup>2</sup> )	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27
Subtotal Concrete Floor Demolition Costs	\$125,146	\$2,634	\$42,137	\$67,419	\$67,419	\$0	\$34,236	\$94,808	\$0
C. Concrete Footing									
Length of Concrete Footing (ft)	617	89	358	453	453	0	322	537	0
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft)	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25
Subtotal Concrete Footing Demolition Costs	\$11,872	\$1,722	\$6,889	\$8,714	\$8,714	\$0	\$6,209	\$10,333	\$0
Subtotal Demolition Costs per Building	\$344,967	\$12,402	\$99,311	\$159,941	\$159,941	\$9,837	\$64,278	\$192,354	\$1,467
<b>Total Demolition Costs</b>	<b>\$1,469,967</b>								

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

<b>Building Demolition and Disposal (Highland Uranium Project Buildings)</b>	<b>Central Plant</b>	<b>Dryer Building</b>	<b>Satellite No. 1</b>	<b>Satellite No. 2</b>	<b>Satellite No. 3</b>	<b>Sat. No. 3 Fab Shop</b>	<b>Yellowcake Warehouse</b>	<b>South Warehouse</b>	<b>Suspended Walkway</b>
<b>III. Disposal Costs</b>									
A. Building									
Volume of Building (cy)	29407	1138	7111	11852	11852	1391	3370	12333	207
Off-Site County Landfill									
Percentage (%)	100	100	100	100	100	100	100	100	100
Volume for Disposal (cubic yards)	29407	1138	7111	11852	11852	1391	3370	12333	207
Disposal Unit Cost (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal County Facility Off-Site Disposal Costs	\$233,051	\$9,017	\$56,355	\$93,925	\$93,925	\$11,024	\$26,710	\$97,740	\$1,644
B. Concrete Floor									
Area of Concrete Floor (ft <sup>2</sup> )	23760	500	8000	12800	12800	1500	6500	18000	1186
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft <sup>3</sup> )	17820	375	6000	9600	9600	1125	4875	13500	889.5
Volume of Concrete Floor (cy)	660	14	222	356	356	42	181	500	33
1. Off-Site County Landfill									
Percentage (%)	75	75	75	100	100	100	100	100	100
Volume for Disposal (cy)	495	10	167	356	356	42	181	500	33
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal County Facility Off-Site Disposal Costs	\$3,923	\$83	\$1,321	\$2,818	\$2,818	\$330	\$1,431	\$3,962	\$261
2. NRC-Licensed Facility									
Percentage (%)	25	25	25	0	0	0	0	0	0
Volume for Disposal (ft <sup>3</sup> )	4455	94	1500	0	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14
Subtotal NRC-Licensed Facility Disposal Costs	\$49,637	\$1,045	\$16,713	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Concrete Floor Disposal Costs	\$53,560	\$1,128	\$18,034	\$2,818	\$2,818	\$330	\$1,431	\$3,962	\$261
C. Concrete Footing									
Length of Concrete Footing (ft)	617	89	358	453	453	0	322	537	124
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (ft <sup>3</sup> )	2466	358	1431	1810	1810	0	1290	2147	496
Volume of Concrete Footing (cy)	91	13	53	67	67	0	48	80	18
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal Concrete Footing Disposal Costs (county landfill)	\$724	\$105	\$420	\$531	\$531	\$0	\$379	\$630	\$146
Subtotal Disposal Costs per Building	\$287,335	\$10,250	\$74,809	\$97,274	\$97,274	\$11,354	\$28,520	\$102,332	\$2,051
<b>Total Disposal Costs</b>	<b>\$906,557</b>								
<b>IV. Health and Safety Costs</b>									
Accounted for on GW REST									
<b>SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS</b>	<b>\$771,829</b>	<b>\$42,046</b>	<b>\$178,327</b>	<b>\$263,947</b>	<b>\$263,947</b>	<b>\$21,191</b>	<b>\$92,798</b>	<b>\$294,686</b>	<b>\$3,518</b>
<b>TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS</b>	<b>\$2,568,147</b>								
<b>Building Utility Costs</b>									
Number of years of operation required for restoration/reclamation	0	0	0	19	0	0	0	0	0
SUBTOTAL BUILDING ELECTRICAL COSTS (UC-Electrical Power)	\$0.00	\$0.00	\$0.00	\$478,074.18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>TOTAL BUILDING ELECTRICITY COSTS</b>	<b>\$1,416,949</b>								
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)				\$47,459.02					
<b>TOTAL PROPANE AND NATURAL GAS COSTS</b>	<b>\$227,566</b>								
<b>TOTAL UTILITY COSTS</b>	<b>\$1,644,514.86</b>								



