

CAMECO RESOURCES Project Development 550 N. Poplar Street Suite 100 Casper, WY 82601 USA

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December 22, 2011

Mr. Doug Mandeville U.S. Nuclear Regulatory Commission 11545 Rockville Pike Two White Flint North, Mailstop T8F5 Rockville, MD 20852-2738

Re: Ruth ISR Uranium Project, Docket No. 40-8964, SUA-1548 2011-2012 Annual Surety Estimate Update

Dear Mr. Mandeville:

License Condition 9.5 of Source Materials License SUA-1548 requires annual surety estimate updates for the Power Resources Inc. d/b/a Cameco Resources (Cameco) Ruth ISR Project. Enclosed with this letter are two (2) paper copies of the 2011-12 Surety Estimate Update for the Ruth ISR Project.

The current facility status is non-operational with no current development or operational activities planned for the next surety period. A surety estimate of \$183,000 is proposed, estimated using WDEQ Guideline 12 and actual reclamation costs from Cameco's Smith Ranch-Highland operations. If you have any questions or concerns please contact Jeanie Wolford at 307-333-7644 or by email at Jeanie wolford@cameco.com.

Sincerely,

for - JoshLeftwich

Josh Leftwich Director of Radiation Safety & Licensing

JL/jmw

Enc: Ruth 2011-12 Surety Estimate Update

cc: file RU 4.3.3.2 **CR-Cheyenne** ec:

TOTAL DECOMMISSIONING AND RECLAMATION COST ESTIMATE

PROJECT MANAGEMENT + MISCELLANEOUS COSTS (25%) ^a	\$34,019
CONTINGENCY:	\$136,074
V. FINAL STATUS SURVEY REPORT	\$10,000
IV. WELL PLUGGING AND ABANDONMENT	\$10,445
III. MISC. SURFACE RECLAMATION COSTS	\$8,715
II. EVAPORATION POND DECOMMISSIONING COSTS	\$36,795
I. BUILDING DEMOLITION AND DISPOSAL COSTS	\$70,120

^a Based on WDEQ-LQD Guideline No. 12 (November 2010), Section II(B)(12)(except b) and (13). ^b Based on WDEQ-LQD Guideline No. 12 (November 2010), Section II(B)(12)(b).

RUTH ISR PROJECT - CAMECO RE	Process Building	Warehouse Building	Generator Building	
A. Demolition				
1 Equipment				
Equipment remaining on site includes 6 tanks/vessels and				
injection manifold.				
Subtotal Equipment Dismantling	g \$8,000	\$0	\$C	
2 Building				
Building Volume (CF)	80,000	6,000	1500	
Demolition Unit Cost per WDEQ Guideline 12, App. K (\$/CF)	\$0.249	\$0.249	\$0.249	
Subtotal Building Demolition		\$1,494	\$374	
3 Concrete Floor	φ10,520	ψ1,404		
Concrete Floor Area, SF	4 000	600	150	
	4,000		* .	
Demolition Unit Cost per WDEQ Guideline 12, App. K (\$/SF)	\$5.05	\$5.05	\$5.05	
Subtotal Concrete Floor Demolitio	on \$20,200	\$3,030	\$758	
4 Concrete Footing				
Concrete Footing Length (ft)	280	0	C	
Demolition Unit Cost per WDEQ Guideline 12, App. K (\$/lin.ft) \$18.14	\$18.14	\$18.14	
Subtotal Concrete Footing Demolition	·	\$0	\$C	
Subtotal Demolition per Buildin		\$4,524	\$1,132	
Total Demolition	-	ψ+,02+	\$58,855	
B. Disposal	·••			
1 Equipment				
Equipment Volume (CY)	15		*	
Disposal Unit Cost (\$/ton) ^a	\$0	\$0	\$C	
Convert waste volume to tons (0.24 tons / CY) ^b	4	* *	\$	
QTY. Trips	2	0	(
Transportation Unit Cost (\$/trip)	\$1,000	\$1,000	\$1,000	
Subtotal Equipment Disposa		\$0	\$0	
2 Buildings On-Site				
Assume Thickness of building material (ft)	0.75	0.5	0.5	
Building Length (ft)	100	30	15	
Building Width (ft)	40	20	10	
Building Height (ft)	20	10	10	
Volume of Building Materials (CY)	267	30	12	
Volume for Disposal (assume 25% swell factor) (CY)	334	38	1:	
Disposal Unit Cost per WDEQ Guideline 12, App. K (\$/CY)	\$8.12	\$8.12	\$8.12	
Subtotal Building Disposa	al \$2,712	\$309	\$122	
3 Concrete Floor			·	
Area of Concrete Floor, SF	4,000	600	150	
Average Thickness of Concrete Floor (ft)	0.5	0.5	0.8	
Volume of Concrete Floor (CY)	74	11	3	
a. On-Site Disposal			-	
Percentage (%) ^b	90%	100%	100%	
Volume for Disposal (CY)	66.6	11		
Disposal Unit Cost per WDEQ Guideline 12, App. K (\$/CY)	\$6.97	\$6.97	\$6.97	
Subtotal On-Site Disposa	al \$464	\$77	\$21	

