



February 2, 2015

WDEQ Land Quality Division – District II
Attn: Mr. Brian Wood
510 Meadowview Drive
Lander, WY 82520

US Nuclear Regulatory Commission
Attn: Mr. Douglas Mandeville
11545 Rockville Pike
Two White Flint North, Mailstop T8 F5
Rockville, MD 20852-2738

CAMECO RESOURCES

Corporate Office
550 N Poplar St. Ste. 100
Casper, WY
82601 USA

Tel: (307) 237-2128
Fax: (307) 237-2142
www.cameco.com

**2014-15 Bond Update for Gas Hills ISR Project,
In Situ Permit to Mine No. 687,
Source Material License SUA-1548**

Dear Sirs,

Power Resources, Inc. d.b.a. Cameco Resources (Cameco) is hereby submitting a response to the 2014-15 Annual Surety update comment received from the Nuclear Regulatory Commission (NRC) dated November 10, 2014. The following RAI was received:

RAI 1

Description of Deficiency

The financial assurance cost estimate uses labor costs that are based on a 2012 salary survey by the Mountain States Employment Council. It is not clear to the staff if this salary survey is representative of labor rates in Wyoming in 2014.

Basis for Request

The financial assurance cost estimate may not include sufficient costs for labor activities involved in decommissioning, ground water restoration, and reclamation of the site. License Condition 9.5 to Source Materials License SUA-1548, in part, requires: "The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criterion 9, adequate to cover the estimated reclamation and closure costs, if accomplished by a third party, for all existing operations and any planned expansions or operational changes for the upcoming year. Reclamation includes all cited activities and groundwater restoration, as well as off-site disposal of all 11 e.(2) byproduct material ..." It is possible that labor costs in

NUCLEAR. *The Clean Air Energy.*

2012, are less than what an independent third party would incur while performing cleanup activities.

Formulation of RAI

The staff requests that Cameco either: (i) revise the cost estimate using more recent labor cost data; or (ii) justify the continued use of labor rates from 2012.

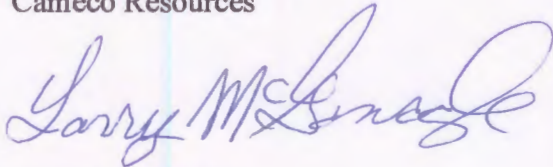
Cameco Response

Cameco agrees that the bond calculation does not utilize the most current labor rates as defined by the Mountain States Employer Council (MSEC). Cameco chose to not renew their annual subscription to the MSEC in 2014. It was discussed with and agreed upon with Miles Bennett, Wyoming Department of Environmental Quality, Land Quality Division, Uranium Coordinator; that Cameco could use a current CPI escalator at the time of revising bond calculations to maintain current inflation increases. This method has been utilized in the Nebraska bond calculations for years.

At the time of recalculating the Gas Hills bond this option had not yet been discussed and agreed upon. It was during review of the Smith Ranch Highland bond that this was discussed. Based on the agreement Cameco has revised the bond calculation utilizing the June 2014 CPI escalator (see attached 2014-15 GH Bond Rev1). The resulting increase was approximately \$56 to the current approved bond. Cameco is requesting that they do not have to revise the current letter of credit for this slight increase. This will be accounted for and increased in the August 2015 bond calculation.

If you have any questions or concerns please feel free to contact Jeanie Wolford at 307-333-7644 or by email at Jeanie_wolford@cameco.com.

Sincerely,
Cameco Resources



Larry McGonagle
Division SHEQ Manager

LM/jmw

Attachments:
2014-15 GH Bond Rev1

Cc: SHEQ

Appendix B
2014-2015 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		\$332,472
III.	Miscellaneous Surface Reclamation Cost		\$418,878
	Subtotal Restoration and Reclamation Cost Estimate		\$2,587,029
	Contractor Profit & Overhead (10%)¹	See Master Costs	
	Contingency (15%)²	15%	\$388,054
		TOTAL³	\$2,975,083

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.