**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

Building Demolition and Disposal (Highland Uranium Project Buildings)	Changehouse and Lab	Maintenance Bldg	Main Office	Office Trailers	Process/ Fire Water	Potable Water Bldg	Potable Water Tank Slab	Central Plant Tank Slabs	Selenium Plant	Exxon R&D RO Bldg.	Exxon R&D Process Bldg.	SRHUP 9 DDW	VOLLMAN 33-27 DDW	MORTON 20 DDW	1-
<b>I. Decontamination Costs</b>															
A. Wall Decontamination															
Area to be Decontaminated (ft <sup>2</sup> )	0	0	0	0	0	0	0	0	4,000	0	0	0	0	0	0
HCl Acid Wash, including labor (\$/ft <sup>2</sup> )	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97	\$0.97
Subtotal Wall Decontamination Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,871	\$0	\$0	\$0	\$0	\$0	\$0
B. Concrete Floor Decontamination															
Area to be Decontaminated (ft <sup>2</sup> )	0	0	0	0	0	0	0	0	9,600	1260	1260	1260	1260	1260	1260
HCl Acid Wash, including labor (\$/ft <sup>2</sup> )	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70
Subtotal Concrete Floor Decontamination Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,712	\$881	\$881	\$881	\$881	\$881	\$881
C. Deep Well Injection Costs															
Total Kgals for Injection (1 gal used per ft <sup>2</sup> )	0	0	0	0	0	0	0	0	13.6	1.26	1.26	1.26	1.26	1.26	1.26
Deep Well Injection Unit Cost (\$/Kgals)	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07	\$2.07
Subtotal Deep Well Injection Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28	\$3	\$3	\$3	\$3	\$3	\$3
Subtotal Decontamination Costs per Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,611	\$884	\$884	\$884	\$884	\$884	\$884
<b>Total Decontamination Costs</b>															
<b>II. Demolition Costs</b>															
A. Building															
Height of Building (ft)	14	13	12	0	21	35	0	0	25	12	12	12	12	12	12
Volume of Building (ft <sup>3</sup> )	73000	27,000	72,000	20,000	16,500	6,300	0	0	320,000	15120	15120	15120	15120	15120	15120
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft <sup>3</sup> )	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26	\$0.26
Subtotal Building Demolition Costs	\$19,119	\$7,071	\$18,857	\$5,238	\$4,321	\$1,650	\$0	\$0	\$83,808	\$3,960	\$3,960	\$3,960	\$3,960	\$3,960	\$3,960
B. Concrete Floor															
Area of Concrete Floor (ft <sup>2</sup> )	5400	2100	6000	0	800	180	1256	7854	12800	1260	1260	1260	1260	1260	1260
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft <sup>2</sup> )	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27	\$5.27
Subtotal Concrete Floor Demolition Costs	\$28,442	\$11,061	\$31,603	\$0	\$4,214	\$948	\$6,615	\$41,368	\$67,419	\$6,637	\$6,637	\$6,637	\$6,637	\$6,637	\$6,637
C. Concrete Footing															
Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	142	142	142	142	142	142
Demolition Unit Cost per WDEQ Guideline No.12, App.K (\$/ft)	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25	\$19.25
Subtotal Concrete Footing Demolition Costs	\$5,660	\$3,529	\$5,966	\$0	\$2,178	\$1,033	\$0	\$0	\$8,714	\$2,734	\$2,734	\$2,734	\$2,734	\$2,734	\$2,734
Subtotal Demolition Costs per Building	\$53,221	\$21,661	\$56,426	\$5,238	\$10,713	\$3,631	\$6,615	\$41,368	\$159,941	\$13,331	\$13,331	\$13,331	\$13,331	\$13,331	\$13,331
<b>Total Demolition Costs</b>															

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

Building Demolition and Disposal (Highland Uranium Project Buildings)	Changehouse and Lab	Maintenance Main Bldg Office	Office Trailers	Process/ Fire Water	Potable Water Bldg	Potable Water Tank Slab	Central Plant Tank Slabs	Selenium Plant	Exxon R&D RO Bldg.	Exxon R&D Process Bldg.	SRHUP 9 DDW	VOLLMAN 33-27 DDW	MORTON 1- 20 DDW
<b>III. Disposal Costs</b>													
A. Building													
Volume of Building (cy)	2704	1000	2667	741	611	233	0	0	11852	560	560	560	560
Off-Site County Landfill													
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100	100
Volume for Disposal (cubic yards)	2704	1000	2667	741	611	233	0	0	11852	560	560	560	560
Disposal Unit Cost (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal County Facility Off-Site Disposal Costs	\$21,427	\$7,925	\$21,133	\$5,870	\$4,843	\$1,849	\$0	\$0	\$93,925	\$4,438	\$4,438	\$4,438	\$4,438
B. Concrete Floor													
Area of Concrete Floor (ft <sup>2</sup> )	3000	2100	6000	0	800	180	1256	7854	12800	1260	1260	1260	1260
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft <sup>3</sup> )	2250	1575	4500	0	600	135	942	5890.5	9600	945	945	945	945
Volume of Concrete Floor (cy)	83	58	167	0	22	5	35	218	356	35	35	35	35
1. Off-Site County Landfill													
Percentage (%)	100	100	100	100	100	100	100	100	100	100	100	100	100
Volume for Disposal (cy)	83	58	167	0	633	5	35	218	356	35	35	35	35
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal County Facility Off-Site Disposal Costs	\$660	\$462	\$1,321	\$0	\$5,019	\$40	\$276	\$1,729	\$2,818	\$277	\$277	\$277	\$277
2. NRC-Licensed Facility													
Percentage (%)	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume for Disposal (ft <sup>3</sup> )	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft <sup>3</sup> )	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14	\$11.14
Subtotal NRC-Licensed Facility Disposal Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Concrete Floor Disposal Costs	\$660	\$462	\$1,321	\$0	\$5,019	\$40	\$276	\$1,729	\$2,818	\$277	\$277	\$277	\$277
C. Concrete Footing													
Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	142	142	142	142
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4	4	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1	1	1	1	1	1	1	1	1	1	1	1	1
Volume of Concrete Footing (ft <sup>3</sup> )	1176	733	1239	0	453	215	0	0	1810	568	568	568	568
Volume of Concrete Footing (cy)	44	27	46	0	17	8	0	0	67	21	21	21	21
Disposal Unit Cost per WDEQ Guideline No.12, App.K (\$/cy)	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92	\$7.92
Subtotal Concrete Footing Disposal Costs (county landfill)	\$345	\$215	\$364	\$0	\$133	\$63	\$0	\$0	\$531	\$167	\$167	\$167	\$167
Subtotal Disposal Costs per Building	\$22,432	\$8,602	\$22,818	\$5,870	\$9,995	\$1,952	\$276	\$1,729	\$97,274	\$4,882	\$4,882	\$4,882	\$4,882
<b>Total Disposal Costs</b>													
<b>IV. Health and Safety Costs</b> Accounted for on GW REST													
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$75,653	\$30,263	\$79,244	\$11,108	\$20,708	\$5,583	\$6,891	\$43,097	\$267,826	\$19,097	\$19,097	\$19,097	\$19,097
<b>TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS</b>													
<b>Building Utility Costs</b>													
Number of years of operation required for restoration/reclamation	0	0	0	0	0	0	0	0	19	0	0	19	19
SUBTOTAL BUILDING ELECTRICAL COSTS (UC-Electrical Power)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$713,549.75	\$0.00	\$0.00	\$75,115.98	\$75,092.93
<b>TOTAL BUILDING ELECTRICITY COSTS</b>													
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)									\$180,107				
<b>TOTAL PROPANE AND NATURAL GAS COSTS</b>													
<b>TOTAL UTILITY COSTS</b>													



