



July 30, 2014

ATTN: Document Control Desk

Mr. Drew Persinko, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental
Management Programs
Mailstop T8 F5
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

CAMECO RESOURCES

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**NRC License SUA-1548, Docket No. 40-8956 Gas Hills Uranium Project
2014-2015 Financial Assurance Estimates**

Dear Mr. Persinko:

Pursuant to License Condition 9.5 of Source Material License SUA-1548, Power Resources, Inc. d/b/a Cameco Resources (Cameco) is herein submitting the 2014-15 Surety Estimate Updates for the Gas Hills Uranium Project. This estimate result in a proposed surety amount of \$2,975,027 for the Gas Hills Uranium Project.

If you have questions or need additional please feel free to contact me directly at (307) 333-7665.

Sincerely,

A handwritten signature in black ink that reads "Larry McGonagle".

Larry McGonagle

Att: Gas Hills Uranium Project, 2014-15 Surety Estimate Update
1 disc

cc: Doug Mandeville, USNRC w/Att

NUCLEAR. The Clean Air Energy.

FSME20

SUNSI Review has been completed

Appendix B

2013-2014 RECLAMATION SURETY BOND ESTIMATE

WDEQ Permit No. 687 Annual Report / NRC SUA-1548

Gas Hills ISR Project - Cameco Resources

Total Restoration and Reclamation Cost Estimate

I.	Building Demolition and Disposal Cost		\$1,835,679
II.	Well & Drill Hole Abandonment		\$332,423
III.	Miscellaneous Surface Reclamation Cost		\$418,878
	Subtotal Restoration and Reclamation Cost Estimate		\$2,586,980
	Contractor Profit & Overhead (10%)¹	See Master Costs	
	Contingency (15%)²	15%	\$388,047
		TOTAL³	\$2,975,027

¹, Per WDEQ/LQD Guideline No. 12, Section 12(b)

², Per WDEQ/LQD Guideline No. 12, Section 12(a) and (c-h), Section 13 and NRC License Condition 9.5 (SUA-1548)

³, Costs reflect both WDEQ & NRC requirements. No salvage value assumed.

2013-2014 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources
Part III. Miscellaneous Surface Reclamation

I. Carol Shop/Office Area

Assumptions	
Surface grade	0%
Surface Area (acres)	21.00
A. Ripping Overburden with Dozer	
Overburden Surface Area (acres)	21.00
<u>Ripping Cost (per acre)</u>	\$1,381.27
Subtotal Ripping Overburden Costs	\$29,007
B. Topsoil Application	
Area of surface disturbance (ft ²)	21.00
Average thickness of topsoil (ft)	0.5
Average haul distance (ft)	500
Surface grade (%)	0%
Volume of Topsoil (cy)	16940
<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Topsoil Application Costs	\$24,466
C. Discing/Seeding	
Surface Area (acres)	21.00
<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$548
Subtotal Discing/Seeding Costs	\$11,501
Total Carol Shop/Office Area Reclamation	\$64,974

II. Carol Shop Road

Assumptions	
Surface grade	0%
Length of Road (ft)	26400
Width of Road (ft)	50
Area of road (acres)	30.30
Culverts (per 20' Section)	40
A. Ripping Overburden with Dozer	
Overburden Surface Area (acres)	30.30
<u>Ripping Cost (per acre)</u>	\$1,381.27
Subtotal Ripping Overburden Costs	\$41,857
B. Gravel Road Base Removal	
Average haul distance (ft)	1000
Gravel Road Base Width (ft)	50
Gravel Road Base Area (acres)	1320000
Average Road Base Depth (ft)	0.5
Volume of Road Base (cy)	24444
<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Gravel Road Base Removal Costs	\$35,305

2013-2014 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources
Part III. Miscellaneous Surface Reclamation