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

Part I. Building Demolition and Disposal						
Building & Other Miscellaneous Demolition and Disposal	Carol Shop	Tire Shop	Change House	Air Comp Building	Water Treat Building	BaCl Building
I. Demolition Costs						
A. Building (Tanks)						
Volume of Building (ft ³)	1,977,851	54,560	18,600	6,240	6,600	6,600
Demolition Cost	\$0.316	\$0.316	\$0.316	\$0.316	\$0.316	\$0.316
Subtotal Building Demolition Costs	\$624,408	\$17,225	\$5,872	\$1,970	\$2,084	\$2,084
B. Concrete Floor						
Area of Concrete Floor (ft ²)	56,985	2,480	1,860	520	600	864
Demolition Cost	\$6.03	\$6.03	\$6.03	\$6.03	\$6.03	\$6.03
Subtotal Concrete Floor Demolition Costs	\$343,506	\$14,949	\$11,212	\$3,135	\$3,617	\$5,208
C. Concrete Footing						
Length of Concrete Footing (ft)	1,221	204	184	48	60	48
Demolition Cost	\$22.23	\$22.23	\$22.23	\$22.23	\$22.23	\$22.23
Subtotal Concrete Footing Demolition Costs	\$27,144	\$4,535	\$4,091	\$1,067	\$1,334	\$1,067
Subtotal Demolition Costs per Building	\$995,058	\$36,709	\$21,175	\$6,172	\$7,035	\$8,359
Total Demolition Costs	\$1,074,508					
II. Disposal Costs						
A. Building						
Volume of Building (cy)	48,838	2,021	689	231	244	244
Off-Site County Landfill						
Percentage (%)	100	100	100	100	100	100
Total Volume for Disposal - Incl. 33% Factor (cy)	16,117	667	227	76	81	81
Disposal Cost Landfill (cy)	\$42.17	\$42.17	\$42.17	\$42.17	\$42.17	\$42.17
Subtotal County Facility Off-Site Disposal Costs	\$679,585	\$28,119	\$9,586	\$3,216	\$3,401	\$3,401
B. Concrete Floor						
Area of Concrete Floor (ft ²)	56,985	2,480	1,860	520	600	864
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft ³)	42,739	1,860	1,395	390	450	648
Volume of Concrete Floor (cy)	1,583	69	52	14	17	24
1. On-Site Concrete Disposal						
Percentage (%)	100	100	100	100	100	100
Volume for Disposal (cy)	1,583	69	52	14	17	24
Concrete Disposal On Site (cy)	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12
Subtotal County Facility Off-Site Disposal Costs	\$14,435	\$628	\$471	\$132	\$152	\$219
Subtotal Concrete Floor Disposal Costs	\$14,435	\$628	\$471	\$132	\$152	\$219
C. Concrete Footing						
Length of Concrete Footing (ft)	1,221	204	184	48	60	48
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	75	75	75	75	75	75
Volume of Concrete Footing (ft ³)	3663	612	552	144	180	144
Volume of Concrete Footing (cy)	136	23	20	5	7	5
Concrete Disposal On Site (cy)	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12
Subtotal Concrete Footing Disposal Costs	\$1,237	\$207	\$186	\$49	\$61	\$49
Subtotal Disposal Costs per Building	\$709,692	\$29,582	\$10,714	\$3,529	\$3,766	\$3,888
Total Disposal Costs	\$761,171					