**Camero Resources  
Highland Uranium Project  
2012-13 Safety Estimate**

[illegible]

NOTE: Vehicle operation costs are captured in WP REC.

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**WELLFIELD ROAD RECLAMATION**

**Assumptions**

1. Gravel road base removed (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
2. Gravel road base: average depth = 0.25 ft, average width = 10 ft
3. Roads scarified prior to topsoil application (WDEQ Guideline No. 12, Appendix P)
4. Grading of scarified roads prior to topsoil application (WDEQ Guideline No. 12, Appendix G)
5. Topsoil applied (WDEQ Guideline No. 12, App. C, Level Ground, 500 ft haul)
6. Stripped topsoil: average depth = 0.67 ft, average width = 25 ft
7. Discing/seeding cost of acre is based on actual contractor costs as listed in the master costs

**Gravel Road Base Removal Costs per 1000 ft of Road**

$$\frac{1000 \text{ ft}}{1000 \text{ ft}} \times \frac{0.25 \text{ ft}}{0.25 \text{ ft}} \times \frac{10 \text{ ft}}{10 \text{ ft}} \times \frac{1 \text{ cy}}{27 \text{ ft}^3} \times \frac{\$1.27}{\text{cy}} = \$ 118$$

**Scarification Costs per 1000 ft of Road**

$$\frac{1000 \text{ ft}}{1000 \text{ ft}} \times \frac{25 \text{ ft}}{25 \text{ ft}} \times \frac{1 \text{ acre}}{43560 \text{ ft}^2} \times \frac{\$67.68}{\text{acre}} = \$ 39$$

**Grading Costs per 1000 ft of Road**

$$\frac{1000 \text{ ft}}{1000 \text{ ft}} \times \frac{25 \text{ ft}}{25 \text{ ft}} \times \frac{1 \text{ acre}}{43560 \text{ ft}^2} \times \frac{\$73.79}{\text{acre}} = \$ 42$$

**Topsoil Application Costs per 1000 ft of Road**

$$\frac{1000 \text{ ft}}{1000 \text{ ft}} \times \frac{0.67 \text{ ft}}{0.67 \text{ ft}} \times \frac{25 \text{ ft}}{25 \text{ ft}} \times \frac{1 \text{ cy}}{27 \text{ ft}^3} \times \frac{\$1.27}{\text{cy}} = \$ 790$$

**Discing/Seeding Costs per 1000 ft of Road**

$$\frac{1000 \text{ ft}}{1000 \text{ ft}} \times \frac{25 \text{ ft}}{25 \text{ ft}} \times \frac{1 \text{ acre}}{43560 \text{ ft}^2} \times \frac{\$606}{\text{acre}} = \$ 348$$

**TOTAL WELLFIELD ROAD RECLAMATION COSTS PER  
1000 FT OF ROAD**

**= \$ 1,337**



**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Groundwater Sweep (GWS) and Deep Disposal Well (DDW) Unit Costs**

**Assumptions:**

1. Wellfield pumps are 5 hp pumps pumping 25 gpm
2. Cost of electricity = \$0.0554 kwh
3. One 60 hp pump at the plant or satellite feeds two DDWs at 75 gpm
4. One 75 hp at each DDW (pumps run on VFDs which reduces operating HP to match pumping rate)
5. Se Plant Media is changed 4 times per year and there are 2 columns in the plant
6. There are 12000 pounds of iron in each column, \$0.46 per pound  
18000 pounds of sand, and \$0.14 per pound  
20000 pounds of gravel in each column \$0.05 per pound
7. Antiscalant (ScaleTrol) added at a rate of 0.00001900 gal/gal at a cost of \$43.59 gal

**Wellfield Pumping Electrical Costs per 1000 Gallons**

$$\frac{5 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{25 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{\text{kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$0.14$$

**Plant or Satellite to DDW Pumping Electrical Costs per 1000 Gallons**

$$\frac{60 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{75 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{\text{kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$0.55$$

**DDW Pumping Costs per 1000 gallons**

$$\frac{75 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{75 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{\text{kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$0.69$$

**AntiScalant ScaleTrol**

$$1000 \text{ gal} \times \frac{0.000019 \text{ gal}}{1 \text{ gal}} \times \$43.59 \text{ gal} = \$0.83$$

