



September 24, 2012

Mr. Doug Mandeville
U.S. Nuclear Regulatory Commission
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Rockville, MD 20852-27381

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CERTIFIED MAIL # 7011 0470 0001 0202 2160 RETURN RECEIPT REQUESTED

RE: Source Material License SUA-1548, Docket No. 40-8964, Highland Uranium Project,
Revised Surety Estimate Update, Cameco Resources

Dear Mr. Mandeville:

Pursuant to License Condition 9.5 of Source Materials License SUA-1548, Power Resources, Inc. d/b/a Cameco Resources (Cameco) is herein providing a revised 2012-2013 Highland Uranium Project (HUP) surety estimate update to the Nuclear Regulatory Commission (NRC) for review and approval. The revised surety update supersedes the HUP surety estimate provided to the NRC under cover of a letter dated June 29, 2012.

The proposed revised surety estimate for HUP is \$109,425,183. (See attachment) The previous surety estimate submitted in June, 2012 had a calculation error associated with the Well Abandonment (WA) page 4 of 32. Mine Unit I Ext had an incorrect number of abandoned wells pending bond release.

The HUP revised surety was provided to the Wyoming Department of Environmental Quality (WDEQ) – Land Quality Division (LQD) in the 2011-2012 Annual Reports submitted on July 30th, 2012 and copied to the NRC. Additionally, an electronic copy of the revised HUP surety estimate was provided to Reginald Augustus of the NRC in an email dated August 10, 2012.

Please contact me at 307-358-6541, ext. 476 or email to Kenneth_Garoutte@cameco.com if you have any questions.

Respectfully,

A handwritten signature in black ink, appearing to read "Ken Garoutte".

Ken Garoutte
Safety, Health, Environment, Quality (SHEQ) Manager

KG/kg

Attachment: Revised HUP Surety Estimate Update

Cc: File HUP 4.6.4.1

Document Control Desk, Certified Mail # 7011 0470 0001 0202 2177

Ec: Camcco – Cheyenne

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

Highland Uranium Project 2012-13 Surety Estimate Update

I.	Groundwater Restoration (GW REST Sheet)	\$40,637,924
II.	Well Abandonment (WA Sheet)	\$14,828,922
III.	Wellfield Reclamation (WF REC Sheet)	\$12,997,512
IV.	Wellfield and Satellite Surface Reclamation (WF-SAT-SURF Sheet)	\$497,578
V.	Equipment Costs (EQUIP Sheet)	\$628,991
VI.	Building Costs (BLDGS Sheets)	\$4,212,662
VII.	Miscellaneous Site Reclamation (MISC REC Sheet)	\$13,736,557
	Subtotal Reclamation Cost	\$87,540,146
	Contingency	25%
		\$21,885,037
	TOTAL	\$109,425,183

Permit 603

**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
I. Ground Water Sweep Costs													
Estimated PVs	0	0	0	0	0	0	0	1	1	1	1	1	1
Total Kgal for GWS	0	0	0	0	0	0	0	81658	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
Subtotal Ground Water Sweep Costs per Wellfield	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180,077	\$515,350	\$209,092	\$255,414	\$167,461	\$191,847
Total Ground Water Sweep Costs	\$1,519,241												
II. Reverse Osmosis Costs													
Estimated PVs	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	307,461	1,051,610	426,668	521,190	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
Subtotal Reverse Osmosis Costs per Wellfield	\$0	\$0	\$0	\$0	\$0	\$15,194	\$9,370	\$398,148	\$1,139,431	\$462,299	\$564,715	\$370,254	\$424,170
Total Reverse Osmosis Costs	\$3,383,582												
III. Reverse Osmosis with Chemical Reductant Costs													
Estimated PVs	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
Subtotal Reverse Osmosis Chemical Reductant & Disposal Costs	\$0	\$0	\$233,900	\$22,262	\$0	\$110,980	\$68,441	\$323,126	\$924,730	\$375,189	\$458,307	\$300,487	\$344,245
Total Reverse Osmosis Chemical Reductant Costs	\$3,161,667												
IV. Bioremediation													
Estimated PVs	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
Subtotal Bioremediation Costs per Wellfield	\$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
Total Bioremediation Costs	\$0.00												
V. Selenium Plant Operation													
Years	19												
5 year	\$281,964												
Subtotal Selenium Plant Operation Costs	\$5,357,309.84												
VI. MIT Costs													
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
Subtotal MIT Mine Unit	\$0.00	\$11,844.00	\$56,376.00	\$0.00	\$0.00	\$17,928.00	\$3,024.00	\$91,260.00	\$754,488.00	\$100,440.00	\$103,680.00	\$66,240.00	\$152,064.00
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 MITs per DDW	4												
Subtotal MIT DDW Costs	\$503,841.60												
Total MIT Costs	\$1,861,185.60												
VII. Monitoring and Sampling Costs													
Modified Guideline 8 = 6 parameter contract laboratory analysis = Total monitor wells	\$337.00 analysis \$100.00 analysis												
	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
A. Monitor Well Sampling													
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	\$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
\$/sample	54	414	1872	0	0	684	180	2160	9156	3096	1632	2640	3312
7. Other Laboratory Costs													
Radon, etc. =	\$1,000.00												
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	\$470,009.00	\$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												
Restoration Manager Support	\$8,779.75												
HP Technician support	\$6,020.40												
Total Restoration Period	19												
Manager support during restoration	\$4,461,116.40												
HP Technician support during restoration	\$1,372,651.20												
Labor Support 5 each	\$6,589,960.00												
Total Supervisory Labor Costs	\$12,423,727.60												
TOTAL RESTORATION COST PER WELLFIELD	\$32,121.00	\$197,585.00	\$717,435.67	\$45,950.43	\$15,896.00	\$328,719.84	\$165,058.55	\$1,462,619.39	\$5,194,503.97	\$1,864,014.62	\$1,812,257.89	\$1,352,665.27	\$1,869,711.87
	\$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
Bellhole Refurbishment (#)	0	0	0	0	0	0	0	15	22	19	6	0	0
Refurbishment (\$/bellhole)	\$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													
TOTAL GROUND WATER RESTORATION COSTS	\$40,637,924												

