

CAMECO RESOURCES
CROW BUTTE OPERATION



86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
(308) 665-2341 – FAX

September 30, 2011

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Michael Linder, Director
Nebraska Department of Environmental Quality
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Subject: 2012 Surety Estimate
Class III Underground Injection Control Permit Number NE 0122611
Class I Underground Injection Control Permit Number NE 0210457
Class I Underground Injection Control Permit Number NE 0210825

Dear Mr. Linder:

Attached is the annual update to the surety estimate for the Crow Butte Uranium Mine. This estimate meets the requirements of Chapter 13 of Title 122, *Rules and Regulations for Underground Injection and Mineral Production Wells* and the annual update requirements included in the referenced permits issued by the Nebraska Department of Environmental Quality (NDEQ). Also attached as required in the approved minor permit modification dated August 21, 2007, is an audit statement from George W. Klein, an independent professional auditing firm.

The surety estimate for 2012 is \$35,625,892, an increase of \$227,090 over the revised 2011 surety estimate of \$35,398,802 which was submitted on August 26, 2011. All costs have been baselined to current day costs with the exception of the Deep Disposal Well Decommissioning which is based upon the April 2009 Class I Permit application for installation of a second deep disposal well. Significant changes reflected in the surety estimate for 2012 include the following items:

- 1) The estimate includes continued development of Mine Units 10 and 11, the number of wellhouses needed to completely develop the two mine units were included in the revised 2011 surety estimate. The number of the wells needed to completely develop Mine Units 10 and 11 were included in the 2010 surety estimate.

CAMECO RESOURCES
CROW BUTTE OPERATION



Mr. Michael Linder
September 30, 2011
Page 2

- 2) The unit cost associated with treating groundwater through reverse osmosis (RO) has decreased due to the additional 500 GPM of RO capacity that will be brought on line in 2012.
- 3) The cost associated with restoration water samples submitted to a contract laboratory for analysis was expanded to account for a minimum of twelve months of stability monitoring.
- 4) The costs associated with performing mechanical integrity tests (MIT's) during groundwater restoration were added to the estimate along with the number of remaining MIT's to be performed during the life of the mine.

The most significant factors contributing to the increased surety estimate include groundwater restoration sampling costs (+\$757,000), contract administration (+\$18,167), contingency (+\$27,251), wellfield abandonment (+\$329,416), and a reduction in the unit cost for RO treatment (-\$345.925). Sheet 2 of the attached estimate presents the changes for selected cost elements over the 2011 surety estimate.

Upon approval of the surety estimate update by the NDEQ, the Crow Butte Operation (CBO) will provide a secured letter of credit on the renewal date to the State of Nebraska in an amount equal to the updated surety estimate.

If you have any questions or require any further information, please do not hesitate to call me at (307) 316-7588.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

A handwritten signature in black ink, appearing to read 'J. Leftwich'.

Josh Leftwich
Director of Radiation Safety and Licensing

Enclosure

CAMECO RESOURCES
CROW BUTTE OPERATION



Mr. Michael Linder
September 30, 2011
Page 3

cc: Mr. Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Mailstop T8-F5
Washington D.C. 20555-0001

U.S. Nuclear Regulatory Commission
Mr. Ron Burrows - ADDRESSEE ONLY
Fuel Cycle Licensing Branch
Mail Stop T8-F5
Washington, DC 20555-0001

CBO - File

ec: CR -- Cheyenne Office

September 30, 2011

Paul Goranson, President
Crow Butte Resources, Inc.
2020 Carey Avenue, Suite 600
Cheyenne, WY 82001

Dear Mr. Goranson:

This report shows the findings for each of the services I have performed as outlined in our engagement letter for the Crow Butte Uranium Project 2012 Surety Estimate. These findings were based on the review of the spreadsheet received September 19, 2011 with the Total 2012 Surety Bond estimate totaling \$35,625,892.

No findings in the review of the results of the mathematical calculations used in the surety estimate worksheet. A few cosmetic items were discussed but they did not affect the total calculation of the surety amount.

No findings in the review and confirmation of selected items that support the master costs used in preparing the surety estimate worksheet.

No findings in the further tests and procedures I considered necessary to enable me to express an opinion on the master costs and the calculations used in the surety estimate.

This agreed upon procedures review was conducted in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. I was not engaged to and did not conduct an audit on Crow Butte Resources Financial Statements, and accordingly, will not express an opinion or any other form of assurance involved in conducting an audit of their financial statements.