<b>TOTAL GWS + DDW INJECTION COSTS PER 1000 GALLONS</b>	<b>= \$</b>	<b>2.21</b>
<b>TOTAL DDW INJECTION COSTS PER 1000 GALLONS</b>	<b>= \$</b>	<b>2.07</b>

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Annual Cost of Selenium Plant Operation**

**Barium Chloride Usage**

$$\frac{1800 \text{ bags}}{\text{year}} \times \frac{50 \text{ lbs}}{\text{bag}} \times \frac{\$0.64}{\text{lb}}$$

\$57,717

**Media Change Out**

$$\frac{4 \text{ times}}{1 \text{ year}} \times \frac{2 \text{ columns}}{1 \text{ plant}} = 8 \times$$

63 yd3

x

\$301

\$5,562 iron  
\$2,527 sand  
\$990 gravel  
\$9,079 material  
18952.26 disposal

\$28,031

\$224,247

<b>Annual Cost of Selenium Plant Operation</b>	<b>\$281,964</b>
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**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Groundwater Reverse Osmosis (RO) and Bioremediation Unit Costs**

**Assumptions:**

1. Cost of electricity =									\$0.0554 KW hr
2. RO System Capacity				250 gpm					
3. RO System Horsepower:									
	RO Unit Pump			60 hp					
	Permeate/Injection pump			60 hp					
	Waste pump			15 hp					
	TOTAL:			135 hp					
4. Chemical costs:									
	Sodium Sulfide								\$0.51 pound
	Antiscalant (Hypersperse)								\$34.58 gal
5. Mix Rates									
	Sodium Sulfide			0.0001 pound/gal					
	Antiscalant (Hypersperse)			0.00000833 gal/gal					
6. Based on wellfield	5 hp pumps doing	25 gpm							
7. RO Maintenance Costs									
	35 lbs tripolyphosphi	\$2.18 per pound	=						
	85 lbs EDTA	\$3.95 per pound		\$412.05	x	2 times per year	\$824.10	\$0.01	per Kgal

**Reverse Osmosis/Bioremediation Electrical Costs per 1000 Gallons**

$$\frac{135 \text{ hp}}{1 \text{ pump}} \times \frac{1 \text{ pump}}{250 \text{ gpm}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{0.746 \text{ kW}}{1 \text{ hp}} \times \frac{\$0.0554}{\text{kWh}} \times \frac{1000 \text{ gallons}}{1 \text{ kgal}} = \$0.37 \text{ per Kgal}$$

**Treatment chemical costs per 1000 Gallons**

Antiscalant HyperSperser									
1000 gal	X	0.000008330 gal antiscalant	X	\$34.58					
		1 gal		gal antiscalant				= \$ 0.288	per Kgal
Sodium Sulfide									
1000 gal	X	0.00010 pounds	X	\$0.51					
		1 gal		pound sodium sulfide				= \$ 0.051	per Kgal

<b>TOTAL RO COSTS PER 1000 GALLONS</b>	<b>= \$ 0.67</b>
<b>TOTAL RO WITH CHEMICAL REDUCTANT COST PER 1000 GALLONS</b>	<b>= \$ 0.72</b>

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**FIVE YEAR MECHANICAL INTEGRITY TESTS (MIT)**

**Assumptions:**

- 1 Pulling Unit for 8 hr/day
- 2 MIT Unit for 8 hr/day
- 3 Labor for operation requires 2 workers (one for Pulling Unit and one for MIT Unit)

**MIT Costs per Well**

**Equipment and Labor:**

Pulling Unit					
8 hours	X	\$ 37.83	per hour	=	\$ 302.64
Laborer					
8 hours	X	\$ 33.35	per hour	=	\$ 533.60
MIT Unit					
8 hours	X	\$ 30.42	per hour	=	\$ 243.36

**TOTAL MIT COST PER DAY = \$ 1080.00**

Wells Completed 6 per day

**MIT COSTS PER WELL = \$ 180.00**

**Cameco Resources**  
**Highland Uranium Project**  
**2012-2013 Summary Estimate**

**Wells without pumps**

**Assumptions:**

- 1 Typical 8 hour working day
- 2 Average 700 feet per well
- 3 Plug four (4) Wells per day

700 ft X 4 = 2,800

**Cased Well Abandonment Costs**

\$ per day \$ per foot

Cat 416 Backhoe	8 hours	X	\$ 116.88	per hour	=	\$ 935.00	\$0.33
Water Truck	8 hours	X	\$ 106.25	per hour	=	\$ 850.00	\$0.30
Hose Reel	8 hours	X	\$ 62.50	per hour	=	\$ 500.00	\$0.18
Cementér	8 hours	X	\$ 14.30	per hour	=	\$ 800.00	\$0.29

**Materials per foot of well**

Cement	0.0857143 sacks/ X	\$ 16.00	per sack	=	\$ 3,840.00	\$1.37
Bentonite	0.006 sacks/ X	\$ 4.31	per sack	=	\$ 68.96	\$0.02

**Total Estimated Cost per Day**

\$ 6,993.96

**Total Estimated Cost per Foot based on Tyler Exploration Quote #502 dated 3-11-11:**

**\$2.50**

**Wells with pumps**

**Assumptions:**

- 1 Typical 8 hour working day
- 2 Average 700 feet per well
- 3 Plug four (4) Wells per day

700 ft X 4 = 2,800

**Cased Well Abandonment Costs**

\$ per day \$ per foot

Cat 416 Backhoe	8 hours	X	\$ 116.88	per hour	=	\$ 935.00	\$0.33
Pulling Unit	8 hours	X	\$ 106.25	per hour	=	\$ 850.00	\$0.30
Water Truck	8 hours	X	\$ 106.25	per hour	=	\$ 850.00	\$0.30
Hose Reel	8 hours	X	\$ 62.50	per hour	=	\$ 500.00	\$0.18
Cementér	8 hours	X	\$ 189.21	per hour	=	\$ 800.00	\$0.29

