



CAMECO RESOURCES

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July 31, 2017

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Mr. Brian Wood
Wyoming Department of Environmental Quality
Land Quality Division – District II
510 Meadowview Drive
Lander, WY 82520

2016-2017 Annual Report, Permit No. 687, Cameco Resources, Gas Hills ISR Project

Dear Mr. Wood:

Power Resources, Inc. d/b/a Cameco Resources (Cameco) is enclosing two (2) paper copies and two (2) electronic copies of the annual report for the Gas Hills In Situ Recovery (ISR) Project, Permit to Mine No. 687 as required by the Wyoming Environmental Quality Act W.S. 35-11-411 and the Wyoming Department of Environmental. Quality - - Land Quality Division (WDEQ-LQD) Chapter 11 Rules & Regulations for Noncoal In Situ Mining. This report covers the period of August 8, 2016 through August 7, 2017 and is in the LQD Guideline 4 In Situ Annual Report Format (ISARF).

There has been no activity at the Gas Hills ISR Project and has remained non-operational through the report period. The reclamation bond estimate has been revised using WDEQ-LQD Guideline 12 (2/2017) and 12A (2/2016) for applicable line items. The revised surety estimate is \$2,465,799 compared to the 2016 revised estimate of \$2,300,013. The current letters of credit held by the WDEQ for Permit 687 is at \$2,979,027. Upon concurrence from the LQD, Bureau of Land Management, and Nuclear Regulatory Commission, Cameco will provide adjusted letters of credit accordingly.

By letter dated July 13, 2017 Cameco submitted "Wildlife Monitoring Plan, Gas Hills ISR Project" to Wyoming Department of Environmental Quality – Land Quality Division (WDEQ-LQD). Guideline No. 5 (HH/5-80; ST/2-87 revised; Rules Update/8-94), is designed to obtain data sufficient detail to evaluate the effect of mining on specific wildlife species to develop mitigation proposals. Cameco has suspended all active mining development activities in the Gas Hills and has therefore proposed to suspend annual wildlife monitoring beginning in 2017

Received
without
CD
8/17/17

NMSSDI
NMSS

If you have comments or questions concerning this report, please contact me at 307-358-6541 ext. 438, or email to Lawrence_Reimann@cameco.com.

Sincerely,

L. Reimann For L. Reimann

Larry Reimann
Manager of Compliance & Licensing

LR/th

Attachments: 2016-2017 Gas Hills ISR Project Annual Report (Hard copy and Electronic CD)

cc: File GH 4.3.3.2

ec: T. Sunderland / BLM Lander
D. Mandeville / NRC (Surety Estimate)
Document Control Desk / NRC (Surety Estimate)

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Appendix B

2016-17 RECLAMATION SURETY BOND ESTIMATE

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

Gas Hills ISR Project - Cameco Resources

Bond Calculation Changes

2016/17 Surety Calculation	\$2,300,013.00
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Net changes = CPI index, WDEQ GL-12 (2/2017)
changes, and update to DDW P&A cost

2017/18 Updated Surety Calculation	\$2,465,798.99
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Net Increase	\$165,785.99
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Appendix B

2017-18 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		\$1,527,200
II.	Well & Drill Hole Abandonment		\$324,632
III.	Miscellaneous Surface Reclamation Cost		\$292,341
	Subtotal Restoration and Reclamation Cost Estimate		\$2,144,173
	Contractor Profit & Overhead (10%) ¹	See Master Costs	
	Contingency (15%) ²	15%	\$321,626
		TOTAL³	\$2,465,799

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.