I. BUILDING DEMOLITION AND DISPOSAL	Process Building	Warehouse Building	Generator Building
	Dunung	Dunung	Danang
b. NRC-Licensed Facility	10%	0%	0%
Percentage (%) ^c			
Disposal Volume (CY)	7.4	0	0
Assume 50% volume swell factor (CY)	11	0	
Disposal Unit Cost (\$/ton) ^a	0	0	0
Convert waste volume to tons (0.24 tons / CY) ^b	2.64	0	0
QTY. Trips	1	-	0
Transportation Unit Cost (\$/trip)	\$1,000 \$1,000	\$1,000	\$1,000
Subtotal NRC-Licensed Facility Disposal	\$1,000	\$0	\$0 \$0
Subtotal Concrete Floor Disposal	\$1,464	\$77	\$21
4 Concrete Footing On-Site	000		
Length Concrete Footing (ft)	280	0	0
Average Thickness Concrete Footing (ft)	4	4	4
Average Width Concrete Footing (ft)	1	1	1
Concrete Footing Volume (CY)	41	0	0
Disposal Unit Cost per WDEQ Guideline 12, App. K (\$/CY)	\$6.97	\$6.97	\$6.97
Subtotal Concrete Footing Disposal	\$286	\$0	\$0
Subtotal Disposal per Building	\$6,462	\$386	\$143
Total Disposal			\$6,991
C. Radiation Surveys and Soil Sampling			
Assume: environmental and personnel monitoring (TLD) not			
required, based on NRC regulations and ambient levels of			
radiation on-site.			
1 Equipment (Alpha/Gamma Surveys and Smear Samples)			
QTY. Weeks	2	0	0
Rental Rate (\$/week)	\$250	\$250	\$250
Subtotal Equipment	\$500	\$0	\$0
2 Labor (Surveys and Soil Sampling)		·····	
QTY. Hours	80	0	0
Labor, per Guideline 12 App's. N & O	\$40.92	\$38.56	\$38.56
Subtotal Labor	\$3,274	\$0	\$0
3 Analytical			
QTY. Samples	5	0	0
Ra-226 Analytical (\$/sample)	\$100	\$100	\$100
Subtotal Analytical	\$500	\$0	\$0
Total Radiation Survey + Soil Sampling	÷		\$4,274
SUBTOTAL INDIVIDUAL BLDG. DEMOLITION + DISPOSAL COSTS	\$63,935	\$4,910	\$5,549
TOTAL ALL BUILDING DEMOLITION + DISPOSAL COST			\$70,120

Notes:

a - Per Byproduct Material Disposal Agreement with Pathfinder, first 185 cy disposed of at Shirley Basin at no cost

b - Florida Dept. Environmental Protection: Converting C&D Debris from Volume to Weight, a Fact Sheet for C&D Debris Facility Operators [www.floridacenter.org/C&Dconversion.html]

c - Based on radiation surveys conducted by Pathfinder Mines Co. during October - November 2001 (see site transfer letter dated November 2, 2001).