**Materials per foot of well**

Cement	0.0857143 sacks/ X	\$ 16.00	per sack	=	\$ 3,840.00	\$1.37
Bentonite	0.006 sacks/ X	\$ 4.31	per sack	=	\$ 68.96	\$0.02

**Total Estimated Cost per Day**

\$ 7,843.96

**Total Estimated Cost per Foot based on Tyler Exploration Quote #503 dated 4-29-11:**

**\$2.80**

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**REMOVAL OF CONTAMINATED SOIL AROUND WELLS Unit Cost**

**Assumptions:**

- 1 Use backhoe for 0.25 hr/well to dig
- 2 Radiation Technician measures extent of contamination for 0.25 hr/well

**Assessment/Removal Costs**

**Cost per well**

Cat 416 Backhoe	0.25 hours	X	\$	35.84 per hour	\$8.96
Radiation Technician	0.25 hours	X	\$	34.80 per hour	\$8.70
Operator	0.25	X	\$	37.70 per hour	\$9.43

**Disposal and Transportation Costs**

Contaminated Soil per Well	0.370 cy per well		
Disposal and Transportation	\$	300.83 per cy	\$111.31

<b>Total Estimated Cost per Well:</b>	<b>\$138.39</b>
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**DELINEATION HOLE ABANDONMENT Unit Costs**

**Assumptions:**

- 1 Per Guideline 12, Appendix L

**Hole Abandonment Costs**

Site Locating	\$	10.00 per si
Sealing Costs per Guideline 12	\$	6.28 per fo
Hole Plug/Cap	\$	8.00 ea
Site Grading & Seeding	\$	30.00 per si

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Wellfield Building/Clay Liner Removal**

**Cost per Well Head Cover**

Radiation Tech =		34.80 per hour
Operator =		37.70 per hour
Total Wellhead Covers =		4,470
HCl 35% Cost =	\$	0.200 per pound
Acid Usage Rate =		4.1 pounds per wellhead cover
Acid Unit Cost =	\$	0.82 per wellhead cover
Total Labor Rate =	\$	80.70 per hour
Cleaning Rate		10 wellheads per hour
<b>Survey / Decon.</b>	<b>\$</b>	<b>8.07 per wellhead cover</b>

**Cost per Header House**

Rad Technician =		34.80 per hour
Operator =		37.70 per hour
Number of Operators =		2
HCl 35% Cost =	\$	0.200 per pound
Acid Usage Rate =		20 pounds per header house
Acid Unit Cost =	\$	4.00 per header house
Total Labor Rate =	\$	670.00 per hour
Cleaning Rate		1 header house per day
<b>Survey / Decon.</b>	<b>\$</b>	<b>670.00 per header house</b>

**Clay Liner/Subsoil Removal Cost**

Operator =		37.70 per hour
Trackhoe =	\$	100.85 per hour
Loader =	\$	52.56 per hour
Loader Size =		1.5 cubic yards
Disposal Rate =		40 yards/hour
<b>Total Removal</b>	<b>\$</b>	<b>4.78 per cubic yard</b>

**Cameco Resources**  
**Highland Uranium Project**  
**ACID WASH**  
**2012-13 Surety Estimate**

**Assumptions:**

- 10% wash solution is used
- 0.25 gallon of acid wash is used per sq ft. to clean walls.
- 1 gallon of acid wash is used per sq ft. to clean floors.

Using the CPP square footages the assumption is as follows

**Acid Wash (Walls)**

Labor	2 Men
Rate	\$33.35 hr.
Time	20 8hr. Days
Manlift Rental	\$8,496.00 Month
CPP Wall Area	26710 square feet
Labor and manlift	\$0.72 per square foot
Acid	\$0.20 pound
Consumables	\$0.05 per square foot
Total	\$0.97 per square foot

**Acid Wash (Floors)**

Labor	2 Workers
Rate	\$33.35 hr.
Time	15 8hr. Days
CPP Floor Area	17820 square feet
Labor	\$0.45 per square foot
Acid	\$0.20 pound
Consumables	\$0.05 per square foot
Total	\$0.70 per square foot

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Electrical Power Consumption and Costs - During Restoration**