2017-18 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
<u>Demolition Cost</u>	\$0.328	\$0.328	\$0.328	\$0.328	\$0.328	\$0.328
Subtotal Building Demolition Costs	\$648,340	\$17,885	\$6,097	\$2,045	\$2,163	\$2,163
B. Concrete Floor						
Area of Concrete Floor (ft ²)	56,985	2,480	1,860	520	600	864
<u>Demolition Cost</u>	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86	\$0.86
Subtotal Concrete Floor Demolition Costs	\$48,830	\$2,125	\$1,594	\$446	\$514	\$740
C. Concrete Footing						
Length of Concrete Footing (ft)	1,221	204	184	48	60	48
<u>Demolition Cost</u>	\$17.57	\$17.57	\$17.57	\$17.57	\$17.57	\$17.57
Subtotal Concrete Footing Demolition Costs	\$21,449	\$3,584	\$3,232	\$843	\$1,054	\$843
Subtotal Demolition Costs per Building	\$718,619	\$23,594	\$10,923	\$3,334	\$3,731	\$3,746
Total Demolition Costs	\$763,947					
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
<u>Disposal Cost, Landfill (cy)</u>	\$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
<u>Concrete Disposal On Site (cy)</u>	\$9.68	\$9.68	\$9.68	\$9.68	\$9.68	\$9.68
Subtotal County Facility Off-Site Disposal Costs	\$15,323	\$667	\$500	\$140	\$161	\$232
Subtotal Concrete Floor Disposal Costs	\$15,323	\$667	\$500	\$140	\$161	\$232
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)	0.75	0.75	0.75	0.75	0.75	0.75
Volume of Concrete Footing (ft ³)	3663	612	552	144	180	144
Volume of Concrete Footing (cy)	136	23	20	5	7	5
<u>Concrete Disposal On Site (cy)</u>	\$9.68	\$9.68	\$9.68	\$9.68	\$9.68	\$9.68
Subtotal Concrete Footing Disposal Costs	\$1,313	\$219	\$198	\$52	\$65	\$52
Subtotal Disposal Costs per Building	\$711,544	\$29,672	\$10,784	\$3,548	\$3,788	\$3,917
Total Disposal Costs	\$763,253					

TOTAL BUILDING & OTHER MISCELLANEOUS DEMOLITION AND DISPOSAL COSTS

\$1,527,200

2017-18 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
<u>Well Abandonment (Sealing) Costs (\$/ft)</u>	\$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
<u>Remove and Dispose Casing (\$/well)</u>	\$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 <u>Remove Pump, Wiring, and Drop Pipe</u>	\$0.44	\$0.44
Subtotal Removal of Pump, Wiring, and Drop Pipe	\$1,056.00	\$0.00
2 <u>Monitoring Well Concrete Pedestal Disposal</u>	\$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
	Total Well Abandonment Costs	\$190,832

2017-18 RECLAMATION SURETY BOND ESTIMATE
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Gas Hills ISR Project - Cameco Resources

Part II - Well and Drill Hole Abandonment

	Water Wells	Misc Wells
II. Waste Disposal Well Abandonment		
A. Well Sealing	DDW #1	DDW #2
Total Depth of Well (feet)	3794	5389
<u>Sealing cost per foot (in UIC permit)</u>	\$13.99	\$13.99
Subtotal Plugging Costs per Well (in UIC permit)	\$53,095	\$75,417
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>	\$311.13	\$311.13
Subtotal Dismantling and Decon Costs per Well	\$2,489.08	\$2,489.08
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	\$123.38	\$185.85
	\$55,707.78	\$78,091.55
Total Waste Disposal Well Abandonment Costs	\$133,799	
Total Well Abandonment	\$324,632	

2017-18 RECLAMATION SURETY BOND ESTIMATE
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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 Cat 140 Blade	
Overburden Surface Area (acres)	21.00
<u>Ripping Cost (per acre)</u>	\$903.39
Subtotal Ripping Overburden Costs	\$18,971
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>	\$1.02
Subtotal Topsoil Application Costs	\$17,236
C. Discing/Seeding	
Surface Area (acres)	21.00
<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$330
Subtotal Discing/Seeding Costs	\$6,930
Total Carol Shop/Office Area Reclamation	\$43,137

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>	\$903.39
Subtotal Ripping Overburden Costs	\$27,375

**2017-18 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources**

Part III. Miscellaneous Surface Reclamation

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>	\$1.02
	Subtotal Gravel Road Base Removal Costs	\$24,872
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>	\$1.02
	Subtotal Topsoil Application Costs	\$24,872
D.	Discing/Seeding	
	Surface Area (acres)	30.3
	<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$330
	Subtotal Discing/Seeding Costs	\$10,000
E.	Culvert Removal	
	Culverts (per 20' Section)	40
	<u>Culvert Removal Unit Cost</u>	\$114
	Fill Removal/Drainage Reestablishment	\$500
	Subtotal Culvert Removal	\$24,554.00
	Total Carol Shop Road Reclamation	\$111,673.56