CF - cubic feet CY - cubic yards ft - feet in - inches vers: 12/22/2011 lin. ft - linear feet SF - square feet QTY - quantity

I. E'	VAP	OR/	ATION POND DECOMMISSIONING	Pond No. 1	Pond No. 2
A.	By-	pro	duct Material Removal and Loading		
	1		ume of By-product Material		
			a of Pond Bottom (SF)	22,138	21,94
			Area with Fill (SF)	2,813	
			Average Fill Thickness (in)	3.5	
			/olume of Fill (CY)	30	
			Remaining Area with Pond Residue (SF)	19,325	21,94
			Average Pond Residue Thickness (in)	1	0.
			/olume of Pond Residue (CY)	60	3
			Area of Liner (SF)	22,138	21,94
			Thickness of Liner (in)	0.036	0.03
-			/olume of Liner (CY)	2.5	2.
			/olume of Liner Assuming 25% Void Space (CY)	3	
			Area of Contaminated Sump and Drain (SF)	0	
			ength of Sump and Drain (ft)	0	24
			/olume of Sump and Drain (CY)	0	
			Diameter of Contaminated Soil (ft)	0	1
			Contaminated Soil Thickness (in)	0	
	<u> </u>		/olume of Contaminated Soil (CY)	0	
			Subtotal Volume By-product Material (CY)	93	4
	2	Fai	ipment (Front-End Loader)		
· · · ·	<u> </u>		Y. Hours	40	2
			erating (\$/hr),	\$106	
			from Table D-1 Operating Costs and Adjusted Costs WDEQ Guidline 12		
			Subtotal Equipment	\$4,242	\$2,12
	3	Lab		· . ·	
		QT	Y. Hours	40	2
		QT	Y. Laborers	3	
		Lab	or (\$/hr), fr. WDEQ Guideline 12 App. A	\$40.92	\$40.9
			Subtotal Labor	\$4,910	
			By-product Material Removal and Loading Per Pond	\$9,152	
			Total By-product Material Removal + Loading		\$13,72
В.	Tra	nsp	ortation and Disposal		
			olume of Byproduct Material (CY)	93	4
			nsportation		
			ume of Soil per Trip (CY/trip)	30	3
			Y. Trips	3	
			Trip (\$/trip)	\$1,000	\$1,00
			Subtotal Transportation per pond	\$3,000	
	2	Dis	posal		
			posal Unit (\$/CY)	\$0	9
		T	Assume: Per By-product Material Disposal Agreement		
			between PRI and Pathfinder, first 185 CY disposed of at		
			Shirley Basin at no cost.		
			Subtotal Transportation + Disposal per pond	\$3,000	\$2,00
		\vdash	Total Transportation + Disposal	+ - , - 0 0	\$5,00