The management of Crow Butte Resources, Inc. was responsible for making all records and related information used in the preparation of the surety estimate available to me. They were responsible for the accuracy and completeness of that information and for disclosing all significant information that might affect the surety estimate.

This report is intended solely for the information and use of the Crow Butte Resources, Inc., the Nebraska Department of Environmental Quality, and Fuel Cycle Licensing Branch in evaluating the 2012 Surety Estimate and is not intended and should not be used by anyone other than these specified parties.

I appreciate the opportunity to be of service to the Crow Butte Resources, Inc.

Sincerely,

A handwritten signature in cursive script, appearing to read "George W. Klein".

George W. Klein, CPA

GWK/ll

CROW BUTTE RESOURCES, INC.
URANIUM PROJECT 2012 SURETY ESTIMATE
AGREED UPON PROCEDURES ENGAGEMENT REVIEW
Prepared 9/29/11 LLL

Received the original spreadsheet for the 2012 Surety Estimate from Larry Teahon, SHEQ Manager at Crow Butte Resources on 9/19/2011. Performed review actions noted below. As the only changes found were to the headers and footers due to time constraints, the corrections were made to the file copy sent to us and return to Larry.

The following is a summary of the tests performed and items reviewed:

- I. Traced formula references to cells used throughout the spreadsheet to assure that information being used was being pulled correctly. Printed out all formulas and cell locations so they could be easily reviewed and then manually calculated formulas. Considered whether the formulas and information used were appropriate for end information. Followed formulas from each spreadsheet tab to the end of the column's calculations, with particular attention to new lines added and changes in computation or assumptions from prior year. Compared amounts in master cost sheet to prior year numbers and end costs in each spreadsheet to prior year and looked at reason for any significant change. Selected cost elements in section II below for testing. Checked that changes made during the review of the amended 2011 Surety Estimate were incorporated in the 2012 Estimate.

No errors were found in the formulas in the worksheets or in the costs or data used in the calculations. The headings of all the worksheets needed to be changed to update for the new year and the footers changed to the corresponding sheet identification instead of "summary sheet" on all the pages. As these were minor changes, the corrections were made and the file sent back to Larry Teahon for his use.

- II. The following expense costs and rates were selected for verification.
 - 1) Larry Burbach, Heavy Equipment Sales Representative of Nebraska Machinery Co. in Scottsbluff, NE was the source of the rental rates used for the loader, backhoe, and dozer rental and reserve rates used as well as the range and average fuel consumption for the equipment. Obtained a copy of an 8/23/11 letter emailed to Bob Tiensvold at Crow Butte Resources which listed the rental, reserve, and fuel consumption rates. Traced the rates to the master cost sheet and found no variances.

AGREED UPON PROCEDURES ENGAGEMENT REVIEW, page 2

- 2) Obtained copies of current billings from the Solid Waste Agency of Northwest Nebraska (SWANN) and Stumph Sanitation, current providers for the landfill and collection service for solid waste disposal for Crow Butte Resources to confirm rates used in the Estimate. The cost per load for solid waste (landfill) jumped from \$212 in the prior year to \$912 in the current estimate. Per discussion with Larry Teahon this is because of a fee element that was added in the vendor of \$35 per ton in addition to the roll-off cost of \$200 plus \$6 per day. At an estimated 20 tons per load, this adds \$700 to the cost of each load.
- 3) Traced the Consumer Price Index (CPI) on the internet to a copy of the Bureau of Labor Statistics CPI Detailed report for June 2011 as well as to another internet site (fintrend.com) which provided a historical listing of the CPI by month for several years. Rate used for estimate found to be correct.
- 4) Received an excel spreadsheet from Larry Teahon showing the basis of their diesel price of \$3.55 per gallon based on the actual price of diesel fuel for the past month as delivered to them by Westco of Crawford. Obtained the monthly average diesel fuel price from the Nebraska Energy Office website. The state average at the pump for August 2011 was \$3.85 and the monthly average for North Platte, NE, the nearest surveyed city, was also \$3.85. Deducting the \$.51 state and federal diesel fuel excise taxes would give an off-road price of \$3.34. Give an additional charge for delivery and that fuel prices in more rural Crawford are always run higher than North Platte, the \$.21 additional cost is not out of line. No change was made to the fuel price used in the Estimate.
- 5) Equipment rental rates for the mixer, shredder, and pulling unit used in the Estimate were obtained from Equipment Watch 2011 edition for average rental rates across the nation. For a comparison to local rates, contacted the Chadron Home Center and obtained their rates for a shredder and concrete mixer. The mixer rate for a 24 hour period after a 10% discount is \$36.90/day divided by an 8 hour work day equals \$4.61 per hour which rounded up is the same as the \$5.00 per hour used in the Estimate. The shredder rate for a 24 hour period after a 10% discount is \$72.00/day divided by an 8 hour work day equals \$9.00 per hour. This shredder is probably a lighter duty unit than the size used in the Estimate for \$12 per hour. Both rates used for the Estimate seem reasonable and were accepted.