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>	\$903.39
	Subtotal Ripping Overburden Costs	\$31,076

**2017-18 RECLAMATION SURETY BOND ESTIMATE
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Gas Hills ISR Project - Cameco Resources**

Part III. Miscellaneous Surface Reclamation

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>	\$1.02
	Subtotal Gravel Road Base Removal Costs	\$28,235
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
	<u>Moving Materials (0% Grade)</u>	\$1.02
	Subtotal Topsoil Application Costs	\$28,235
D.	Discing/Seeding	
	Surface Area (acres)	34.4
	<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$330
	Subtotal Discing/Seeding Costs	\$11,352
E.	Culvert Removal	
	Culverts (per 20' Section)	20
	<u>Culvert Removal Unit Cost</u>	\$70
	Fill Removal/Drainage Reestablishment	\$500
	Subtotal Culvert Removal	\$11,402.94
	Total AML Road Reclamation	\$110,301.37

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>	\$903.39
	Subtotal Ripping Overburden Costs	\$5,420

**2017-18 RECLAMATION SURETY BOND ESTIMATE
WDEQ Permit No. 687 Annual Report / NRC SUA-1548
Gas Hills ISR Project - Cameco Resources**

Part III. Miscellaneous Surface Reclamation

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>		\$1.02
Subtotal Topsoil Application Costs		\$4,924
C. Discing/Seeding		
Surface Area (acres)		3.00
<u>Discing/Seeding Unit Cost (\$/acre)</u>		\$330
Subtotal Discing/Seeding Costs		\$1,980
Total Waste Disposal Injection Well Pads and Access Road		\$12,324.32
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>		\$903.39
Subtotal Ripping Overburden Costs		\$1,807
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>		\$1.02
Subtotal Topsoil Application Costs		\$1,642

**2017-18 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.	Discing/Seeding	
	Surface Area (acres)	1.00
	<u>Discing/Seeding Unit Cost (\$/acre)</u>	\$330.00
	Subtotal Discing/Seeding Costs	\$660
	Total Water Supply Wells and Access Road	\$4,109
VI.	Removal of Monitoring Stations	
A.	Surface Water Monitoring Stations	3
	<u>Removal Unit Cost</u>	\$2,163.74
	Subtotal Surface Water Monitoring Stations	\$6,491
B.	Air Quality Monitoring Stations	5
	<u>Removal Unit Cost</u>	\$860.99
	Subtotal Air Quality Monitoring Stations	\$4,305
	Total Removal of Monitoring Stations	\$10,796
	Total Miscellaneous Surface Reclamation	\$292,341.31

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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)	0	0	0	0	0
Wellfield Area (acres)	0.00	0.00	0.00	0.00	0.00
Affected Ore Zone Area (ft2)	0	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)	0	0	0	0	0
Kgallons per Pore Volume	0	0	0	0	0
Number of Patterns in Unit(s)					
Current	0	0	0	0	0
Estimated next report	0	0	0	0	0
Total Estimated	0	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	0	0	0	0	0
Total Estimated	0	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	0	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	54				
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				

2017-18 RECLAMATION SURETY BOND ESTIMATE
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Gas Hills ISR Project - Cameco Resources

Labor Costs	2013 Rate**	Ese Rate (\$)	Net Benefits*	Units	Source
Environmental Manager/RSO	\$46.00	\$49.15	\$68.81	hour	2013 MSEC rates plus CPI 2016 Annual
Restoration Manager	\$40.00	\$42.74	\$59.83	hour	2013 MSEC rates plus CPI 2016 Annual
Environmental Tech/HPT	\$25.50	\$27.23	\$38.14	hour	2013 MSEC rates plus CPI 2016 Annual
Operator/Laborer	\$26.00	\$27.78	\$38.89	hour	2013 MSEC rates plus CPI 2016 Annual
Maintenance Tech	\$23.00	\$24.37	\$34.40	hour	2013 MSEC rates plus CPI 2016 Annual