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

Part II - Well and Drill Hole Abandonment

I. Well Abandonment		Water Wells	Misc Wells
A. Sealing Costs			
Total # of Wells per Wellfield		2	54
Well Average Depth (ft)		1600	451
Well Abandonment (Sealing) Costs (\$/ft)		\$3.30	\$3.30
Subtotal Sealing Costs per Wellfield		\$10,560	\$80,368
B. Casing Removal and Disposal Costs			
Total # of Wells per Wellfield		2	54
Total # of Wells for Casing Removal and Disposal		2	54
Remove and Dispose Casing (\$/well)		\$33	\$33
Subtotal Casing Removal and Disposal Costs per Wellfield		\$99	\$1,881
Subtotal Well Abandonment Costs per Wellfield		\$10,659	\$82,249
C. Incidental Costs			
1 Remove Pump, Wiring, and Drop Pipe		\$0.44	\$0.44
Subtotal Removal of Pump, Wiring, and Drop Pipe		\$1,056.00	\$0.00
2 Monitoring Well Concrete Pedestal Disposal		\$110	\$110
Subtotal Monitoring Well Concrete Pedestal Disposal		\$0	\$5,940
Subtotal Incidental Costs		\$1,056.00	\$5,940.00
	Subtotal Well Abandonment Costs	\$22,275	\$168,557
	Total Well Abandonment Costs	\$190,832	
II. Drill Hole Abandonment			
A. Drill Hole Plug and Abandonment			
# of Projected Drill Holes		0	
Hole Abandonment (\$/ft)		\$3.30	
Subtotal Plug and Abandonment Costs		\$0	
B. Incidental Costs			
Mobilization		\$1,000	
Total # of Drill Holes		0	
Site Location (\$/hole)		\$11	
Capping (\$/hole)		\$11	
Small Site Grading and Seeding (\$/site)		\$55	
Subtotal Incidental Costs		\$1,000	
C. Subsurface Retained Abandonment Cost			
Plugged and Abandoned Boreholes - \$50 per hole per B. Wood (2009)	22	\$50	\$1,100
Plugged and Abandoned Boreholes - \$150 hole per B. Wood (2010)	26	\$150	\$3,900
Plugged and Abandoned Boreholes - \$150 hole per B. Wood (2011)	37	\$150	\$5,550
Subtotal Subsurface Retained Abandonment Cost		\$10,550	
	Total Delineation Hole Abandonment	\$11,550	
III. Waste Disposal Well Abandonment			
A. Well Sealing		DDW #1	DDW #2
Total Depth of Well (feet)		3794	5389

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

<u>Sealing cost per foot (in UIC permit)</u>	\$13.62	\$13.62
Subtotal Plugging Costs per Well (in UIC permit)	\$51,674	\$73,398
B. Pump Dismantling and Decontamination		
Number of Persons	2	2
Number of Pumps	2	2
Pumps/Day	0.5	0.5
Number of Days	4	4
<u>\$/Day/Person</u>	\$297.32	\$291.20
Subtotal Dismantling and Decon Costs per Well	\$2,378.52	\$2,329.60
C. Tubing String Disposal (C&D Landfill)		
Length of Tubing String (ft)	3400	5100
Diameter of Tubing String (inches)	2.875	2.875
Volume of Tubing String (ft ³)	79	119
<u>Transportation and Disposal Unit Cost (\$/ft³)</u>	\$1.56	\$1.56
Subtotal Tubing String Disposal Costs per Well	\$123.64	\$185.47
	\$54,176.45	\$75,913.25
Total Waste Disposal Well Abandonment Costs	\$130,090	
Total Well and Drill Hole Abandonment	\$332,472	

2014-2015 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
Ripping Cost (per acre)	\$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
Moving Materials (0% Grade)	\$1.44
Subtotal Topsoil Application Costs	\$24,466
C. Discing/Seeding	
Surface Area (acres)	21.00
Discing/Seeding Unit Cost (\$/acre)	\$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
Ripping Cost (per acre)	\$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
Moving Materials (0% Grade)	\$1.44
Subtotal Gravel Road Base Removal Costs	\$35,305

2014-2015 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
Moving Materials (0% Grade)	\$1.44
Subtotal Topsoil Application Costs	\$35,305
D. Discing/Seeding	
Surface Area (acres)	30.3
Discing/Seeding Unit Cost (\$/acre)	\$548
Subtotal Discing/Seeding Costs	\$16,596
E. Culvert Removal	
Culverts (per 20' Section)	40
Culvert Removal Unit Cost	\$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
Ripping Cost (per acre)	\$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
Moving Materials (0% Grade)	\$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

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
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