C. Topsoil Application	
Average haul distance (ft)	1000
Topsoil Surface Area (ft ²)	1320000
Depth of Topsoil (ft)	0.5
Volume of Topsoil (cy)	24444
<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Topsoil Application Costs	\$35,305
D. Discing/Seeding	
Surface Area (acres)	30.3
<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$548
Subtotal Discing/Seeding Costs	\$16,596
E. Culvert Removal	
Culverts (per 20' Section)	40
<u>Culvert Removal Unit Cost</u>	\$153
Fill Removal/Drainage Reestablishment	\$500
Subtotal Culvert Removal	\$26,121.28
Total Carol Shop Road Reclamation	\$155,184.06

III. AML Road Reclamation

Assumptions	
Surface grade	0%
Length of Road (ft)	22704
Width of Road (ft)	66
Area of road (acres)	34.40
Culverts (per 20' Section)	20
A. Ripping Overburden with Dozer	
Overburden Surface Area (acres)	34.40
<u>Ripping Cost (per acre)</u>	\$1,381.27
Subtotal Ripping Overburden Costs	\$47,516
B. Gravel Road Base Removal	
Average haul distance (ft)	1000
Gravel Road Base Width (ft)	66
Gravel Road Base Area (acres)	1498464
Average Road Base Depth (ft)	0.5
Volume of Road Base (cy)	27749
<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Gravel Road Base Removal Costs	\$40,078
C. Topsoil Application	
Average haul distance (ft)	1000
Topsoil Surface Area (ft ²)	1498464
Depth of Topsoil (ft)	0.5
Volume of Topsoil (cy)	27749

2013-2014 RECLAMATION SURETY BOND ESTIMATE
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Gas Hills ISR Project - Cameco Resources
Part III. Miscellaneous Surface Reclamation

<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Topsoil Application Costs	\$40,078
D. Discing/Seeding	
Surface Area (acres)	34.4
<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$548
Subtotal Discing/Seeding Costs	\$18,840
E. Culvert Removal	
Culverts (per 20' Section)	20
<u>Culvert Removal Unit Cost</u>	\$153
Fill Removal/Drainage Reestablishment	\$500
Subtotal Culvert Removal	\$13,060.64
Total AML Road Reclamation	\$159,572.47

IV. Waste Disposal Injection Well Pads and Access Road

Assumptions	
Surface grade	0%
Surface Area (acres)	3.00
Length of Road (ft)	1000
Width of Road (ft)	20
Area of road (acres)	0.46
Quantity	2
A. Ripping Overburden with Dozer	
Overburden Surface Area (acres)	3.00
<u>Ripping Cost (per acre)</u>	\$1,381.27
Subtotal Ripping Overburden Costs	\$8,288
B. Topsoil Application	
Area of surface disturbance (ft ²)	3.00
Average thickness of topsoil (ft)	0.5
Average haul distance (ft)	500
Surface grade (%)	0%
Volume of Topsoil (cy)	2420
<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Topsoil Application Costs	\$6,990
C. Discing/Seeding	
Surface Area (acres)	3.00
<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$548
Subtotal Discing/Seeding Costs	\$3,286
Total Waste Disposal Injection Well Pads and Access Road	\$18,563.63

2013-2014 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources
Part III. Miscellaneous Surface Reclamation

V. Water Supply Wells and Access Road

Assumptions	
Surface grade	0%
Surface Area (acres)	1
Length of Road (ft)	2500
Width of Road (ft)	20
Area of road (acres)	1.15
Quantity	2

A. Ripping Overburden with Dozer	
Overburden Surface Area (acres)	1.00
<u>Ripping Cost (per acre)</u>	\$1,381.27
Subtotal Ripping Overburden Costs	\$2,763
B. Topsoil Application	
Area of surface disturbance (ft ²)	1.00
Average thickness of topsoil (ft)	0.5
Average haul distance (ft)	500
Surface grade (%)	0%
Volume of Topsoil (cy)	807
<u>Moving Materials (0% Grade)</u>	\$1.44
Subtotal Topsoil Application Costs	\$2,330
C. Discing/Seeding	
Surface Area (acres)	1.00
<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$547.67
Subtotal Discing/Seeding Costs	\$1,095