*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, 2013 Survey, Mining Industry Compensation & Benefits
 ***<http://www.usinflationcalculator.com/>

CPI Escalators (CPI-U, U.S. City Average)	
Denver CPI (2013 Annual)	230.8
Denver CPI (2016 Annual)	246.6
2016 Escalator Factor (2013 to 2016)	1.07
Denver CPI (2014 Annual)	237.2
Denver CPI (2016 Annual)	246.6
2016 Escalator Factor (2014 to 2016)	1.04
Denver CPI (2015 Annual)	240.0
Denver CPI (2016 Annual)	246.6
2016 Escalator Factor (2015 to 2016)	1.03

Utility Costs	Rate (\$)	Profit & Overhead	Units	Source
Electrical Costs	NA	included	kWhr	
Kilowatt to Horsepower	NA	included	Kw/HP	
Efficiency - Downhole Pumps	NA	included	Percent	
Efficiency - Surface Pumps	NA	included	Percent	
Natural Gas - Satellite	NA	included	Percent	
Natural Gas - DDW	NA	included	year	
Propane - Satellite	NA	included	year	
Propane - DDW	NA	included	year	

Chemical & Material Costs	Rate (\$)	Profit & Overhead	Units	Source
Antiscalant for RO (Hypersperse)	NA	included	pound	
Antiscalant for RO (ScaleTrol)	NA	included	pound	
Sodium Tripolyphosphate	NA	included	pound	
EDTA Tetrasodium Dihydrate	NA	included	pound	
Sodium Sulfide	NA	included	pound	
Hydrochloric Acid	NA	included	pound	
Barium Chloride	NA	included	pound	

Analytical Costs	Rate (\$)	Profit & Overhead	Units	Source*
Guideline 4 (former Guideline 8) Parameters	NA	included	analysis	
Excursion Parameters (UCL)	NA	included	analysis	
Restoration Progress Parameters (UCL + U + Se)	NA	included	analysis	
Soil Sampling/Monitoring	NA	included	analysis	
Other (Radon, Bissassy, etc.)	NA	included	month	

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

Equipment Costs	Rate (\$)	Profit & Overhead*	Units	Source
Bandit 1290XP Tractor Mounted Brush Chipper	NA		hour	Equipment Watch
Bobcat S250 Skid Steer Loader	NA		hour	Equipment Watch
Cat 320C L Tractorhoe - 1.25 cu yd bucket	NA		hour	Equipment Watch
Cat 416E Backhoe	NA		hour	Equipment Watch
Cat 924H Loader - 2.4 cu yd bucket	NA		hour	Equipment Watch
Concrete Jaws Labounty - CP-60	NA		hour	Equipment Watch
GEHL DL-8 Rough Terrain Lift Truck	NA		hour	Equipment Watch
Manlift (JLG 600S)	NA		hour	Equipment Watch
MTT Unit	NA		hour	Equipment Watch
Pick-up Truck 3/4 ton 4X4	NA		hour	Equipment Watch
Pulling Unit***	NA		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 2015 estimate	\$13.62	\$13.99 included	foot	2015 estimate plus 2015 to 2016 CPI Escalator
DDW MIT	NA	included	well	
Well Replacements (Restoration)	NA	included	well	
Bellhole Refurbishment	NA	included	bellhole	
Header House Refurbishment (Typical Wellfield)	NA	included	header house	