2014-2015 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

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

Mine Unit Data		Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
Flare Factor		1.5				0
Wellfield Area (ft2)		1,526,400	0	0	0	0
Wellfield Area (acres)		35.04	0.00	0.00	0.00	0.00
Affected Ore Zone Area (ft2)		1,526,400	0	0	0	0
Avg. Completed Thickness		20.0	20.0	20.0	20.0	20.0
Porosity		0.27	0.27	0.27	0.27	0.27
Affected Volume (ft3)		45,792,000	0	0	0	0
Kgallons per Pore Volume		92,482	0	0	0	0
Number of Patterns in Unit(s)						
Current		0	0	0	0	0
Estimated next report		212	0	0	0	0
Total Estimated		212	0	0	0	0
Number of Wells in Unit(s)						
Production Wells						
Current		0	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		0	0	0	0	0
Injection Wells						
Current		0	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		0	0	0	0	0
Monitor Wells						
Current		0	0	0	0	0
Estimated next report		109	0	0	0	0
Total Estimated		109	0	0	0	0
M-Wells		0	0	0	0	0
MP-Wells		0	0	0	0	0
MO-Wells		0	0	0	0	0
MU-Wells		0	0	0	0	0
Trend Wells		0	0	0	0	0
Restoration Wells		0	0	0	0	0
Number of Wells per Wellfield		109	0	0	0	0
Misc. Monitor Wells						
Current		54	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		54	0	0	0	0
Total Number of Wells		163				
Average Well Depth (ft)		451				
Average Diameter of Casing (inches)		5				
Water Supply Wells						
Current		2	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		2	0	0	0	0
Average Well Depth (ft)		1600				

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

CPI Escalators (CPI-U, U.S. City Average)	
1988 CPI (average)	118.3
June 2014 CPI (deep well estimate)	238.3
2013 CPI (June 2013 used in last update)	233.5
Current CPI (June 2014)	238.3
2014 Escalation Factor	1.02

Labor Costs	Rate (\$)	CPI increase	Net Benefits*	Units	Source
Environmental Manager/RSO	\$46.00	\$46.97	\$65.75	hour	MSEC**
Restoration Manager	\$40.00	\$40.84	\$57.18	hour	MSEC
Environmental Tech/HPT	\$25.00	\$25.53	\$35.74	hour	MSEC
Operator/Laborer	\$26.00	\$26.55	\$37.16	hour	MSEC
Maintenance Tech	\$23.00	\$23.48	\$32.88	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	\$0.507	included	kWhr	Actual Costs-2013
Kilowatt to Horsepower	7.40	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	\$37.103	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	\$1.0895	included	pound	Actual Costs (SRH)-2013
EDTA Tetrasodium Dihydrate	\$1.8774	included	pound	Actual Costs (SRH)-2013
Sodium Sulfide	\$8.5520	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	\$20.15	\$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	\$13.02	included	foot	UIC Permit-2012
DDW MIT	\$16.05	included	well	Quote-2013
Well Replacements (Restoration)	\$4.60	included	well	Actual Costs-2013
Bellhole Refurbishment	\$2,530	included	bellhole	Contract-2012
Header House Refurbishment (Typical Wellfield)	\$2,000	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	\$1.315	\$1.44	bcy	Guideline-10/2013
Moving Materials: One-Way Distance 2,000 feet, 0% grade	Appendix C	\$1.761	\$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	\$77.51	\$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	\$5.45	\$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	\$5.29	\$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	\$2.54	\$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 I	\$10	\$11.00	each	Guideline-10/2013
Incidental Costs: Site Location	Appendix L	\$1	\$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	\$91.55	\$101.07	acre	Actual Costs-2013
Revegetation Costs-Fertilizer	Appendix Q	\$300.00	\$330.00	acre	Actual Costs-2013
Revegetation Costs-Total	Appendix Q	\$497.55	\$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 Guidline 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)	Tranport (\$/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)	Tranport (\$/cy)	Total (\$/cy)	Total (\$/ft3)
Type I: Soil, sand, gravel, rock, concrete rubble,etc.	\$135.97	\$152.87	15.0	\$247.95	\$400.82	\$14.85
Type II: Process material, pumps, motors, etc.	\$160.05	\$67.23	24.7	\$130.50	\$197.73	\$7.32
Type II: Chipped piping	\$160.05	\$67.23	36.4	\$58.55	\$155.78	\$5.77
<u>Pathfinder</u>						
Type I: Soil, sand, rock, gravel, demolition masonry, concrete rubble	N/A	\$130.00	13	\$26.75	\$156.73	\$5.80
Type II: Other process waste, process equipment, etc.	N/A	\$575.00	24.7	\$14.07	\$392.07	\$14.52
Type II: Chipped piping	N/A	\$575.00	36.4	\$6.55	\$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. Tranportation 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 pimps, motors, etc.) and 3) one truck tranports one 36.4-cy bin of Type II chipped piping waste.