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 Hand 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	Totals
I. Well Abandonment (Wellfields)														
# 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	9	69	104	0	0	38	15	72	109	86	74	55	46	637
# of Previously Abandoned Wells Pending Release	109	170	223	0	0	96	0	273	400	59	47	0	18	
Total Number of Wells	118	568	849	0	0	300	57	852	2006	610	441	285	416	6502
Average Diameter of Casing (inches)	5	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	520	540	565
Total Mine Unit Well Depth (ft), production wells	0	63450	81400	0	0	33600	7800	73700	386100	68000	83850	52000	63180	913080
Total Mine Unit Well Depth (ft), all others	59000	192150	385350	0	0	146400	26400	594900	917800	237000	202800	133250	161460	2856710
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	\$2.50
Well Abandonment (w/perm) 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	\$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	\$741,789	\$478,725	\$580,554	\$9,698,399
III. Removal of Contaminated Soil Around Wells														
# of Production and Injection Wells	4470													
Cost per well (\$-well)	\$138.59													
Subtotal Removal of Soil Around Wells		\$618,603.30												\$618,603.30
IV. Decontamination Hole Abandonment														
	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	\$605,549										
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				\$611,933										
# 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 = 830	\$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				\$1,642,730										
Subtotal Hole Abandonment				\$4,105,525.00										
V. Waste Disposal Well Abandonment														
	Morton No. 1-20	Vollman No. 33-27	SRHUP # 9											
A. Well Sealing														
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. Pump Dismantling and Decontamination														
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											
C. Tubing String Disposal (NRC-Licensed Facility)														
Length of Tubing String (ft)	8,498	8,869	8,820											
Diameter of Tubing String (inches)	2,875	2,875	2,875											
Volume of Tubing String (ft ³)	198	207	205											
Transportation and Disposal Unit Cost (\$/ft ³)	\$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													
Total Wellfield Abandonment Costs		\$14,828,922												

**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-E		Mine Unit-F		Mine Unit-H		Mine Unit-I		Mine Unit-J		Est	
	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est	Est
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											
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											
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											
Chipped Volume Reduction (ft ³ /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 (ft ³)	740	2663	2959	0	0	592	444	2219	6658	1480	888	592	1332											
Volume for Disposal Assuming 10% Void Space (ft ³)	814	2930	3255	0	0	651	488	2441	7324	1628	977	651	1465											
Transportation and Disposal Unit Cost (\$/ft ³)	\$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	\$24,486	\$194,693	\$129,793	\$292,035											
Total Wellfield Piping Costs	\$4,510,310																							
II. Well Pumps and Downhole Tubing																								
Assumptions:	60% of production/injection wells contain pumps and/or tubing																							
A. Pump and Tubing Transport 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 (ft ³) 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 (ft ³)	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 (ft ³ /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 (ft ³)	46	1599	2251	0	0	925	253	1914	8691	1914	1823	1441	1546											
Volume of Pump and Tubing (ft ³)	46	2332	3020	0	0	1216	321	2611	11779	2530	2628	1857	2154											
Volume for Disposal Assuming 10% Void Space (ft ³)	51	2565	3322	0	0	1338	353	2872	12956	2783	2890	2043	2370											
Transportation and Disposal Unit Cost (\$/ft ³)	\$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:	inc w/MU-A inc w/MU-C inc w/MU-D																							
Length of Trunkline Trench (ft)	6500	0	5900	0	0	12000	5500	0	11700	13200	10750	0	2500	68050										
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											
Volume (ft ³)	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											
Chipped Volume per Lft (ft ³ /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											
Chipped Volume (ft ³)	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	29900											
Chipped Volume per Lft (ft ³ /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											
Chipped Volume (ft ³)	151	0	137	0	0	279	128	0	272	307	250	0	0											
4. 6" HDPE Trunkline																								
Piping Length (ft)	0	0	0	0	0	0	11000	0	0	0	3000	0	14000											
Chipped Volume per Lft (ft ³ /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											
Chipped Volume (ft ³)	0	0	0	0	0	0	917	0	0	0	250	0	0											
5. 8" HDPE Trunkline																								
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0	0											
Chipped Volume per Lft (ft ³ /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											
Chipped Volume (ft ³)	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 (ft ³ /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											
Chipped Volume (ft ³)	2854	0	0	0	0	0	0	0	0	0	165	0	439											
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 (ft ³ /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											
Chipped Volume (ft ³)	0	0	3644	0	0	7411	0	0	0	0	0	0	618											
8. 14" HDPE Trunkline																								