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Total Restoration and Reclamation Cost Estimate

I.	Groundwater Restoration (Sheets 3 to 6)		\$18,624,235
II.	Wellfield Reclamation (Sheets 7 to 10)		\$7,329,364
III.	Commercial Plant Reclamation/Decommissioning (Sheets 11 to 14)		\$810,241
IV.	R.O. Building Reclamation/Decommissioning (Sheets 11 to 14)		\$237,400
V.	Evaporation Pond Reclamation (Sheets 15 to 18)		\$1,001,615
VI.	Miscellaneous Site Reclamation (Sheets 19 to 21)		\$335,819
VII.	Deep Disposal Well Reclamation (Sheet 22)		\$132,947
VIII.	I-196 Brule Aquifer Restoration (Sheets 23 to 24)		\$29,093
	Subtotal Reclamation and Restoration Cost Estimate		\$28,500,714
	Contract Administration	10%	\$2,850,071
	Contingency	15%	\$4,275,107
		TOTAL	\$35,625,892

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety estimate
(Revised September 2011)

Comparison of Total Surety and Major Cost Elements to Previous Year						
Projected Costs for 2012 are Compared with Costs for 2011 and Changes are Calculated						
		<u>2012</u>	<u>2011</u>	<u>Change</u>		
Total Surety		\$35,625,892	\$35,398,802	\$227,090		
Contract Administration		<u>2012</u>	<u>2011</u>	<u>Change</u>		
		\$2,850,071	\$2,831,904	\$18,167		
Contingency		<u>2012</u>	<u>2011</u>	<u>Change</u>		
		\$4,275,107	\$4,247,856	\$27,251		
Groundwater Restoration		<u>2012</u>	<u>2011</u>	<u>Change</u>		
Groundwater IX						
Total Gallons Processed (Kgal)		3,316,059	2,606,883	709,176		
Total Cost		\$1,160,621	\$1,147,029	\$13,592		
RO Treatment						
Total Gallons Processed (Kgal)		6,632,118	5,213,766	1,418,352		
Total Cost		\$8,621,753	\$8,967,678	(\$345,925)		
Recirculation						
Total Gallons Processed (Kgal)		2,210,706	1,737,922	472,784		
Total Cost		\$618,998	\$556,135	\$62,863		
Sampling and Monitoring						
Total On Site Samples		45,605	48,813	-3,208		
Total On Site Analysis Costs		\$2,407,488	\$2,504,595	(\$97,107)		
Total Contract Samples		5,976	2,191	3,785		
Total Contract Analysis Costs		\$1,195,200	\$438,200	\$757,000		
Wellfield Reclamation		<u>2012</u>	<u>2011</u>	<u>Change</u>		
Pipeline Removal and Loading		\$1,269,029	\$1,754,611	-\$485,582		
Well Abandonment						
Total Number of Wells		4,691	4,691	0		
Total Abandonment Cost		\$2,312,442	\$1,983,026	\$329,416		
Site Reclamation		<u>2012</u>	<u>2011</u>	<u>Change</u>		
Site Earthwork		\$862,356	\$855,396	\$6,960		
Plant and Equipment Decontamination		<u>2012</u>	<u>2011</u>	<u>Change</u>		
Decontamination Costs		\$204,413	\$192,159	\$12,254		
Demolition Costs		\$427,271	\$426,710	\$561		
Piping Shredding Costs		\$438,157	\$594,639	-\$156,482		
Transportation and Disposal		<u>2012</u>	<u>2011</u>	<u>Change</u>		
Byproduct Material						
Soil-Type Materials, Total Volume (Yd3)		4,378	4,376	2		
Soil-Type Materials, Total Cost		\$1,094,764	\$1,094,264	\$500		
Unpackaged Bulk Materials, Total Volume (Yd3)		3,101	2,896	205		
Unpackaged Bulk Materials, Total Cost		\$688,048	\$642,523	\$45,525		