Appendix B

2014-2015 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			\$332,472
III.	Miscellaneous Surface Reclamation Cost			\$418,878
	Subtotal Restoration and Reclamation Cost Estimate			\$2,587,029
	Contractor Profit & Overhead (10%) ¹	See Master Costs		
	Contingency (15%) ²	15%		\$388,054
			TOTAL ³	\$2,975,083

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.

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

Part I. Building Demolition and Disposal						
Building & Other Miscellaneous Demolition and Disposal	Carol Shop	Tire Shop	Change House	Air Comp Building	Water Treat Building	BaCl Building
I. Demolition Costs						
A. Building (Tanks)						
Volume of Building (ft ³)	1,977.851	54,560	18,600	6,240	6,600	6,600
Demolition Cost	\$0.316	\$0.316	\$0.316	\$0.316	\$0.316	\$0.316
Subtotal Building Demolition Costs	\$624.408	\$17,225	\$5,872	\$1,970	\$2,084	\$2,084
B. Concrete Floor						
Area of Concrete Floor (ft ²)	56.985	2,480	1,860	520	600	864
Demolition Cost	\$6.03	\$6.03	\$6.03	\$6.03	\$6.03	\$6.03
Subtotal Concrete Floor Demolition Costs	\$343.506	\$14,949	\$11,212	\$3,135	\$3,617	\$5,208
C. Concrete Footing						
Length of Concrete Footing (ft)	1,221	204	184	48	60	48
Demolition Cost	\$22.23	\$22.23	\$22.23	\$22.23	\$22.23	\$22.23
Subtotal Concrete Footing Demolition Costs	\$27.144	\$4,535	\$4,091	\$1,067	\$1,334	\$1,067
Subtotal Demolition Costs per Building	\$995.058	\$36,709	\$21,175	\$6,172	\$7,035	\$8,359
Total Demolition Costs	\$1,074,508					
II. Disposal Costs						
A. Building						
Volume of Building (cy)	48.838	2,021	689	231	244	244
Off-Site County Landfill						
Percentage (%)	100	100	100	100	100	100
Total Volume for Disposal - Incl. 33% Factor (cy)	16.117	667	227	76	81	81
Disposal Cost Landfill (cy)	\$42.17	\$42.17	\$42.17	\$42.17	\$42.17	\$42.17
Subtotal County Facility Off-Site Disposal Costs	\$679,585	\$28,119	\$9,586	\$3,216	\$3,401	\$3,401
B. Concrete Floor						
Area of Concrete Floor (ft ²)	56.985	2,480	1,860	520	600	864
Average Thickness of Concrete Floor (ft)	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Floor (ft ³)	42.739	1,860	1,395	390	450	648
Volume of Concrete Floor (cy)	1.583	69	52	14	17	24
1. On-Site Concrete Disposal						
Percentage (%)	100	100	100	100	100	100
Volume for Disposal (cy)	1.583	69	52	14	17	24
Concrete Disposal On Site (cy)	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12
Subtotal County Facility Off-Site Disposal Costs	\$14,435	\$628	\$471	\$132	\$152	\$219
Subtotal Concrete Floor Disposal Costs	\$14,435	\$628	\$471	\$132	\$152	\$219
C. Concrete Footing						
Length of Concrete Footing (ft)	1,221	204	184	48	60	48
Average Depth of Concrete Footing (ft)	4	4	4	4	4	4
Average Width of Concrete Footing (ft)	1.75	7.5	7.5	11.75	7.5	7.5
Volume of Concrete Footing (ft ³)	3663	612	552	144	180	144
Volume of Concrete Footing (cy)	136	23	20	5	7	5
Concrete Disposal On Site (cy)	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12	\$9.12
Subtotal Concrete Footing Disposal Costs	\$1,237	\$207	\$186	\$49	\$61	\$49
Subtotal Disposal Costs per Building	\$709,692	\$29,582	\$10,714	\$3,529	\$3,766	\$3,888
Total Disposal Costs	\$761,171					