**Comcast 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-D		Mine Unit-E		Mine Unit-F		Mine Unit-G		Mine Unit-H		Mine Unit-I		Mine Unit-J		
	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	19N	Haul Drifts	
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	23400	26400	8500	0	0	23400					
Chipped Volume per LA (ft ³ /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	0.372	0.372	0.372					
Chipped Volume (ft ³)	0	0	0	0	0	0	0	0	0	0	8712	9829	3165	0	0	0					
9. 16" HDPE Trunkline																					
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	23400	26400	8500	0	0	23400					
Chipped Volume per LA (ft ³ /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	0.486	0.486	0.486					
Chipped Volume (ft ³)	0	0	0	0	0	0	0	0	0	0	11381	12841	4134	0	0	0					
10. 18" HDPE Trunkline																					
Piping Length (ft)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Chipped Volume per LA (ft ³ /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	0.616	0.616	0.616					
Chipped Volume (ft ³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Total Trunkline Chipped Volume (ft ³)	3006	0	3781	0	0	7691	1045	0	20366	22977	7964	0	1057								
Volume for Disposal Assuming 10% Void Space (ft ³)	3306	0	4159	0	0	8460	1150	0	22403	25275	8761	0	1162								
Transportation and Disposal Unit Cost (\$/ft ³)	\$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	\$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								
Total Trunkline Decommissioning Costs	\$732,005																				
IV. Well Head Covers																					
Total Quantity	0	329	522	0	0	166	42	507	1497	465	360	230	352	4470							
Average Well Head Cover Volume (ft ³)	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	1.86							
A. Removal																					
Total Volume (ft ³)	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 (\$/ft ³)	\$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	\$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	\$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	\$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								
Total Well Head Cover Removal and Disposal Costs	\$40,841																				
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 (ft ³)	800	800	800	800	800	800	800	800	800	800	800	800	800								
A. Removal																					
Total Volume (ft ³)	4000	14400	16000	0	0	3200	2400	12000	36000	8000	4800	3200	7200								
Demolition Unit Cost per WDEQ Guideline No.12.App.K (\$/ft ³)	\$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 ft ³ (assumes 10W%20Lx2.5TD)	500	500	500	500	500	500	500	500	500	500	500	500	500								
11e(2) Disposal Unit Cost (\$/ft ³)	\$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								
Total Header House Removal and Disposal Costs	\$932,519																				
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	\$236,471	\$727,699	\$859,171	\$0	\$0	\$261,131	\$141,921	\$614,220	\$2,075,966	\$642,906	\$352,744	\$174,542	\$388,628								
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																				
Total Vehicle Operation Costs	\$3,784,800																				
VII. Header Houses (Includes Booster Stations)																					
Years of Active Restoration	0	0	2	0	0	2	1	4	13	5	7	7	11								
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	\$23,933	\$8,975	\$179,496	\$1,750,086	\$149,580	\$125,647	\$83,765	\$296,168								
Total Header Heating cost	\$2,737,314																				

TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL	\$12,997,512
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**Cameco 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
I. Wellfield Pattern Area Reclamation										
Pattern Area (acres)	42.75	67.5	12.375	49.5	171		9	26.33	17.5	60.75
Discing/Seeding Unit Cost (\$/acre)	\$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
Total Wellfield Pattern Area Reclamation Costs	\$311,039									
II. Wellfield Road Reclamation										
Road Construction										
Length of Wellfield Roads (1000 ft)	12.8	11.3	2.4	13.3	15		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
Wellfield Road Reclamation Costs	\$17,114	\$15,108	\$3,209	\$17,782	\$24,066		\$20,991	\$6,685	\$6,685	\$6,685
Total Wellfield Road Reclamation Costs	\$126,347									
III. Laydown area reclamation										
Area of Disturbance (acres)	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	0.57	0.67	0.67
Surface Grade: Level Ground										
Average Length of Topsoil Haul (ft)	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
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
B. Topsoil Application with Scraper										
Volume of Topsoil Removed (cy)	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
Subtotal Topsoil Application Costs	\$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
Subtotal Discing/Seeding Costs	\$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
Total Wellfield Laydown Area Reclamation Costs	\$32,494									
SUBTOTAL SURFACE RECLAMATION COSTS PER WELLFIELD	\$45,990	\$58,992	\$13,667	\$50,751	\$130,709		\$58,053	\$15,096	\$25,605	\$20,250
TOTAL WELLFIELD SURFACE RECLAMATION COSTS	\$469,880									
IV. Satellite Area Reclamation	Satellite No.1	Satellite No.2	Satellite No.3	Se Plant						
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						
Total Satellite Building Area Reclamation Costs	\$27,698									
TOTAL WELLFIELD AND SATELLITE SURFACE RECLAMATION COSTS	\$497,578									