I. E	VAPOR	ATION POND DECOMMISSIONING	Pond No. 1	Pond No. 2
С.	Rippin	g		
	Area (a	cres)	0.5	0.5
	Ripping	y Unit Cost per WDEQ Guideline 12, App. I1 (\$/acre)	\$1,104.19	\$1,104.19
		Subtotal Ripping per pond	\$552	\$552
		Total Ripping		\$1,104
D.	Backfi	ling		
		e of Soil (CY)	5400	5400
	Backfill	ing Unit Cost per WDEQ Guideline 12, App. E (\$/CY)	\$0.234	\$0.234
	Assum	e: Surface grade = 0%; Avg. haul distance = 100 ft.		
		Subtotal Backfilling per pond	\$1,264	\$1,264
		Total Backfilling		\$2,528
E.	Gradin	g		
	Area (a	icres)	1.5	1.5
		Grading Unit Cost per WDEQ Guideline 12, App. M (\$/acre)	\$74.52	\$74.52
	Final G	rading Unit Cost per WDEQ Guideline 12, App. G (\$/acre)	\$68.61	\$68.61
		Subtotal Grading per pond	\$215	\$215
		Total Grading		\$430
F.	Replac	ement of Topsoil		
	Volume	e of Topsoil (CY)	3756	3756
	Applica	tion Unit Cost per WDEQ Guideline No.12, App.E (\$/CY)	\$0.756	\$0.756
	Assum	e Surface grade = 0%, Avg. haul distance = 400 ft.		
		Subtotal Topsoil Replacement per pond	\$2,840	\$2,840
		Total Topsoil Replacement		\$5,680
G.	Seedir	g/Revegetation		
	Area (a	icres)	1.5	1.5
	Discing	, Seeding, Mulching, \$/acre	\$685	\$685
		from Smith Ranch-Highland '08 actual cost		
	Τ	Subtotal Seeding/Revegetation per pond	\$1,028	\$1,028
		Total Seeding/Revegetation		\$2,055
H.	Fence	Removal		
	Length	(ft)	800	800
	Fence	Removal Unit Cost per WDEQ Guideline 12, App. H (\$/ft)	\$0.31	\$0.31
		Subtotal Fence Removal per pond	\$248	\$248
		Total Fence Removal		\$496
Ι.	Radiat	ion Surveys and Soil Sampling		
		Assume: environmental and personnel monitoring (TLD)		
		not required, based on NRC regulations and ambient		
		levels of radiation on-site.		
	1 Eq	upment (Alpha/Gamma Surveys and Smear Samples)		
		Y. Weeks	1	
		ntal Rate (\$/week)	\$250	\$250
-		Subtotal Equipment	\$250	\$250
	2 La	oor (Surveys and Soil Sampling)		
		Y. Hours	40	
	_	por, per WDEQ Guideline 12 App's. N & O	\$40.92	\$40.92
		Subtotal Labor	\$1,637	\$1,637

II. EVAF	POR	RATI	ON POND DECOMMISSIONING	Pond No. 1	Pond No. 2
3	An	nalyti	cal		
	QT	TY. S	Samples	10	10
	Ra	a-226	S Analytical (\$/sample)	\$100	\$100
			Subtotal Analytical per pond	\$1,000	\$1,000
			Subtotal Radiation Survey + Soil Sampling per pond	\$2,887	\$2,887
			Total Radiation Survey + Soil Sampling		\$5,774
SU	BT	ΟΤΑ	L EVAPORATION POND DECOMMISSIONING COSTS	<u>\$21,186</u>	<u>\$15,610</u>
	7	тот	AL EVAPORATION POND DECOMMISSIONING COST		\$36,795

	ISC. SURFACE RECLAMATION	Unit Cost	Linite	Est Qty	Subtotal
III. 1VI		Unit Cost	Units		Subiolai
Α.	Buildings, Roads, and Parking Areas				
	1 Gravel Removal	\$0.913	CY	1500	\$1,370
	Removal Unit Cost per WDEQ Guideline 12, App. C: assume				
	surface Grade = 0%, avg. haul distance = 500 ft.				
	2 Ripping	\$1,104.19	acre	2	\$2,208
	Ripping Unit Cost per WDEQ Guideline 12, App. I1				
	3 Topsoil Replacement	\$0.756	CY	2070	\$1,565
	Application Unit Cost per WDEQ Guideline No.12, App. E:				
	assume surface grade = 0%, avg. haul distance = 400 ft.				
	4 Seeding/Revegetation				
	Discing, Seeding, Mulching, \$/acre	\$685	acre	2	\$1,370
	from Smith Ranch-Highland '08 actual cost				
	Subtotal Seeding/Revegetation			r	\$1,370
	5 Fence Removal	\$0.31	foot	2880	\$893
	Removal Unit Cost per WDEQ Guideline 12, App. H				
	Total Bldgs + Roads + Pkg Area Surface Reclamation	•	·	·	\$7,406
_					
В.	R&D Wellfield Area				0
	1 Replacement of Topsoil	\$0.645	CY	1180	\$761
	Application Link Contained MDEC Childring No. 40, App. E.				
	Application Unit Cost per WDEQ Guideline No.12, App. E:				
	assume surface grade = 0%, avg. haul distance = 350 ft.				
	2 Seeding/Revegetation	0.005			
	Discing, Seeding, Mulching, \$/acre	\$685	acre	0.8	\$548
	from Smith Ranch-Highland '08 actual cost	J	l		
	Subtotal Seeding/Revegetation				\$548
	Total R&D Wellfield Area Surface Reclamation				\$1,309
	TOTAL MISC. SURFACE RECLAMATION COSTS				\$8,715