Description	Operating Horsepower	Voltage	Lighting FT <sup>2</sup>	Lighting Watts (1.25 watts/FT <sup>2</sup> )	Electric Heat Kw	Electric Air Conditioning Kw	Kw/HP	Kwhr/HP hr	Operating Hours/yr	Kwhr/yr	Power Cost \$/Kwhr	Electrical Cost/year
<b>Sat 2 750 Gallon RO and Support Equip</b>												
RO Feed Pump (cost of power in RO operating cost)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb/Re-injection Pump (cost of power in RO operating)	-	480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Fan	5.0	480					0.746	0.746	8,760	32,675	0.05540	\$ 1,810.18
Misc. Equip. (metering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Air Compressors	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.25 watts/sqft)			28,050	1.25					8,760	307,148	0.05540	\$ 17,015.97
Sat 2 Electrical Power Cost per Year Total												\$ 25,161.80
<b>Se Plant 500 Gallon RO and Support Equip.</b>												
PC Booster Pump	40.0	480					0.746	0.746	8,760	261,398	0.05540	\$ 14,481.47
RO Feed Pump (cost of power in RO operating cost)		480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb/Re-injection Pump ((cost of power in RO operating cost)		480					0.746	0.746	8,760	-	0.05540	\$ -
Decarb-Compressor	5.0	480					0.746	0.746	8,760	32,675	0.05540	\$ 1,810.18
Decarb Booster Pump	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Misc. Equip. (metering pumps, fans, sump pumps)	10.0	480					0.746	0.746	8,760	65,350	0.05540	\$ 3,620.37
Air Compressors	7.5	480					0.746	0.746	8,760	49,012	0.05540	\$ 2,715.28
Lighting (1.25 watts/sqft)			18,640	1.25					8,760	204,108	0.05540	\$ 11,307.58
Se Plant 500 Gallon RO and Support Equip. Total												\$ 37,555.25
<b>DDW Vollman 33-27</b>												
DDW PD Injection Pump (is included in DDW Cost)		480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (metering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480			12.5				4,320	54,000	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			390	1.25					8,760	4,271	0.05540	\$ 236.59
DDW Vollman 33-27 Injection Pump Support Equip. Total												\$3,952.26
<b>DDW SHRUP #9</b>												
DDW PD Injection Pump (is included in DDW Cost)		480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (metering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480			12.5				4,320	54,000	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			392	1.25					8,760	4,292	0.05540	\$ 237.80
DDW SRHUP 9 Injection Pump Support Equip. Total												\$3,953.47
<b>DDW Morton 1-20</b>												
DDW PD Injection Pump (is included in DDW Cost)		480					0.746	0.746	8,760	-	0.05540	\$ -
Misc. Equip. (metering pumps, fans, sump pumps)	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Air Compressors	1.0	480					0.746	0.746	8,760	6,535	0.05540	\$ 362.04
Heater - electric Kw (includes wellhead)	-	480			12.5				4,320	54,000	0.05540	\$ 2,991.60
Lighting (1.25 watts/sqft)			392	1.25					8,760	4,292	0.05540	\$ 237.80
Morton 1-20 Injection Pump Support Equip. Total												\$3,953.47



**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

<b>PSR2 &amp; Irrigator</b>										
Feed Water Pump	40.0	480		0.746	0.746	3,600	107,424	0.05540	\$	5,951.29
Irrigator	50.0	480		0.746	0.746	3,600	134,280	0.05540	\$	7,439.11
Sampler	-	480	0.5			3,600	1,800	0.05540	\$	99.72
<b>PSR2 &amp; Irrigator Total</b>										<b>\$ 13,490.12</b>
<b>Header House heating, Typical</b>										
Heater - electric Kw (includes wellhead)	-	480	12.5			4,320	54,000	0.05540	\$	2,991.60
<b>Header House heating, Typical Total</b>										<b>\$2,991.60</b>

**Cameco Resources  
Highland Uranium Project  
2012-13 Surety Estimate**

**Heating Cost by Building**

					AIR Exchange	Building			Determine Which Fuel is Used		
	Flooring	Wall	Number	Fan	BTU/hr	BTU/hr	Combined	Heating	\$\$ per	Nat. Gas	Propane
	Sq. Feet	Sq. Feet	Of Fans	CFM	( $\Delta T=40$ )	$\Delta T=40, R=20$	BTU/hr	Months	Million BTUs (Fuel Specific)	\$/ yr	\$/ yr
Sat-2 (6x6" Tank Fans)	12,375	12,000	6	1,500	61,772	48,750	110,522	5	\$4.94	\$2,498	
Se Removal Bldg. (2009/2010)	12,000	12,400	1	9,000	370,630	48,800	419,430	5	\$4.94	\$9,479	
*from MGTC invoice dated 4/16/12											

**Estimated Ventilation CFM and impact on heating \$\$/yr does not account for time with building doors left open.**

**Cameco Resources  
Highland Uranium Project  
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**WELLFIELD PIPING REMOVAL Unit Costs**

**Assumptions:**

1. Trenching with Trackhoe at 1000 ft per day
2. Pipeline extraction and backfilling with Trackhoe & loader at 20 1000 feet per day
4. Trackhoe operation requires 1 worker
5. Pipeline extraction requires 2 workers
6. Operating schedule: 8 hrs/day, 5 days/week

**Equipment**

<b>Trackhoe</b>					
$\frac{\$ 100.9}{\text{hour}}$	X	$\frac{8 \text{ hours}}{\text{day}}$	$\frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.81	per foot
<b>Loader</b>					
$\frac{\$ 52.56}{\text{hour}}$	X	$\frac{8 \text{ hours}}{\text{day}}$	X $\frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.42	per foot
<b>Pickup</b>					
$\frac{\$ 19.92}{\text{hour}}$	X	$\frac{8 \text{ hours}}{\text{day}}$	X $\frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.16	per foot

**Labor**

<b>Trackhoe Operation</b>					
$\frac{\$ 37.7}{\text{man hr}}$	X	$\frac{8 \text{ man hrs}}{1 \text{ day}}$	X $\frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.30	per foot
<b>Loader Operation</b>					
$\frac{\$ 37.7}{\text{man hr}}$	X	$\frac{8 \text{ man hrs}}{1 \text{ day}}$	X $\frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.30	per foot
<b>Pipeline Extraction Laborer</b>					
$\frac{\$ 33.35}{\text{man hr}}$	X	$\frac{8 \text{ man hrs}}{1 \text{ day}}$	X $\frac{1 \text{ day}}{1000 \text{ ft}}$	= \$ 0.27	per foot

<b>MAIN PIPELINE REMOVAL COST</b>	<b>= \$ 2.260</b>	<b>per foot</b>
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**Chipped Pipe Volume Calculations**