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

Equipment Removal and Loading

I. Removal and Loading Costs

A. Tankage

	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
Number of Tanks	26	8	14	18	7
Volume of Tank Construction Material (ft ³)	1028	162	290	397	290
Labor					
Number of Persons	4	4	4	4	4
Ft ³ /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 ³ /ft)	0.023	0.023	0.023	0.023	0.023
Volume of Shredded PVC Pipe (ft ³)	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 ³)	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 ³ /pump)	4.93	4.93	4.93	4.93	4.93
Volume of Pumps (ft ³)	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 ³)	885	0	0	0	0
Labor & Equipment					
Number of Persons	4	0	0	0	0
Ft ³ /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**

Equipment Removal and Loading	Central Plant	Satellite No. 1	Satellite No. 2	Satellite No. 3	Se Plant
E. RO Units					
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 ³ /Unit)	250	250	250	250	250
Labor & Equipment					
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
Total Equipment Removal and Loading Costs	\$591,511				
II. Transportation and Disposal Costs (NRC-Licensed Facility)					
A. Tankage					
Volume of Tank Construction Material (ft ³)	1028	162	290	397	290
Volume for Disposal Assuming 10% Void Space (ft ³)	1131	178	319	437	319
Transportation and Disposal Unit Cost (\$/ft ³)	\$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. PVC / Steel Pipe					
Volume of Shredded PVC Pipe (ft ³)	233	23	93	93	93
Volume for Disposal Assuming 10% Void Space (ft ³)	256	25	102	102	102
Volume of Steel Pipe (ft ³)	0	0	0	0	0
Volume for Disposal Assuming 10% Void Space (ft ³)	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft ³)	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal PVC Pipe Transportation and Disposal Costs	\$1,982	\$194	\$790	\$790	\$790
C. Pumps					
Volume of Pumps (ft ³)	246.5	49.3	69.02	64.09	69.02
Volume for Disposal Assuming 10% Void Space (ft ³)	271	54	76	70	76
Transportation and Disposal Unit Cost (\$/ft ³)	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Subtotal Pump Transportation and Disposal Costs	\$2,098	\$418	\$588	\$542	\$588
D. Dryer					
Dryer Volume (ft ³)	885	0	0	0	0
Volume for Disposal Assuming Dryer Remains Intact (ft ³)	885	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft ³)	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Total Dryer Transportation and Disposal Costs	\$6,853	\$0	\$0	\$0	\$0
E. RO/Degasser Units					
Volume of RO/Degasser Units (ft ³)	0	0	625	0	250
Volume for Disposal Assuming 50% Volume Reduction (ft ³)	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
Total Equipment Transportation and Disposal Costs	\$37,480				
III. Health and Safety Costs					
Radiation Safety Equipment	Accounted for on GW REST				
Total Health and Safety Costs					
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	\$312,544	\$38,061	\$89,840	\$100,158	\$88,388
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	\$628,991				

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

Building Demolition and Disposal (Highland Uranium Project Buildings)	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No. 3 Fab Shop	Yellowcake Warehouse	South Warehouse	Suspended Walkway
I. Decontamination Costs									
A. Wall Decontamination									
Area to be Decontaminated (ft ²)	131,000	20,000	0	0	0	0	0	0	0
HCl Acid Wash, including labor (\$/ft ²)	\$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 ²)	17,820	0	6,000	9,600	9,600	0	0	0	0
HCl Acid Wash, including labor (\$/ft ²)	\$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 ft2)	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
Total Decontamination Costs	\$191,623								
II. Demolition Costs									
A. Building									
Height of Building (ft)	24	24	24	25	25	25	14	19	0
Volume of Building (ft ³)	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 ³)	\$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 ²)	23,760	500	8,000	12800	12800	0	6500	18000	0
Demolition Unit Cost per WDEQ Guideline No. 12, App. K (\$/ft2)	\$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
Total Demolition Costs	\$1,469,967								

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

Building Demolition and Disposal (Highland Uranium Project Buildings)	Central Plant	Dryer Building	Satellite No. 1	Satellite No. 2	Satellite No. 3	Sat. No. 3 Fab Shop	Yellowcake Warehouse	South Warehouse	Suspended Walkway
III. Disposal Costs									
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 ²)	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 ³)	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 ³)	4455	94	1500	0	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft ³)	\$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 ³)	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
Total Disposal Costs	\$906,557								
IV. Health and Safety Costs Accounted for on GW REST									
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$771,829	\$42,046	\$178,327	\$263,947	\$263,947	\$21,191	\$92,798	\$294,686	\$3,518
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS	\$2,568,147								
Building Utility Costs									
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
TOTAL BUILDING ELECTRICITY COSTS	\$1,416,949								
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)				\$47,459.02					
TOTAL PROPANE AND NATURAL GAS COSTS	\$227,566								
TOTAL UTILITY COSTS	\$1,644,514.86								