WDEQ/LQD Guideline No. 12 Costs	Appendix	Rate (\$)	Profit & Overhead*	Units	Source
Moving Materials: One-Way Distance 500 feet, 0% grade	Appendix C	\$0.774	\$0.85	bcy	Guideline-2/2017
Moving Materials: One-Way Distance 1,000 feet, 0% grade	Appendix C	\$0.925	\$1.02	bcy	Guideline-2/2017
Moving Materials: One-Way Distance 2,000 feet, 0% grade	Appendix C	\$1.198	\$1.32	bcy	Guideline-2/2017
Moving Materials: One-Way Distance 150 feet, 0% grade	Appendix E	\$0.251	\$0.28	lcy	Guideline-2/2017
Grading Operating Costs	Appendix G	\$54.73	\$60.20	acre	Guideline-2/2017
Fencing Removal	Appendix H	\$0.31	\$0.34	foot	Guideline-2/2017
Ripping Operating Costs (Asphalt)	Appendix I	\$629.53	\$692.48	acre	Guideline-2/2017
Ripping Operating Costs (Overburden)	Cat D8	\$821.26	\$903.39	acre	Guideline-2/2017
Building Demolition - Mixture of Types	Appendix K	\$0.298	\$0.33	ft3	Guideline-2/2017
Building Demo Disposal (Average)	Appendix K	\$10.10	\$11.11	cy	Guideline-2/2017
Concrete (Floor) Demolition - 6" Thick with Rebar	Appendix K	\$0.78	\$0.86	ft2	Guideline-2/2017
Concrete (Footing) Demolition - 2' Thick, 3' Wide	Appendix K	\$15.97	\$17.57	linear foot	Guideline-2/2017
Concrete Disposal On-Site	Appendix K	\$8.80	\$9.68	cy	Guideline-2/2017
Dry/Hole Abandonment: Wet Exploration Holes >25 holes	Appendix L	\$3.00	\$3.30	foot	Guideline-2/2017
Well Abandonment: Monitor, Production, and Injection Wells	Appendix L	\$2.50	\$2.75	foot	Guideline-2/2017
Scattered Wells >25	Appendix L	\$3.00	\$3.30	foot	Guideline-2/2017
Mobilization	Appendix L	\$1,000.00	\$1,100.00	location	Guideline-2/2017
Incidental Costs: Small Site Grading and Seeding (<1000 sq. feet)	Appendix L	\$50	\$55.00	site	Guideline-2/2017
Incidental Costs: Capping	Appendix L	\$10	\$11.00	each	Guideline-2/2017
Incidental Costs: Site Location	Appendix L	\$10	\$11.00	site	Guideline-2/2017
Incidental Costs: Remove Pump, Wiring, and Drop Pipe	Appendix L	\$0.40	\$0.44	foot	Guideline-2/2017
Incidental Costs: Remove and Dispose Casing (top few feet)	Appendix L	\$30.00	\$33.00	well	Guideline-2/2017
Incidental Costs: Monitoring Well Concrete Pedestal Disposal	Appendix L	\$100.00	\$110.00	each	Guideline-2/2017
Scarification Costs	Appendix P	\$50.20	\$55.22	acre	Guideline-2/2017
Revegetation Costs-Seed	Guideline 12A	\$300.00	\$330.00	acre	Guideline-2/2017
Revegetation Costs-Mulch	Guideline 12A	\$0.00	\$0.00	acre	Guideline-2/2017
Revegetation Costs-Fertilizer	Guideline 12A	\$0.00	\$0.00	acre	Guideline-2/2017
Revegetation Costs-Total	Guideline 12A	\$300.00	\$330.00	acre	Guideline-2/2017
Revegetation Costs-Seed + Application	Guideline 12A, I.I.I.	\$300	\$330.00	acre	Guideline 12 A-2/2016
Dozer - D6	Table D-1	\$63.77	\$70.15	hour	Guideline-2/2017
Culvert Removal	Appendix J	\$103.50	\$113.85	per 20' section	Guideline-2/2017
Demolition and Removal of Surface Water Monitoring Station	Appendix N	\$1,967.04	\$2,163.74	each	Guideline-2/2017
Demolition and Removal of Meteorological/Air Monitoring Station	Appendix O	\$782.72	\$860.99	each	Guideline-2/2017

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)
\$62.00	2	\$335.00	30	\$42.17	\$1.56

C&D Debris (county landfill)

*Transportation and disposal costs based on actual costs (2013). Transportation and disposal costs include profit and overhead of service provider. Conversion factors of 2 cy/ton and 0.33 to

11c.(2) Byproduct Material Transportation & Disposal

Load Correction Factor: Soil, sand, etc. 1.1

Load Correction Factor: Process materials, etc. 0.42

White Metals	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
Ballfield						
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