**Cameco Resources  
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Pipe Diam Inches	SDR	OD	ID	Wall Thickness	Area of Plastic in Crossection (ft <sup>2</sup> )	Volume of Plastic per Linear Foot (ft <sup>3</sup> )
1.5	11	1.900	1.534	0.183	0.0069	0.0069
2	11	2.375	1.917	0.229	0.0107	0.0107
3	11	3.500	2.825	0.3375	0.0233	0.0233
4	11	4.500	3.633	0.4335	0.0385	0.0385
6	11	6.625	5.348	0.6385	0.0834	0.0834
8	11	8.625	6.963	0.831	0.1413	0.1413
10	11	10.750	8.678	1.036	0.2196	0.2196
12	11	12.750	10.293	1.2285	0.3088	0.3088
14	11	14.000	11.302	1.349	0.3723	0.3723
16	11	16.000	12.916	1.542	0.4864	0.4864
18	11	18.000	14.531	1.7345	0.6155	0.6155

**Camero Resources  
Highland Uranium Project  
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Mine Unit Data													
	with added for restoration no increase in affected volume												
	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C22	Mine Unit-C Heat Drifts	Mine Unit-D	Mine Unit-E	Mine Unit-F	Mine Unit-G	Mine Unit-H	Mine Unit-I	EXT	Mine Unit J J Est
Total number of production wells	0	141	137	0	0	51	15	114	574	136	129	0	117
Total number of injection wells	0	188	313	0	0	110	29	263	868	329	231	0	235
Total number of monitor wells	0	69	104	0	0	38	15	72	190	86	34	55	46
Wells Factor	2.94	2.94	2	2	0	2.5	2.5	2	2	2.4	2.5	2.5	2.5
Wellfield Area (B2)	151,900	690,000	1,067,056	325,000	0	326,730	201,500	971,941	3,615,990	1,222,983	1,146,939	752,000	1,148,680
Wellfield Area (acres)	3.49	15.86	24.50	7.40	0.00	7.50	4.63	22.51	83.01	28.07	26.33	17.29	26.37
Affected Ore Zone Area (B2)	151,900	690,000	1,067,056	325,000	0	326,730	201,500	971,941	3,615,990	1,222,983	1,146,939	752,000	1,148,680
Avg. Computed Thickness	15.0	15.0	16.0	15.0	0.0	17.0	17.0	16.0	16.0	16.0	20.0	20.0	15.0
Porosity	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Affected Volume (B5)	6,698,790	30,468,690	34,143,792	9,790,000	0	13,886,875	8,564,131	40,432,746	115,711,680	46,947,187	57,347,590	37,600,000	43,075,500
Gallons per Foot Volume	13,529	61,535	68,261	19,691	0	28,046	17,296	81,638	235,691	94,815	115,820	75,917	86,995
Number of Patterns in Unit(s)													
Number of Wells in Unit(s)													
Production Wells	Current	0	141	137	0	51	15	114	574	136	129	0	117
	Planned	0	0	11	0	5	0	20	20	0	0	80	0
	Total Estimated	0	141	148	0	56	15	134	594	136	129	80	117
Injection Wells	Current	0	188	313	0	110	29	263	868	329	231	0	235
	Planned	0	0	61	0	0	0	110	35	0	0	150	0
	Total Estimated	0	188	374	0	110	29	373	903	329	231	150	235
Monitor and Restoration Wells	Current	0	69	104	0	38	15	72	190	86	34	55	46
	Planned	0	0	0	0	0	0	0	0	0	0	55	0
	Total Estimated	0	69	104	0	38	15	72	190	86	34	55	46
Number of Wells per Wellfield													
Total Number of Wells	5187												
Average Well Depth (ft)	500	450	550	550	550	600	600	550	650	500	650	550	540
Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5	5
Debris Hole Estimated Next Report Period	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of Fanning (ft)	0	0	18004	0	0	14000	0	18426	29540	6080	0	0	9977
Number of Deep Disposal Wells													

Utility Costs		
Electrical Costs	\$0.0554	kw-Hr
Water to Horsepower	0.766	Kw-Hr
Horsepower per gallon per minute	0.167	HP/gpm
Natural Gas	\$4.94	per MMBTU
Propane	\$26.08	per MMBTU
*Electric rate is from actual invoice to Power Resources on 4/2/12. **Natural Gas rate is from MUTC invoice to Power Resources on 4/16/12. *** Propane rate is from an invoice from V.I. Propane on 3/16/12.		
Labor Rates		
Latest Available for 2012 year, Wyoming Mountain States Employers Council, 2010	Inc 45% benefits	(Ex. overhead)
Environmental Manager/RSO	\$43.00	\$62.35 hour
Restoration Manager/Hydrologist	\$35.00	\$50.75 hour
Operator	\$26.00	\$37.70 hour
Labore	\$23.00	\$33.35 hour
Engineer	\$56.00	\$82.20 hour
Validation/Environmental Engineering Technician	\$24.00	\$34.60 hour
2,080 working hours in a year	175	hours per month
Chemical Costs		
Antiscalant for RO (Hypersperse)	\$34.58	gal
Antiscalant for RO (Scalefret)	\$43.59	gal
Sodium Sulfide	\$0.51	pyramid
Cement	\$9.17	sack
Plug Gel	\$8.00	sack
Well Cap - per guideline 12	\$7.50	sack
Hydrochloric Acid	\$0.20	pound
*Prices are actual for 2012		
Analytical Costs		
Modified Guidelines # (contract lab adjusted for current contract cost)	\$197.00	analysis
6 parameter (contract lab) (Est Rate) (CPI)	\$100.00	analysis
Other (radon, bio, etc.) (Est Rate) (CPI)	\$1,000.00	month