**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 1-20 DDW
I. Decontamination Costs														
A. Wall Decontamination														
Area to be Decontaminated (ft ²)	0	0	0	0	0	0	0	0	0	4,000	0	0	0	0
HCl Acid Wash, including labor (\$/ft ²)	\$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	\$0	\$3,871	\$0	\$0	\$0	\$0
B. Concrete Floor Decontamination														
Area to be Decontaminated (ft ²)	0	0	0	0	0	0	0	0	0	9,600	1260	1260	1260	1260
HCl Acid Wash, including labor (\$/ft ²)	\$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	\$0	\$6,712	\$881	\$881	\$881	\$881
C. Deep Well Injection Costs														
Total Kgals for Injection (1 gal used per ft ²)	0	0	0	0	0	0	0	0	0	13.6	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
Subtotal Deep Well Injection Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28	\$3	\$3	\$3	\$3
Subtotal Decontamination Costs per Building	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,611	\$884	\$884	\$884	\$884
Total Decontamination Costs														
II. Demolition Costs														
A. Building														
Height of Building (ft)	14	13	12	0	21	35	0	0	25	12	12	12	12	12
Volume of Building (ft ³)	73000	27,000	72,000	20,000	16,500	6,300	0	0	320,000	15120	15120	15120	15120	15120
Demolition Unit Cost per WDEQ Guideline No.12.App.K (\$/ft ³)	\$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
B. Concrete Floor														
Area of Concrete Floor (ft ²)	5400	2100	6000	0	800	180	1256	7854	12800	1260	1260	1260	1260	1260
Demolition Unit Cost per WDEQ Guideline No.12.App.K (\$/ft ²)	\$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
C. Concrete Footing														
Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	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
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
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
Total Demolition Costs														

**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 1-20 DDW
III. Disposal Costs														
A. Building														
Volume of Building (cy)	2704	1000	2667	741	611	233	0	0	11852	560	560	560	560	560
Off-Site County Landfill														
Percentage (%)	100	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	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	\$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	\$4,438
B. Concrete Floor														
Area of Concrete Floor (R ²)	3000	2100	6000	0	800	180	1256	7854	12800	1260	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	0.75
Volume of Concrete Floor (R ³)	2250	1575	4500	0	600	135	942	5890.5	9600	945	945	945	945	945
Volume of Concrete Floor (cy)	83	58	167	0	22	5	35	218	356	35	35	35	35	35
1. Off-Site County Landfill														
Percentage (%)	100	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	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	\$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	\$277
2. NRC-Licensed Facility														
Percentage (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume for Disposal (ft ³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation and Disposal Unit Cost (\$/ft ³)	\$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	\$0	\$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	\$277
C. Concrete Footing														
Length of Concrete Footing (ft)	294	183	310	0	113	54	0	0	453	142	142	142	142	142
Average Depth of Concrete Footing (ft)	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
Volume of Concrete Footing (ft ³)	1176	733	1239	0	453	215	0	0	1810	568	568	568	568	568
Volume of Concrete Footing (cy)	44	27	46	0	17	8	0	0	67	21	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	\$7.92
Subtotal Concrete Footing Disposal Costs (county landfill)	\$345	\$215	\$364	\$0	\$133	\$63	\$0	\$0	\$531	\$167	\$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	\$4,882
Total Disposal Costs														
IV. Health and Safety Costs 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	\$19,097
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS														
Building Utility Costs														
Number of years of operation required for restoration/reclamation	0	0	0	0	0	0	0	0	19	0	0	19	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	\$75,115.98
TOTAL BUILDING ELECTRICITY COSTS														
SUBTOTAL PROPANE AND NATURAL GAS COSTS (UC-Heating Cost)									\$180,107					
TOTAL PROPANE AND NATURAL GAS COSTS														
TOTAL UTILITY COSTS														

**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

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

Scarification Costs per 1000 ft of Road

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

Grading Costs per 1000 ft of Road

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

Topsoil Application Costs per 1000 ft of Road

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

Discing/Seeding Costs per 1000 ft of Road

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

**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

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

TOTAL GWS + DDW INJECTION COSTS PER 1000 GALLONS	= \$	2.21
TOTAL DDW INJECTION COSTS PER 1000 GALLONS	= \$	2.07

**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

$\frac{4 \text{ times}}{1 \text{ year}}$	x	$\frac{2 \text{ columns}}{1 \text{ plant}}$	=	8 x	63 yd3	x	\$301
							\$5,562 iron \$2,527 sand <u>\$990 gravel</u> \$9,079 material <u>18952.3 disposal</u>
							\$28,031
							\$224,247

Annual Cost of Selenium Plant Operation	\$281,964
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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) 0.0000833 gal/gal
- 6. Based on wellfield 5 hp pumps doing 25 gpm
- 7. RO Maintenance Costs
 - 35 lbs tripolyphosph \$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 HyperSpere:

$$1000 \text{ gal} \times \frac{0.00008330 \text{ gal antiscalant}}{1 \text{ gal}} \times \frac{\$34.58}{\text{gal antiscalant}} = \$ 0.288 \text{ per Kgal}$$