IV. WELL PLUGGING AND ABANDONMENT

	Unit		Estimated	
	Cost	Units	Quantity	Subtotal
A. Well Plugging				
Quantity Wells (based on 12/08 review of WSEO records)		wells	3	
Plug Wells 500' - 1000' (based on WSEO records), assume average well depth 550'	\$6.28	linear foot	1,650	\$10,362
Remove Top Portion Casing	\$15.00	well	3	\$45
Install concrete surface hole plug/cap	\$7.50	hole	3	\$23
Subtotal Plugging Costs				\$10,430
B. Surface Reclamation ^a				
Site Smoothing & Re-Seeding	\$5.00	site	3	\$15
TOTAL PLUGGING + RECLAMATION COSTS				\$10,445

Based on WDEQ Guideline 12 (November, 2010), Appendix L

^a Seeding of abandoned well locations to be completed in conjunction with seeding of Exploration Camp and two-track roads.

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TOTAL DECOMMISSIONING AND RECLAMATION COST ESTIMATE

TOTAL RECLAMATION, ROUNDED DOWN	\$183,000
CONTRACTOR PROFIT + OVERHEAD + MOBILIZATION COSTS (10%) ^b	\$13,607
PROJECT MANAGEMENT + MISCELLANEOUS COSTS (25%) ^a	\$34,019
CONTINGENCY:	
SUBTOTAL	\$136,074
V. FINAL STATUS SURVEY REPORT	\$10,000
IV. WELL PLUGGING AND ABANDONMENT	\$10,445
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II. EVAPORATION POND DECOMMISSIONING COSTS	\$36,795
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BUILDING DEMOLITION AND DISPOSAL	Process Building	Warehouse Building	Generator Building
A. Demolition			
1 Equipment			
Equipment remaining on site includes 6 tanks/vessels and injection manifold.			
Subtotal Equipment Dismantling	\$8,000	\$0	\$0
2 Building			
Building Volume (CF)	80,000	6,000	1500
Demolition Unit Cost per WDEQ Guideline 12, App. K (\$/CF)	\$0.249	\$0.249	\$0.249
Subtotal Building Demolition	\$19,920	\$1,494	\$374
3 Concrete Floor			
Concrete Floor Area, SF	4,000	600	150
Demolition Unit Cost per WDEQ Guideline 12, App. K (\$/SF)	\$5.05	\$5.05	\$5.05
Subtotal Concrete Floor Demolition	· · · · · · · · · · · · · · · · · · ·	\$3,030	\$758
4 Concrete Footing	φ20,200	\$3,030	
Concrete Footing Length (ft)	280	0	
Demolition Unit Cost per WDEQ Guideline 12, App. K (\$/lin.ft)	\$18.14	\$18.14	\$18.14
Subtotal Concrete Footing Demolition		\$0.14	φ10.1- \$(
		4 ,524	
Subtotal Demolition per Building Total Demolition		Φ4, 524	\$1,132
B. Disposal			\$58,855
1 Equipment			
Equipment Volume (CY)	15		
Disposal Unit Cost (\$/ton) ^a	\$0	\$0	\$0
Convert waste volume to tons (0.24 tons / CY) ^b	4		
QTY. Trips	2	0	(
Transportation Unit Cost (\$/trip)	\$1,000	\$1,000	\$1,000
Subtotal Equipment Disposal	\$2,000	\$0	\$(
2 Buildings On-Site	0.75		
Assume Thickness of building material (ft)	0.75	0.5 30	0.5
Building Length (ft) Building Width (ft)	40	20	15 10
Building Height (ft)	20		1(
Volume of Building Materials (CY)	267	30	12
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Area of Concrete Floor, SF	4,000		150
Average Thickness of Concrete Floor (ft)	0.5	0.5	0.8
Volume of Concrete Floor (CY)	74	11	3
a. On-Site Disposal			
Percentage (%) ^b	90%	100%	100%
Volume for Disposal (CY)	66.6	11	3
Disposal Unit Cost per WDEQ Guideline 12, App. K (\$/CY)	\$6.97	\$6.97	\$6.97
Subtotal On-Site Disposal	\$464	\$77	\$21