Total Water Supply Wells and Access Road **\$6,188**

VI. Removal of Monitoring Stations

A. Surface Water Monitoring Stations	3
<u>Removal Unit Cost</u>	\$2,939.38
Subtotal Surface Water Monitoring Stations	\$8,818
B. Air Quality Monitoring Stations	5
<u>Removal Unit Cost</u>	\$1,115.53
Subtotal Air Quality Monitoring Stations	\$5,578
Total Removal of Monitoring Stations	\$14,396

Total Miscellaneous Surface Reclamation **\$418,877.52**

2013-2014 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

Labor Costs	Rate (\$)	Net Benefits*	Units	Source
Environmental Manager/RSO	\$46.00	\$64.40	hour	MSEC**
Restoration Manager	\$40.00	\$56.00	hour	MSEC
Environmental Tech/HPT	\$25.00	\$35.00	hour	MSEC
Operator/Laborer	\$26.00	\$36.40	hour	MSEC
Maintenance Tech	\$23.00	\$32.20	hour	MSEC

*Includes additional 40% net benefits based on InfoMine USA cost data for Surface Metal and Industrial Mineral Mines - Western U.S. (Table 5)

**Mountain States Employers Council, 2012 Survey, Mining Industry Compensation & Benefits

Utility Costs	Rate (\$)	Profit & Overhead	Units	Source
Electrical Costs	\$0.0597	included	kWhr	Actual Costs-2013
Kilowatt to Horsepower	0.746	included	Kw/HP	N/A
Efficiency - Downhole Pumps	80%	included	Percent	N/A
Efficiency - Surface Pumps	90%	included	Percent	N/A
Natural Gas - Satellite	\$0.00	included	Percent	N/A
Natural Gas - DDW	\$0.00	included	year	Actual Costs-2012
Propane - Satellite	\$37,163	included	year	Actual Costs-2013
Propane - DDW	\$0.00	included	year	Actual Costs-2012

Chemical & Material Costs	Rate (\$)	Profit & Overhead	Units	Source
Antiscalant for RO (Hypersperse)	\$3.9050	included	pound	Actual Costs (SRH)-2013
Antiscalant for RO (ScaleTrol)	\$4.5177	included	pound	Actual Costs (SRH)-2013
Sodium Tripolyphosphate	\$1.0893	included	pound	Actual Costs (SRH)-2013
EDTA Tetrasodium Dihydrate	\$1.8774	included	pound	Actual Costs (SRH)-2013
Sodium Sulfide	\$0.5520	included	pound	Quote-2013
Hydrochloric Acid	\$0.1992	included	pound	Actual Costs (SRH)-2013
Barium Chloride	\$0.7970	included	pound	Actual Costs (SRH)-2013

Analytical Costs	Rate (\$)	Profit & Overhead	Units	Source*
Guideline 4 (former Guideline 8) Parameters	\$353.00	included	analysis	Actual Costs-2013
Excursion Parameters (UCL)	\$30.00	included	analysis	Fee Schedule-2013
Restoration Progress Parameters (UCL + U + Se)	\$50.00	included	analysis	Fee Schedule-2013
Soil Sampling/Monitoring	\$315.00	included	analysis	Actual Costs-2013
Other (Radon, Bioassay, etc.)	\$1,000.00	\$1,100.00	month	Cost Estimate

*All quotes, fee schedules and actual costs based on Energy Laboratories, Inc., Casper, WY