Sodium Sulfide

$$1000 \text{ gal} \times \frac{0.00010 \text{ pounds}}{1 \text{ gal}} \times \frac{\$0.51}{\text{pound sodium sulfide}} = \$ 0.051 \text{ per Kgal}$$

TOTAL RO COSTS PER 1000 GALLONS	= \$ 0.67
TOTAL RO WITH CHEMICAL REDUCTANT COST PER 1000 GALLONS	= \$ 0.72

**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
2012-13 Summary Estimate
WELL ABANDONMENT ESTIMATES**

Wells without pumps

Assumptions:

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

Cased Well Abandonment Costs

	700 ft	X		4 =		2,800	
						\$ 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
Cementer	8 hours	X	\$ 14.30	per hour	=	\$ 800.00	\$0.29

Materials per foot of well

Cement	0.08571429 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
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Wells with pumps

Assumptions:

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

Cased Well Abandonment Costs

	700 ft	X		4 =		2,800	
						\$ 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
Cementer	8 hours	X	\$ 189.21	per hour	=	\$ 800.00	\$0.29

Materials per foot of well

Cement	0.08571429 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
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**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

Total Estimated Cost per Well:	\$138.39
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DELINEATION HOLE ABANDONMENT Unit Costs

Assumptions:

- 1 Per Guideline 12, Appendix L

Hole Abandonment Costs

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

**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
Survey / Decon.	\$	8.07 per wellhead cover

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
Survey / Decon.	\$	670.00 per header house

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
Total Removal	\$	4.78 per cubic yard

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 ²	Lighting Watts (1.25 watts/FT ²)	Electric Heat Kw	Electric Air Conditioning Kw	Kw/HP	Kwhr/HP hr	Operating Hours/yr	Kwhr/yr	Power Cost \$/Kwhr	Electrical Cost/year
Sat 2 750 Gallon RO and Support Equip												
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
Se Plant 500 Gallon RO and Support Equip.												
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
DDW Vollman 33-27												
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
DDW SHRUP #9												
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
DDW Morton 1-20												
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**

PSR2 & Irrigator										
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
PSR2 & Irrigator Total										\$ 13,490.12
Header House heating, Typical										
Heater - electric Kw (includes wellhead)	-	480	12.5				4,320	54,000	0.05540	\$ 2,991.60
Header House heating, Typical Total										\$2,991.60

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

Heating Cost by Building

	Flooring Sq. Feet	Wall Sq. Feet	Number Of Fans	Fan CFM	AIR	Building BTU/hr ($\Delta T=40$)	Building BTU/hr ($\Delta T=40, R=20$)	Combined BTU/hr	Heating Months	Determine Which Fuel is Used		
					Exchange BTU/hr ($\Delta T=40$)					\$\$ per Million BTUs (Fuel Specific)	Nat. Gas \$\$ / yr	Propane \$\$ / 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	12400	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
2012-13 Surety Estimate**

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

Trackhoe

$$\frac{\$ 100.9}{\text{hour}} \times \frac{8 \text{ hours}}{\text{day}} \times \frac{1 \text{ day}}{1000 \text{ ft}} = \$ 0.81 \text{ per foot}$$

Loader

$$\frac{\$ 52.56}{\text{hour}} \times \frac{8 \text{ hours}}{\text{day}} \times \frac{1 \text{ day}}{1000 \text{ ft}} = \$ 0.42 \text{ per foot}$$

Pickup

$$\frac{\$ 19.92}{\text{hour}} \times \frac{8 \text{ hours}}{\text{day}} \times \frac{1 \text{ day}}{1000 \text{ ft}} = \$ 0.16 \text{ per foot}$$

Labor

Trackhoe Operation

$$\frac{\$ 37.7}{\text{man hr}} \times \frac{8 \text{ man hrs}}{1 \text{ day}} \times \frac{1 \text{ day}}{1000 \text{ ft}} = \$ 0.30 \text{ per foot}$$

Loader Operation

$$\frac{\$ 37.7}{\text{man hr}} \times \frac{8 \text{ man hrs}}{1 \text{ day}} \times \frac{1 \text{ day}}{1000 \text{ ft}} = \$ 0.30 \text{ per foot}$$

Pipeline Extraction Laborer

$$\frac{\$ 33.35}{\text{man hr}} \times \frac{8 \text{ man hrs}}{1 \text{ day}} \times \frac{1 \text{ day}}{1000 \text{ ft}} = \$ 0.27 \text{ per foot}$$

MAIN PIPELINE REMOVAL COST	= \$ 2.260 per foot
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Chipped Pipe Volume Calculations

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

Pipe Diam Inches	SDR	OD	ID	Wall Thickness	Area of Plastic in Crosssection (ft ²)	Volume of Plastic per Linear Foot (ft ³)
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