Caneco Resources  
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Equipment Costs	
Equipment	Total (\$/hr)
Cat 924H Loader - 2.4 cu yd bucket	\$52.56
Cat 416H Backhoe	\$35.84
Trailer Mounted Brush Chipper	\$37.60
Cat D8H Bulldozer, Semi-U	\$207.17
Pulling Unit	\$37.83
*1 3/4 Ton 4x4 Truck with Hoist	
MT Unit	\$30.42
GFHL DL-8 Rough Terrain Lift Truck	\$54.89
Goose Neck Trailer	\$17.61
Manlift	\$53.10
Generator	\$14.30
Crane	\$132.85
Cat 320C L Tractor - 1.25 cu yd bucket	\$100.85
Concrete Jaws Laboratory - CP-40	\$18.22
Pick-up Truck 3/4 ton 4x4	\$19.92
Bobcat V250 Skid Steer Loader	\$35.55
Cat 14H Grader - 14' Blade	\$117.73
Cat 613C Elevating Scraper	\$189.21

Notes:  
Equipment costs are PTH/A rates, from the Equipment Watch Rental Rate Blue Book, dated June 7, 2012. Rate is the monthly ownership cost divided by 176 plus the hourly estimated operating cost and is the standard used by the DCF for contractors.  
Costs of these rates used are listed on site.

Waste Disposal Costs									
Waste Form	Fee*		Load Correction Factor (Lose/Ton)	Fee per Cubic Yard	Transport Cost**		Total Transportation and Disposal Cost		
Soil, Concrete, Bulk Hypodermic Material - 1182	\$147.76	per Ton	1.1	\$162.53	\$138.30	per Yd ***	\$300.83	per Yd	
Unpackaged Bulk Hypodermic Material (e.g., pipes) - 1182	\$168.49	per Ton	0.42	\$70.76	\$138.30	per Yd ***	\$209.06	per Yd	
Solid Waste (except landfill)	\$7.66	per Yd	0.42		Ind.		\$7.74	per Yd	
							\$7.66	per Yd	
Void Factor (for disposal)			1.25						

\* Fee includes taxes, unloading, decontamination charge. Based on Denison Mines Invoice no. 510112  
\*\* Transport costs based on invoice from Greenfield Logistics in June 2012

Load Correction Factor - difference between solid material and when it is broken because of air space between the pieces of material, the coarser the material the lower the load factor (or the finer the material the higher the factor). The table below shows some examples of load factors for several common materials, including concrete. These factors are from the Caterpillar Performance Handbook and the Engineering Pocket Reference Guide.

Material	Solid (heaps)	Pounds/CY Heaps (Loose)	% DCF	Load Factor	Cross To CY
Gravel	4136	2781	30%	0.61	1.631068
Limestone	4401	2619	40%	0.60	1.680412
Sandstone	3015	2138	30%	0.65	1.542553
Concrete	3096	2175	40%	0.54	1.854397
Sand & gravel	2700	2400	11%	0.89	1.125



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Guideline No. 12 Unit Costs (includes profit)			
New-11			
App K, Cost Estimate for Demolition and Removal of Railroad Spurs and Facilities Buildings			
Task	Cost per unit		Adjusted Cost per Unit
Mixture of Types	\$0.27 #3	0.97	\$0.262 #3
Explosive Demolition, Concrete or Steel	0.27 #3	0.97	\$0.262 #3
Disposal (Average)	0.14 cy	0.97	\$0.136 cy
City Landfill Dump Charges	\$82.00 ton	0.97	\$79.540 ton
Concrete Footings and Foundations			
4" Thick with Rebar	5.43 #2	0.97	\$5.267 #2
Footings - 2' Thick, 7' Wide	10.83 lin. ft.	0.97	\$10.255 lin. ft.
Concrete Disposal Off-Site	8.17 cy	0.97	\$7.925 cy
App C, Calculations for Moving Materials with a Caterpillar 637G Push-Pull Scraper Fleet			
		Operating Cost per bank (in situ) cubic yards	
One-Way Distance 500 feet, 0% grade		\$1.087	\$1.087 bay
One-Way Distance 1,000 feet, 0% grade		\$1.234	\$1.234 bay
One-Way Distance 2,000 feet, 0% grade		\$1.451	\$1.451 bay
One-Way Distance 4,000 feet, 0% grade		\$3.402	\$3.402 bay
App E, Calculations for Moving Material with a Caterpillar D9R Dozer			
		Operating Cost per linear cubic yard	
Distance 50 feet		\$0.157	\$0.157 bay
App H, Cost Estimate for Handling Wire Fencing and Electrical Power Lines			
Fencing Removal		\$0.34	\$0.34 linear foot
App I, Cost Estimate for Ripping Asphalt Using a Caterpillar D9R Dozer			
		Operating Cost	
		\$867.49	\$867.49 per acre
App H, Cost Estimate for Ripping Overburden Using a Caterpillar D10R Dozer			
		Operating Costs	
0.27 acre/hour	\$322.77	\$322.77	\$322.77 per hour
			\$1,195.44 per acre
App F, Cost Estimate for Scarification of Compacted Surfaces			
			\$67.68 per acre
App G, Calculations for Final Grading with a Caterpillar 16M Motor Grader			
			\$73.79 per acre

Seedling Unit Costs	
Planting / Seedling/Topsoil Costs	2010 Actual
Seed cost	\$55.99 per acre
Free Mulch Crisped and Soil Amendment	\$400 per acre
Seed and Mulch	\$455.99 per acre
Depth of Topsoil	0.5 feet