RUTH ISR PROJECT - CAMECO RESC	Process	Warehouse	Generator
I. BUILDING DEMOLITION AND DISPOSAL	Building	Building	Building
b. NRC-Licensed Facility			
Percentage (%) ^c	10%	0%	0%
Disposal Volume (CY)	7.4	0	0
Assume 50% volume swell factor (CY)	11	0	0
Disposal Unit Cost (\$/ton) ^a	0	0	0
Convert waste volume to tons (0.24 tons / CY) ^b	2.64	0	0
QTY. Trips	1	0	0
Transportation Unit Cost (\$/trip)	\$1,000	\$1,000	\$1,000
Subtotal NRC-Licensed Facility Disposal	\$1,000	\$0	\$0
Subtotal Concrete Floor Disposal	\$1,464	\$77	\$21
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Subtotal Disposal per Building	\$6,462	\$386	\$143
Total Disposal			\$6,991
C. Radiation Surveys and Soil Sampling			
Assume: environmental and personnel monitoring (TLD) not			
required, based on NRC regulations and ambient levels of			
radiation on-site.			
1 Equipment (Alpha/Gamma Surveys and Smear Samples)			
QTY. Weeks	2	0	0
Rental Rate (\$/week)	\$250	\$250	\$250
Subtotal Equipment	\$500	\$0	\$0
2 Labor (Surveys and Soil Sampling)			
QTY. Hours	80	0	0
Labor, per Guideline 12 App's. N & O	\$40.92	\$38.56	\$38.56
Subtotal Labor	\$3,274	\$0	\$0
3 Analytical			
QTY. Samples	5	0	0
Ra-226 Analytical (\$/sample)	\$100	\$100	\$100
Subtotal Analytical	\$500	\$0	\$0
Total Radiation Survey + Soil Sampling			\$4,274
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TOTAL ALL BUILDING DEMOLITION + DISPOSAL COST			\$70,120

Notes:

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b - Florida Dept. Environmental Protection: Converting C&D Debris from Volume to Weight, a Fact Sheet for C&D Debris Facility Operators [www.floridacenter.org/C&Dconversion.html]