**Canoco Resources
Highland Uranium Project
2012-13 Survey Estimate**

Mine Unit Data														
wells added for revisions in acres in affected volume														
	Mine Unit-A	Mine Unit-B	Mine Unit-C	Mine Unit-C2	Mine Unit-C Herd Drifts	Mine Unit-D	Mine Unit-D Ext	Mine Unit-E	Mine Unit-F	Mine Unit-H	Mine Unit-I	1 EXT	Mine Unit-J	Mine Unit J Ext
Total number of production wells	0	141	137	0	0	51	13	114	274	136	139	0	117	0
Total number of injection wells	0	188	313	0	0	119	29	267	868	329	231	0	235	0
Total number of monitor wells	9	69	104	0	0	38	15	72	109	86	34	35	46	0
Flow Factor	2.34	2.94	2	0	0	2.5	2.5	2.6	2	2.4	2.5	2.5	2.5	2.5
Walled Area (B2)	151,909	690,900	1,067,556	325,000	0	335,750	208,269	971,941	3,613,900	1,322,583	1,146,959	752,000	1,148,680	29,600
Walled Area (over)	3.49	12.86	24.50	7.40	0	7.50	4.63	22.31	83.36	28.07	28.33	17.58	26.57	6.68
Affected Ore Zone Area (B2)	151,909	690,900	1,067,556	325,000	0	326,750	201,659	971,941	3,613,900	1,322,583	1,146,959	752,000	1,148,680	29,600
Avg. Completed Thickness	15.0	15.0	15.0	15.0	0.9	17.0	17.0	16.0	16.0	16.0	20.0	20.0	15.0	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	0.27
Adjusted Volume (B3)	6,098,790	30,488,606	34,145,792	9,790,000	0	13,886,875	8,564,153	40,432,746	115,721,680	46,547,187	57,347,850	37,666,000	43,075,250	0
Equivalent Porosity Volume	15,232	61,215	68,961	19,091	0	28,046	17,296	81,608	233,681	94,815	115,820	75,937	86,995	0
Number of Patterns in Unit(s)														
Number of Wells in Unit(s)														
Production Wells														
Current	0	141	137	0	0	51	13	114	274	136	139	0	117	0
Planned	0	0	11	0	0	5	0	20	20	0	0	80	0	0
Total Estimated	0	141	148	0	0	56	13	134	294	136	139	80	117	0
Injection Wells														
Current	0	188	313	0	0	119	29	267	868	329	231	0	235	0
Planned	0	0	41	0	0	0	0	110	35	0	0	150	0	0
Total Estimated	0	188	374	0	0	119	29	377	903	329	231	150	235	0
Monitor and Reversion Wells														
Current	9	69	104	0	0	38	15	72	109	86	34	0	46	0
Planned	0	0	0	0	0	0	0	0	0	0	0	55	0	0
Total Estimated	9	69	104	0	0	38	15	72	109	86	34	55	46	0
Number of Wells per Wellfield														
Total Number of Wells	9	398	626	0	0	234	57	379	1606	551	394	283	398	0
Average Well Depth (ft)	500	450	550	550	550	600	600	550	650	500	650	650	540	540
Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Minimum Hole Diameter (inches) Report Period	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Length of casing (ft)	0	0	18494	0	0	14060	0	18428	39540	9680	0	0	9977	9977
Number of Deep Drilling Wells	3													

Utility Costs		
Electrical Costs	\$0.0254	kw/ft
Risk/Water to Reservoir	0.746	kw/ft
Reservoir per gallon per minute	0.147	lit/gpm
Natural Gas	\$4.94	per MMBTU
Propane	\$26.66	per MMBTU
*Electric rate is from actual purchase to Power Resources on 4/27/12		
**Natural Gas rate is from MTC to Power Resources on 4/16/12		
*** Propane rate is from purchase from VI Propane on 10/20/12		
Labor Rates		
Latest available for 2012 year, Wyoming, Mountain States Employer Council, 2010		
	(\$ = overhead)	
Environmental Manager/FSO	\$49.00	\$92.35 hour
Facilities Manager/Hydrologist	\$53.00	\$99.75 hour
Operator	\$26.00	\$37.70 hour
Laborer	\$23.00	\$33.35 hour
Engineer	\$36.00	\$72.20 hour
Radiation/Environmental Engineering Technicians	\$24.00	\$34.80 hour
2,000 working hours in a year	175	hours per month
Chemical Costs		
Antiscalant for RO (Hyponox)	\$34.58	gal
Antiscalant for RO (DowFro)	\$63.19	gal
Sodium Sulfide	\$0.51	pound
Caustic	\$9.17	each
Phag Gel	\$8.00	each
Weld Cap - per gallon 12	\$7.50	each
Hydrochloric acid	\$0.20	pound
**Prices are actual for 2012		
Analytical Costs		
Modified Thiourea # (contract lab adjusted for contract contract cost)	\$377.00	analysis
6 gamma (contract lab) Eri Rate (CFR)	\$100.00	analysis
Other (radio, bio, etc.) Eri Rate (CFR)	\$1,600.00	month