2014-2015 RECLAMATION SURETY BOND ESTIMATE

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

Gas Hills ISR Project - Cameco Resources

Part II - Well and Drill Hole Abandonment

		Water Wells	Misc Wells
I. Well Abandonment			
A. Sealing Costs			
Total # of Wells per Wellfield		2	54
Well Average Depth (ft)		1600	451
Well Abandonment (Sealing) Costs (\$/ft)		\$3.30	\$3.30
Subtotal Sealing Costs per Wellfield		\$10,560	\$80,368
B. Casing Removal and Disposal Costs			
Total # of Wells per Wellfield		2	54
Total # of Wells for Casing Removal and Disposal		2	54
Remove and Dispose Casing (\$/well)		\$33	\$33
Subtotal Casing Removal and Disposal Costs per Wellfield		\$99	\$1,881
Subtotal Well Abandonment Costs per Wellfield		\$10,659	\$82,249
C. Incidental Costs			
1 Remove Pump, Wiring, and Drop Pipe		\$0.44	\$0.44
Subtotal Removal of Pump, Wiring, and Drop Pipe		\$1,056.00	\$0.00
2 Monitoring Well Concrete Pedestal Disposal		\$110	\$110
Subtotal Monitoring Well Concrete Pedestal Disposal		\$0	\$5,940
Subtotal Incidental Costs		\$1,056.00	\$5,940.00
	Subtotal Well Abandonment Costs	\$22,275	\$168,557
	Total Well Abandonment Costs	\$190,832	
II. Drill Hole Abandonment			
A. Drill Hole Plug and Abandonment			
# of Projected Drill Holes		0	
Hole Abandonment (\$/ft)		\$3.30	
Subtotal Plug and Abandonment Costs		\$0	
B. Incidental Costs			
Mobilization		\$1,000	
Total # of Drill Holes		0	
Site Location (\$/hole)		\$11	
Capping (\$/hole)		\$11	
Small Site Grading and Seeding (\$/site)		\$55	
Subtotal Incidental Costs		\$1,000	
C. Subsurface Retained Abandonment Cost			
Plugged and Abandoned Boreholes - \$50 per hole per B. Wood (2009)	22	\$50	\$1,100
Plugged and Abandoned Boreholes - \$150 hole per B. Wood (2010)	26	\$150	\$3,900
Plugged and Abandoned Boreholes - \$150 hole per B. Wood (2011)	37	\$150	\$5,550
Subtotal Subsurface Retained Abandonment Cost		\$10,550	
	Total Delineation Hole Abandonment	\$11,550	
III. Waste Disposal Well Abandonment			
A. Well Sealing		DDW #1	DDW #2
Total Depth of Well (feet)		3794	5389

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

<u>Sealing cost per foot (in UIC permit)</u>	\$13.62	\$13.62
Subtotal Plugging Costs per Well (in UIC permit)	\$51,674	\$73,398
B. Pump Dismantling and Decontamination		
Number of Persons	2	2
Number of Pumps	2	2
Pumps/Day	0.5	0.5
Number of Days	4	4
<u>\$/Day/Person</u>	\$297.32	\$291.20
Subtotal Dismantling and Decon Costs per Well	\$2,378.52	\$2,329.60
C. Tubing String Disposal (C&D Landfill)		
Length of Tubing String (ft)	3400	5100
Diameter of Tubing String (inches)	2.875	2.875
Volume of Tubing String (ft ³)	79	119
<u>Transportation and Disposal Unit Cost (\$/ft³)</u>	\$1.56	\$1.56
Subtotal Tubing String Disposal Costs per Well	\$123.64	\$185.47
	\$54,176.45	\$75,913.25
Total Waste Disposal Well Abandonment Costs	\$130,090	
Total Well and Drill Hole Abandonment	\$332,472	

2014-2015 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

2014-2015 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
Moving Materials (0% Grade)	\$1.44
Subtotal Topsoil Application Costs	\$35,305
D. Discing/Seeding	
Surface Area (acres)	30.3
Discing/Seeding Unit Cost (\$/acre)	\$548
Subtotal Discing/Seeding Costs	\$16,596
E. Culvert Removal	
Culverts (per 20' Section)	40
Culvert Removal Unit Cost	\$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
Ripping Cost (per acre)	\$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
Moving Materials (0% Grade)	\$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