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Ground Water Restoration															
					Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Total
I. IX Treatment Costs															
	PV's Required				3	3	3	3	3	3	3	3	3	3	
	Total Kgals for Treatment				64866	57219	314268	643926	181311	213447	323109	273090	688035	556788	3316059
	IX Treatment Unit Cost (\$/Kgal)	(Sheet 25)			\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	
	Subtotal IX Treatment Costs per Wellfield				\$22,703.10	\$20,026.65	\$109,993.80	\$225,374.10	\$63,458.85	\$74,706.45	\$113,088.15	\$95,581.50	\$240,812.25	\$194,875.80	\$1,160,620.65
	Total IX Treatment Costs				\$1,160,620.65										
II. Reverse Osmosis Costs															
	PV's Required				6	6	6	6	6	6	6	6	6	6	
	Total Kgals for Treatment				129732	114438	628536	1287852	362622	426894	646218	546180	1376070	1113576	6632118
	Reverse Osmosis Unit Cost (\$/Kgal)	(Sheet 26)			\$1.30	\$1.30	\$1.30	\$1.30	\$1.30	\$1.30	\$1.30	\$1.30	\$1.30	\$1.30	\$1.30
	Subtotal Reverse Osmosis Costs per Wellfield				\$168,651.60	\$148,769.40	\$817,096.80	\$1,674,207.60	\$471,408.60	\$554,962.20	\$840,083.40	\$710,034.00	\$1,788,891.00	\$1,447,648.80	\$8,621,753.40
	Total Reverse Osmosis Costs				\$8,621,753.40										
III. Recirculation Costs															
	PV's Required				2	2	2	2	2	2	2	2	2	2	
	Total Kgals for Treatment				43244	38146	209512	429284	120874	142298	215406	182060	458690	371192	2210706
	Recirculation Unit Cost (\$/Kgal)	(Sheet 27)			\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28
	Subtotal Recirculation Costs per Wellfield				\$12,108.32	\$10,680.88	\$58,663.36	\$120,199.52	\$33,844.72	\$39,843.44	\$60,313.68	\$50,976.80	\$128,433.20	\$103,933.76	\$618,997.68
	Total Recirculation Costs				\$618,997.68										
IV. Consumables															
	Spare parts, filters and consumables =	\$51,750.00	year												
	Active restoration period (months)				4.84	4.28	23.45	48.03	13.53	15.93	24.10	20.37	51.33	41.53	247.39
	Consumable usage (months restoration x annual rate estimate)				\$20,872.50	\$18,457.50	\$101,128.13	\$207,129.38	\$58,348.13	\$68,698.13	\$103,931.25	\$87,845.63	\$221,360.63	\$179,098.13	\$1,066,869.41
	Subtotal Consumables per Mine Unit				\$20,872.50	\$18,457.50	\$101,128.13	\$207,129.38	\$58,348.13	\$68,698.13	\$103,931.25	\$87,845.63	\$221,360.63	\$179,098.13	\$1,066,869.41
	Total Consumables Costs				\$1,066,869.41										

Crow Butte Resources Inc.
 Crow Butte Uranium Project 2012 Surety Estimate
 (Revised September 2011)

Ground Water Restoration																		
							Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Total	
V. Monitoring and Sampling Costs																		
	Guideline 8 analysis =																	
	6 parameter in-house analysis =		\$200.00	analysis														
			\$52.79	analysis														
	Total restoration wells						12	18	43	59	55	25	30	21	34	25	322	
	Total monitor wells						13	10	18	48	54	33	50	33	65	43	367	
	IX Treatment duration (months)						1.29	1.14	6.24	12.78	3.60	4.24	6.41	5.42	13.66	11.05	65.83	
	Reverse Osmosis duration (months)						2.69	2.38	13.05	26.73	7.53	8.86	13.41	11.34	28.56	23.11	137.66	
	Recirculation duration (months)						0.86	0.76	4.16	8.52	2.40	2.83	4.28	3.61	9.11	7.37	43.90	
	Stabilization duration (months)						12	12	12	12	12	12	12	12	12	12		
A. Restoration Well Sampling																		
1. Well Sampling prior to restoration start																		
	# of Wells						12	18	43	59	55	25	30	21	34	25	322	
	\$/sample		\$200.00				\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00		
2. IX Treatment Sampling																		
	# of Wells						12	18	43	59	55	25	30	21	34	25		
	Total # samples						24	36	301	767	220	125	210	126	476	300	2585	
	\$/sample		\$52.79				\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79		
3. RO Sampling																		
	# of Wells						12	18	43	59	55	25	30	21	34	25		
	Total # samples						36	36	559	1593	440	225	390	231	986	575	5071	
	\$/sample		\$52.79				\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79		