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. E'	VAP	OR/	ATION POND DECOMMISSIONING	Pond No. 1	Pond No. 2
Α.	Ву∙	·pro	duct Material Removal and Loading		
	1		ume of By-product Material		
		Are	a of Pond Bottom (SF)	22,138	21,94
		a. /	Area with Fill (SF)	2,813	
			Average Fill Thickness (in)	3.5	
			Volume of Fill (CY)	30	
		b. I	Remaining Area with Pond Residue (SF)	19,325	21,94
		1	Average Pond Residue Thickness (in)	1	0.
		,	Volume of Pond Residue (CY)	60	3
		с. /	Area of Liner (SF)	22,138	21,94
		ŀ	Thickness of Liner (in)	0.036	0.03
			Volume of Liner (CY)	2.5	2.
			Volume of Liner Assuming 25% Void Space (CY)	3	
			Area of Contaminated Sump and Drain (SF)	0	
			Length of Sump and Drain (ft)	0	24
			Volume of Sump and Drain (CY)	0	
			Diameter of Contaminated Soil (ft)	0	1
			Contaminated Soil Thickness (in)	0	
			Volume of Contaminated Soil (CY)	0	
			Subtotal Volume By-product Material (CY)	93	4
	2	Εσι	upment (Front-End Loader)		_
	-		Y. Hours	40	2
			erating (\$/hr),	\$106	\$10
			from Table D-1 Operating Costs and Adjusted Costs WDEQ Guidline 12		
			Subtotal Equipment	\$4,242	\$2,12
	3	Lat	or		
		QT	Y. Hours	40	2
		QT	Y. Laborers	3	
		Lab	oor (\$/hr), fr. WDEQ Guideline 12 App. A	\$40.92	\$40.9
			Subtotal Labor	\$4,910	
	1		By-product Material Removal and Loading Per Pond	\$9,152	\$4,57
			Total By-product Material Removal + Loading		\$13,72
В.	Tra	insp	portation and Disposal		
			olume of Byproduct Material (CY)	93	4
	1	I Transportation			
		Vol	ume of Soil per Trip (CY/trip)	30	3
		QT	Y. Trips	3	
			r Trip (\$/trip)	\$1,000	\$1,00
		ΓT	Subtotal Transportation per pond	\$3,000	\$2,00
	2	Dis	posal		
	t		posal Unit (\$/CY)	\$0	\$
		T	Assume: Per By-product Material Disposal Agreement		
	ł		between PRI and Pathfinder, first 185 CY disposed of at		
			Shirley Basin at no cost.		
	+	┝┼	Subtotal Transportation + Disposal per pond	\$3,000	\$2,00
	+	┝─┼	Total Transportation + Disposal	,	\$5,00

II. E	VAPC	RAT	ION POND DECOMMISSIONING	Pond No. 1	Pond No. 2
C.	Ripp	bing			
	Area	Area (acres)			0.5
	Ripp	ing U	nit Cost per WDEQ Guideline 12, App. I1 (\$/acre)	\$1,104.19	\$1,104.19
			Subtotal Ripping per pond	\$552	\$552
			Total Ripping		\$1,104
D.	Bac	kfillin	g		
	Volu	Volume of Soil (CY)			5400
	Back	kfilling	Unit Cost per WDEQ Guideline 12, App. E (\$/CY)	\$0.234	\$0.234
	Assu	ume:	Surface grade = 0%; Avg. haul distance = 100 ft.		
			Subtotal Backfilling per pond	\$1,264	\$1,264
			Total Backfilling		\$2,528
Ε.	Grad	ding			
_	Area	a (acre	es)	1.5	1.5
		Rough Grading Unit Cost per WDEQ Guideline 12, App. M (\$/acre)			\$74.52
	Fina	l Grad	ding Unit Cost per WDEQ Guideline 12, App. G (\$/acre)	\$68.61	\$68.61
			Subtotal Grading per pond	\$215	\$215
			Total Grading		\$430
F.			nent of Topsoil		
	Volu	me o	f Topsoil (CY)	3756	3756
			n Unit Cost per WDEQ Guideline No.12, App.E (\$/CY)	\$0.756	\$0.756
	Assi	Assume Surface grade = 0%, Avg. haul distance = 400 ft.			
			Subtotal Topsoil Replacement per pond	\$2,840	\$2,840
			Total Topsoil Replacement		\$5,680
G.	Seeding/Revegetation				
	Area	Area (acres)			1.{
	Discing, Seeding, Mulching, \$/acre			\$685	\$685
			from Smith Ranch-Highland '08 actual cost		
			Subtotal Seeding/Revegetation per pond	\$1,028	\$1,028
			Total Seeding/Revegetation		\$2,05
Η.	Fence Removal				
	Length (ft)			800	800
	Fend	ce Re	moval Unit Cost per WDEQ Guideline 12, App. H (\$/ft)	\$0.31	\$0.3
			Subtotal Fence Removal per pond	\$248	\$248
			Total Fence Removal		\$490
Ι.	Rad	iatior	n Surveys and Soil Sampling		
			Assume: environmental and personnel monitoring (TLD)		
			not required, based on NRC regulations and ambient		
			levels of radiation on-site.		
	1 Equipment (Alpha/Gamma Surveys and Smear Samples)				
		QTY. Weeks			
	F	Renta	Rate (\$/week)	\$250	\$250
			Subtotal Equipment	\$250	\$250
	21	abor	(Surveys and Soil Sampling)		· · · · · · · · · · · · · · · · · · ·
			Hours	40	4(
	1 II	abor	, per WDEQ Guideline 12 App's. N & O	\$40.92	\$40.92
			Subtotal Labor	\$1,637	\$1,637