Equipment Costs	Rate (\$)	Profit & Overhead*	Units	Source
Bandit 1290XP Trailer Mounted Brush Chipper	\$47.93	\$52.72	hour	Equipment Watch**
Bobcat S250 Skid Steer Loader	\$36.57	\$40.23	hour	Equipment Watch
Cat 320C L Trackhoe - 1.25 cu yd bucket	\$100.03	\$110.03	hour	Equipment Watch
Cat 416E Backhoe	\$34.97	\$38.47	hour	Equipment Watch
Cat 924H Loader - 2.4 cu yd bucket	\$52.93	\$58.22	hour	Equipment Watch
Concrete Jaws Labounty - CP-60	\$18.51	\$20.36	hour	Equipment Watch
GEHL DL-8 Rough Terrain Lift Truck	\$56.44	\$62.08	hour	Equipment Watch
Manlift (JLG 600S)	\$47.54	\$52.29	hour	Equipment Watch
MIT Unit	\$30.09	\$33.10	hour	Equipment Watch
Pick-up Truck 3/4 ton 4X4	\$20.13	\$22.14	hour	Equipment Watch
Pulling Unit***	\$35.32	\$38.85	hour	Equipment Watch

*Includes additional 10% Profit & Overhead per WDEQ/LQD Guideline No. 12, Section 12(b)

**Equipment Watch Rental Rate Blue Book: Volume 1 (1st Half 2013)

***1 3/4 Ton 4x4 Truck with Hoist

Quoted Costs	Rate (\$)	Profit & Overhead	Units	Source
Deep Disposal Well - Plug & Abandonment Costs	\$13.62	included	foot	UIC Permit-2012
DDW MIT	\$31,625	included	well	Quote-2013
Well Replacements (Restoration)	\$14,763	included	well	Actual Costs-2013
Bellhole Refurbishment	\$5,530	included	bellhole	Contract-2012
Header House Refurbishment (Typical Wellfield)	\$32,000	included	header house	Actual Costs-2013

WDEQ/LQD Guideline No. 12 Costs	Appendix	Rate (\$)	Profit & Overhead*	Units	Source
Moving Materials: One-Way Distance 500 feet, 0% grade	Appendix C	\$1.099	\$1.21	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 1,000 feet, 0% grade	Appendix C	\$1.313	\$1.44	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 2,000 feet, 0% grade	Appendix C	\$1.701	\$1.87	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 150 feet, 0% grade	Appendix E	\$0.351	\$0.39	lcy	Guideline-10/2013
Grading Operating Costs	Appendix G	\$77.31	\$85.04	acre	Guideline-10/2013

Fencing Removal	Appendix H	\$0.39	\$0.43	foot	Guideline-10/2013
Ripping Operating Costs (Asphalt)	Appendix I	\$881.17	\$969.29	acre	Guideline-10/2013
Ripping Operating Costs (Overburden)	Appendix II	\$1,255.70	\$1,381.27	acre	Guideline-10/2013
Building Demolition - Mixture of Types	Appendix K	\$0.287	\$0.32	ft3	Guideline-10/2013
Building Demo Disposal (Average)	Appendix K	\$9.62	\$10.58	cy	Guideline-10/2013
Concrete (Floor) Demolition - 6" Thick with Rebar	Appendix K	\$5.48	\$6.03	ft2	Guideline-10/2013
Concrete (Footings) Demolition - 2' Thick, 3' Wide	Appendix K	\$20.21	\$22.23	linear foot	Guideline-10/2013
Concrete Disposal On-Site	Appendix K	\$8.29	\$9.12	cy	Guideline-10/2013
Drill Hole Abandonment: Wet Exploration Holes >25 holes	Appendix L	\$3.00	\$3.30	foot	Guideline-10/2013
Well Abandonment: Monitor, Production, and Injection Wells	Appendix L	\$2.50	\$2.75	foot	Guideline-10/2013
Scattered Wells >25	Appendix L	\$3.00	\$3.30	foot	Guideline-10/2013
Mobilization	Appendix L	\$1,000.00	\$1,100.00	location	Guideline-10/2013
Incidental Costs: Small Site Grading and Seeding (<1000 sq. feet)	Appendix L	\$50	\$55.00	site	Guideline-10/2013
Incidental Costs: Capping	Appendix L	\$10	\$11.00	each	Guideline-10/2013
Incidental Costs: Site Location	Appendix L	\$10	\$11.00	site	Guideline-10/2013
Incidental Costs: Remove Pump, Wiring, and Drop Pipe	Appendix L	\$0.40	\$0.44	foot	Guideline-10/2013
Incidental Costs: Remove and Dispose Casing (top few feet)	Appendix L	\$30.00	\$33.00	well	Guideline-10/2013
Incidental Costs: Monitoring Well Concrete Pedestal Disposal	Appendix L	\$100.00	\$110.00	each	Guideline-10/2013
Scarification Costs	Appendix P	\$70.91	\$78.00	acre	Guideline-10/2013
Revegetation Costs-Seed	Appendix Q	\$106.00	\$116.60	acre	Actual Costs-2013
Revegetation Costs-Mulch	Appendix Q	\$91.88	\$101.07	acre	Actual Costs-2013
Revegetation Costs-Fertilizer	Appendix Q	\$300.00	\$330.00	acre	Actual Costs-2013
Revegetation Costs-Total	Appendix Q	\$497.88	\$547.67	acre	Actual Costs-2013
Dozer - D6	Appendix D-1	\$92.95	\$102.25	hour	Guideline-10/2013
Culvert Removal	Appendix J	\$139.12	\$153.03	per 20' section	Guideline-10/2013
Demolition and Removal of Surface Water Monitoring Station	Appendix N	\$2,672.16	\$2,939.38	each	Guideline-10/2013
Demolition and Removal of Meteorological/Air Monitoring Station	Appendix O	\$1,014.12	\$1,115.53	each	Guideline-10/2013