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Ground Water Restoration															
					Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Total
4. Recirculation Sampling															
	# of Wells				12	18	43	59	55	25	30	21	34	25	
	Total # samples				12	18	215	531	165	75	150	84	340	200	1790
	\$/sample				\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	
5. Stabilization Sampling (Guideline 8)															
	# of Wells				12	18	43	59	55	25	30	21	34	25	
	Total # samples				144	216	516	708	660	300	360	252	408	300	3864
	\$/sample				\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	
6. Stabilization Sampling (6 parameter in-house)															
	# of Wells				12	18	43	59	55	25	30	21	34	25	
	Total # samples				144	216	516	708	660	300	360	252	408	300	3864
	\$/sample				\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	
7. Monitor Well Sampling															
	# of Wells				13	10	18	48	54	33	50	33	65	43	
	\$/sample				\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	\$52.79	
	Total # samples (2.2/mo for entire period)				482	358	1404	6339	3033	2028	3971	2350	9056	5064	34085
8. Other Laboratory Costs															
	Radon, urinalysis, etc. =			\$957.38	month										
	Total for Other Laboratory Costs:				\$4,633.72	\$4,097.59	\$22,450.56	\$45,982.96	\$12,953.35	\$15,251.06	\$23,072.86	\$19,501.83	\$49,142.32	\$39,759.99	\$236,846.24
Subtotal Monitoring and Sampling Costs per Mine Unit					\$74,447.66	\$88,599.93	\$324,006.76	\$802,178.49	\$418,748.22	\$236,622.68	\$391,380.35	\$247,107.44	\$782,325.86	\$474,116.80	\$3,839,534.19
Total Monitoring and Sampling Costs					\$3,839,534.19										
VI. MIT Costs															
	MIT Costs per Well				\$107.94	\$107.94	\$107.94	\$107.94	\$107.94	\$107.94	\$107.94	\$107.94	\$107.94	\$107.94	
	Restoration period, plus stabilization				16.84	16.28	35.45	60.03	25.53	27.93	36.10	32.37	63.33	53.53	
	Remaining MIT's per 5 year cycle				1	1	1	1	2	2	2	3	3	3	
	Number of Wells MIT'd for Life of Mine Unit				144	163	290	494	550	618	711	552	869	487	
	Subtotal MIT Mine Unit				\$15,543.36	\$17,594.22	\$31,302.60	\$53,322.36	\$118,734.00	\$133,413.84	\$153,490.68	\$178,748.64	\$281,399.58	\$157,700.34	
	5-year MIT Costs for Disposal Wells		\$6,425												
	Number of DDWs		2												
	Number of MITs per DDW		2												
	Subtotal MIT DDW Costs		\$25,700												
	Total MIT Costs		\$1,166,950												