II. EV	I. EVAPORATION POND DECOMMISSIONING			Pond No. 1	Pond No. 2	
	3	Ana	lytical			
		QT	Y. Samples	10	10	
		Ra-	226 Analytical (\$/sample)	\$100	\$10	
			Subtotal Analytical per pond	\$1,000	\$1,000	
			Subtotal Radiation Survey + Soil Sampling per pond	\$2,887	\$2,887	
			Total Radiation Survey + Soil Sampling		\$5,774	
	SU	SUBTOTAL EVAPORATION POND DECOMMISSIONING COSTS			<u>\$15,610</u>	
		TOTAL EVAPORATION POND DECOMMISSIONING COST				

TOTAL MISC. SURFACE RECLAMATION COSTS						
Total R&D Wellfield Area Surface Reclamation						
Subtotal Seeding/Revegetation						
from Smith Ranch-Highland '08 actual cost				•		
Discing, Seeding, Mulching, \$/acre	\$685	acre	0.8	\$548		
2 Seeding/Revegetation						
assume surface grade = 0%, avg. haul distance = 350 ft.						
Application Unit Cost per WDEQ Guideline No.12, App. E:						
1 Replacement of Topsoil	\$0.645	CY	1180	\$761		
B. R&D Wellfield Area						
Total Bldgs + Roads + Pkg Area Surface Reclamation	1			\$7,406		
Removal Unit Cost per WDEQ Guideline 12, App. H						
5 Fence Removal	\$0.31	foot	2880	\$893		
	Subtotal Seeding/Revegetation					
from Smith Ranch-Highland '08 actual cost						
Discing, Seeding, Mulching, \$/acre	\$685	acre	2	\$1,370		
4 Seeding/Revegetation						
Application Unit Cost per WDEQ Guideline No.12, App. E: assume surface grade = 0%, avg. haul distance = 400 ft.						
3 Topsoil Replacement	\$0.756	CY	2070	\$1,565		
Ripping Unit Cost per WDEQ Guideline 12, App. I1						
2 Ripping	\$1,104.19	acre	2	\$2,208		
surface Grade = 0%, avg. haul distance = 500 ft.						
Removal Unit Cost per WDEQ Guideline 12, App. C: assume	40.010		1000	ψ1,070		
A. Buildings, Roads, and Parking Areas 1 Gravel Removal	\$0.913	CY	1500	\$1,370		
III. MISC. SURFACE RECLAMATION	Unit Cost	Units	Est Qty	Subtotal		
				<u> </u>		

IV. WELL PLUGGING AND ABANDONMENT

	Unit		Estimated		
	Cost	Units	Quantity	Subtotal	
A. Well Plugging					
Quantity Wells (based on 12/08 review of WSEO records)		wells	3		
Plug Wells 500' - 1000' (based on WSEO records), assume average well depth 550'	\$6.28	linear foot	1,650	\$10,362	
Remove Top Portion Casing	\$15.00	well	3	\$45	
Install concrete surface hole plug/cap	\$7.50	hole	3	\$23	
Subtotal Plugging Costs					
B. Surface Reclamation ^a					
Site Smoothing & Re-Seeding	\$5.00	site	3	\$15	
TOTAL PLUGGING + RECLAMATION COSTS					

Based on WDEQ Guideline 12 (November, 2010), Appendix L

^a Seeding of abandoned well locations to be completed in conjunction with seeding of Exploration Camp and two-track roads.