*Includes additional 10% Profit & Overhead per WDEQ/LQD Guideline No. 12, Section 12(b)

Construction & Demolition Debris Transportation & Disposal Costs

Building Volume for Disposal	0.33					
Void Factor (for disposal)	1.1					
	Disposal (\$/ton)	C&D (cy/ton)	Transport (\$/load)	C&D (cy/load)	Total (\$/cy)	Total (\$/ft3)
C&D Debris (county landfill)	\$62.00	2	\$335.00	30	\$42.17	\$1.56

*Transportation and disposal costs based on actual costs (2013). Transportation and disposal costs include profit and overhead of service provider. Conversion factors of

11e.(2) Byproduct Material Transportation & Disposal

Load Correction Factor: Soil, sand, etc.	1.1					
Load Correction Factor: Process materials, etc.	0.42					
<u>White Mesa</u>	Disposal (\$/ton)	Disposal (\$/cy)	Volume (cy)	Transport (\$/cy)	Total (\$/cy)	Total (\$/ft3)
Type I: Soil, sand, gravel, rock, concrete rubble, etc.	\$138.97	\$152.87	13.0	\$247.95	\$400.82	\$14.85
Type II: Process material, pumps, motors, etc.	\$160.08	\$67.23	24.7	\$130.50	\$197.73	\$7.32
Type II: Chipped piping	\$160.08	\$67.23	36.4	\$88.55	\$155.78	\$5.77
<u>Pathfinder</u>						
Type I: Soil, sand, rock, gravel, demolition masonry, concrete rubble	N/A	\$130.00	13.0	\$26.73	\$156.73	\$5.80
Type II: Other process waste, process equipment, etc.	N/A	\$378.00	24.7	\$14.07	\$392.07	\$14.52
Type II: Chipped piping	N/A	\$378.00	36.4	\$9.55	\$387.55	\$14.35

*Transportation and disposal costs based on contract amounts as adjusted annually. Transportation and disposal costs include profit and overhead of service provider and include all unloading and decontamination fees, waste tax, fuel surcharges, etc. Transportation costs assume 1) one truck transports one 13-cy bin of Type I waste, 2) one truck transports one 24.7-cy bin of Type II process waste (including pumps, motors, etc.) and 3) one truck transports one 36.4-cy bin of Type II chipped piping waste.