Comcast Resources
Highland Urquison Project
2012-13 Surety Estimate

Equipment Cost	Total (\$/hr)
Cat 924H Loader - 2 4 cu yd bucket	\$52.56
Cat 410C Backhoe	\$25.84
Trailer Mounted Disk Chopper	\$37.60
Cat D9T Bulldozer, Series 47	\$297.17
Pulling Unit	\$37.83
* 1 3/4 Ton 4x4 Truck with Hoist	
MTT Unit	\$30.42
DETEL DUG-Rough Terrain Lift Truck	\$54.89
Deere Back Loader	\$17.41
Manitex	\$53.10
Compactor	\$14.30
Crane	\$112.85
Cat 230C L Tractor - 1.25 cu yd bucket	\$100.85
Concrete Jaw Laboratory - CP-60	\$18.22
Pick-up Truck 3/4 ton 4x4	\$19.72
Bobcat 2250 Skid Steer Loader	\$35.55
Cat 140H Grader - 14' Blade	\$117.73
Cat 415C Excavating Scraper	\$149.21

None

Equipment costs are PER HOUR rates, from the Equipment Watch Book Rate Blue Book, dated June 7, 2012. Rate on the hourly coverage cost derived by 175 after the hourly automated operating cost and as the standard used by the DOT for contractors. Copies of these rates are available from the DOT.

Waste Disposal Cost	Rate/Unit	Unit	Lead Correction		Transport Cost**	Total Transportation and Disposal Cost	
			Factor (from Table)	Factor/Unit/Total		Unit	Cost
Silt, Concrete, Bulk Byproduct Material - 11E2	\$147.76	per Ton	1.1	\$162.53	\$138.30	per Yd3 **	\$300.83 per Yd3
Unpackaged Bulk Byproduct Material (e.g., pipe) - 11E2	\$168.49	per Ton	0.43	\$70.76	\$138.30	per Yd3 ***	\$211.04 per Yd3
Solid Waste (heavy load)	\$7.66	per Yd3	0.42		Incl		\$7.74 per Yd3
Void Factor (see appendix)							1.25

* For material transport, unloading, decontamination charge. Based on Decon Manual version no. 5/10/12
** Transport costs based on invoice from Chesapeake Logistics in June 2012

Lead Correction Factor - difference between solid material and when it is broken because of an impact between the pieces of material; the coarser the material the lower the lead factor (or the finer the material the higher the factor). The table below shows some examples of lead factors for several resources materials including concrete. These factors are from the Caterpillar Performance Handbook and the Equipment Product Reference Guide.

Material	S&B (lb/ft3)	Pounds/CY		% Diff	Lead Factor	Conv To CY
		S&B (lb/ft3)	Perform (lb/ft3)			
Crusher	4536	2781	39%	0.41	1.433068	
Concussion	4601	3619	40%	0.40	1.488412	
Smashstone	3915	3518	35%	0.45	1.542553	
Concrete	3996	2176	49%	0.54	1.824397	
Sand A, gravel	2700	2400	11%	0.89	1.125	

Comaco Resources
Highland Uranium Project
2012-13 Surety Estimate

Worksheet No 12 (Unit Costs Database profile)			
Plan 11			
App K, Cost Estimate for Destruction and Removal of Railroad Spurs and Facilities Challenges			
	Cost per unit		Adjusted Cost per Unit
Tank			
Meters of Type	\$0.27 \$3	0.97	\$0.262 \$3
Explosive Demolition, Concrete or Steel	0.27 \$3	0.97	\$0.262 \$3
Deposal (Average)	9.14 cy	0.97	\$8.868 cy
City Landfill Dump Charge	\$62.99 ton	0.97	\$79.540 ton
Concrete Footings and Foundations			
6" Thick with Rebar	5.43 \$2	0.97	\$5.267 \$2
Footings - 7" Thick, 3' Wide	19.85 lin. ft.	0.97	\$19.255 lin. ft.
Concrete Deposal OS&E	8.17 cy	0.97	\$7.925 cy
App C, Calculations for Moving Material with a Caterpillar 3370 Push-Pull Scraper Fleet			
		Operating Cost per bank (in situ) cubic yards	
One-Way Distance 500 feet, 0% grade		\$1.667	\$1.667 bay
One-Way Distance 1,000 feet, 0% grade		\$1.274	\$1.274 bay
One-Way Distance 2,000 feet, 0% grade		\$1.451	\$1.451 bay
One-Way Distance 4,500 feet, 0% grade		\$3.402	\$3.402 bay
App E, Calculations for Moving Material with a Caterpillar D9R Dozer			
		Operating Cost per hour cubic yard	
Distance 50 feet		\$0.157	\$0.157 bay
App H, Cost Estimate for Handling Wire Pencing 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	\$807.48
			\$807.48 per acre
App J, Cost Estimate for Ripping Overhead Using a Caterpillar D10R Dozer			
		Operating Costs	\$323.77
0.27 acre/hour		\$323.77	\$323.77 per hour
			\$1,195.44 per acre
App F, Cost Estimate for Sandblasting of Contaminated Sections			
			\$67.48 per acre
App G, Calculations for Final Grading with a Caterpillar 16M Motor Grader			
			\$73.79 per acre

Grading Unit Costs	
Drawing / Grading / Topsoil Costs	2010 Annual
Level cost	\$65.00 per acre
Hay Strick, Chopped and Tied Ammonium	\$140 per acre
Level and Strick	\$600 per acre
Depth of Topsoil	0.5 feet