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources
Part III. Miscellaneous Surface Reclamation

Moving Materials (0% Grade)	\$1.44
Subtotal Topsoil Application Costs	\$40,078
D. Discing/Seeding	
Surface Area (acres)	34.4
Discing/Seeding Unit Cost (\$/acre)	\$548
Subtotal Discing/Seeding Costs	\$18,840
E. Culvert Removal	
Culverts (per 20' Section)	20
Culvert Removal Unit Cost	\$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
Ripping Cost (per acre)	\$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
Moving Materials (0% Grade)	\$1.44
Subtotal Topsoil Application Costs	\$6,990
C. Discing/Seeding	
Surface Area (acres)	3.00
Discing/Seeding Unit Cost (\$/acre)	\$548
Subtotal Discing/Seeding Costs	\$3,286
Total Waste Disposal Injection Well Pads and Access Road	\$18,563.63

2014-2015 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

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

Mine Unit Data		Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
Flare Factor		1.5				0
Wellfield Area (ft2)		1,526,400	0	0	0	0
Wellfield Area (acres)		35.04	0.00	0.00	0.00	0.00
Affected Ore Zone Area (ft2)		1,526,400	0	0	0	0
Avg. Completed Thickness		20.0	20.0	20.0	20.0	20.0
Porosity		0.27	0.27	0.27	0.27	0.27
Affected Volume (ft3)		45,792,000	0	0	0	0
Kgallons per Pore Volume		92,482	0	0	0	0
Number of Patterns in Unit(s)						
Current		0	0	0	0	0
Estimated next report		212	0	0	0	0
Total Estimated		212	0	0	0	0
Number of Wells in Unit(s)						
Production Wells						
Current		0	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		0	0	0	0	0
Injection Wells						
Current		0	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		0	0	0	0	0
Monitor Wells						
Current		0	0	0	0	0
Estimated next report		109	0	0	0	0
Total Estimated		109	0	0	0	0
M-Wells		0	0	0	0	0
MP-Wells		0	0	0	0	0
MO-Wells		0	0	0	0	0
MU-Wells		0	0	0	0	0
Trend Wells		0	0	0	0	0
Restoration Wells		0	0	0	0	0
Number of Wells per Wellfield		109	0	0	0	0
Misc. Monitor Wells						
Current		54	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		54	0	0	0	0
Total Number of Wells		163				
Average Well Depth (ft)		451				
Average Diameter of Casing (inches)		5				
Water Supply Wells						
Current		2	0	0	0	0
Estimated next report		0	0	0	0	0
Total Estimated		2	0	0	0	0
Average Well Depth (ft)		1600				

2014-2015 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources

CPI Escalators (CPI-U, U.S. City Average)	
1988 CPI (average)	118.3
June 2014 CPI (deep well estimate)	238.3
2013 CPI (June 2013 used in last update)	233.5
Current CPI (June 2014)	238.3
2014 Escalation Factor	1.02

Labor Costs	Rate (\$)	CPI increase	Net Benefits*	Units	Source
Environmental Manager/RSO	\$46.00	\$46.97	\$65.75	hour	MSEC**
Restoration Manager	\$40.00	\$40.84	\$57.18	hour	MSEC
Environmental Tech/HPT	\$25.00	\$25.53	\$35.74	hour	MSEC
Operator/Laborer	\$26.00	\$26.55	\$37.16	hour	MSEC
Maintenance Tech	\$23.00	\$23.48	\$32.88	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	\$1.771	\$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	\$0.69	\$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 H	\$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 (Footing) Demolition - 2' Thick, 3' Wide	Appendix K	\$2.21	\$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	\$2.80	\$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	\$0.46	\$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-I	\$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	\$1,144.12	\$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					
White Mesa	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
Pathfinder						
Type I: Soil, sand, rock, gravel, demolition masonry, concrete rubble	N/A	\$130.00	13	\$267.3	\$156.73	\$5.80
Type II: Other process waste, process equipment, etc.	N/A	\$378.00	24.7	\$140.7	\$392.07	\$14.52
Type II: Chipped piping	N/A	\$378.00	36.4	\$65.5	\$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.