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Ground Water Restoration																
					Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Total	
VI.	Supervisory Labor Cost															
			Engineer Support =	\$9,004.50	month											
			HP Technician support =	\$5,692.50	month											
			Active restoration period (months)			4.84	4.28	23.45	48.03	13.53	15.93	24.10	20.37	51.33	41.53	
			Stabilization period (months)			12	12	12	12	12	12	12	12	12	12	
			1 Engineer support during active restoration			\$43,581.78	\$38,539.26	\$211,155.53	\$432,486.14	\$121,830.89	\$143,441.69	\$217,008.45	\$183,421.67	\$462,200.99	\$373,956.89	\$2,227,623.29
			2 HP Technician support during active restoration			\$27,551.70	\$24,363.90	\$133,489.13	\$273,410.78	\$77,019.53	\$90,681.53	\$137,189.25	\$115,956.23	\$292,196.03	\$236,409.53	\$1,408,267.61
			3 Engineer support during final stabilization										\$108,054.00	\$108,054.00	\$108,054.00	\$324,162.00
			4 HP Technician support during final stabilization										\$68,310.00	\$68,310.00	\$68,310.00	\$204,930.00
			5 Cost reduction due to concurrent restoration of Mine Units					-172,322.33	-352,948.46	-99,425.21	-117,061.61	-177,098.85	-237,870.95	-465,380.51	-393,365.21	-\$2,015,473.13
			Subtotal Supervisory Labor per Mine Unit			\$71,133.48	\$62,903.16	\$172,322.33	\$352,948.46	\$99,425.21	\$117,061.61	\$177,098.85	\$237,870.95	\$465,380.51	\$393,365.21	\$2,149,509.77
			Total Supervisory Labor Costs			\$2,149,509.77										
			TOTAL RESTORATION COST PER WELLFIELD			\$369,916.66	\$349,437.52	\$1,583,211.18	\$3,382,037.55	\$1,145,233.73	\$1,091,894.51	\$1,685,895.68	\$1,429,416.32	\$3,627,203.45	\$2,793,038.50	\$17,457,285.10
			TOTAL GROUND WATER RESTORATION COSTS			\$18,624,234.72										

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Wellfield Reclamation														
	Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Totals		
Wellfield Piping														
Assumptions:														
Number of Wellhouses	0	3	3	5	7	7	6	8	7.5	10	5.5	62		
Total Mine Unit surface area (acres)	9.27	11.70	13.46	71.62	129.66	34.61	51.01	57.92	48.95	111.13	75.08	614.41		
Total length of small diameter production and injection lines (laterals) (ft)	0	34000	39520	68900	106080	130700	172900	188200	163150	239600	92000	1235050		
Total length of 3/8-inch hose (ft)					66300							66300		
Total length 1-1/4-inch stinger pipe (ft)	0	0	0	0	0	0	72000	96000	129600	105000	100000	502600		
Total length of 2-inch downhole production pipe (ft)	1200	20000	30000	22000	50000	45000	104000	65000	95000	63000	97500	592700		
Total Length of Trunkline (6-inch) (ft)	1000	2100	4000	600		4500		900			5600	18700		
Total Length of Trunkline (8-inch) (ft)	4400	1300	1450	7800	3700	2000	1000	2100	2225	3500	1400	30875		
Total Length of Trunkline (10-inch) (ft)												400		
Total Length of Trunkline (12-inch) (ft)			10800	6500	31900	12000	5000	18900	11525	14100	5000	115725		
Total Length of All Trunkline (ft)	5400	3400	16250	14900	35600	18500	6000	22300	13750	23200	6400	165700		
Total number of production wells	3	52	57	103	210	187	205	249	195	301	160	1722		
Total number of injection wells	0	79	96	169	236	309	380	412	324	503	284	2792		
Total number of shallow monitor wells	0	3	3	11	25	28	25	30	20	32	24	201		
Total number of perimeter monitor wells	11	10	7	7	23	26	8	20	13	33	19	177		
I. Production and Injection Piping														
A. Removal and Loading														
Production and Injection Piping Removal Unit Cost (\$/ft of pipe)	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70	\$0.70		
Subtotal Production and Injection Piping Removal and Loading Costs	\$0.00	\$23,800.00	\$27,664.00	\$48,230.00	\$74,256.00	\$91,490.00	\$121,030.00	\$131,740.00	\$114,205.00	\$167,720.00	\$64,400.00	\$864,535.00		
B. Pipe Shredding														
Production and Injection Piping Shredding Unit Cost (\$/ft of pipe)	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08		
Subtotal Production and Injection Piping Removal and Loading Costs	\$0.00	\$2,720.00	\$3,161.60	\$5,512.00	\$8,486.40	\$10,456.00	\$13,832.00	\$15,056.00	\$13,052.00	\$19,168.00	\$7,360.00	\$98,804.00		
C. Equipment Costs														
Cat 924G Loader Unit Costs for removal (450/day)	\$0.00	\$36,157.87	\$42,028.20	\$73,272.85	\$112,812.54	\$138,995.09	\$183,873.39	\$200,144.43	\$173,504.59	\$254,806.61	\$97,838.93			
Shredder Unit Costs for shredding (450/day)	\$0.00	\$7,253.33	\$8,430.93	\$14,698.67	\$22,630.40	\$27,882.67	\$36,885.33	\$40,149.33	\$34,805.33	\$51,114.67	\$19,626.67			
Subtotal Equipment Costs	\$0.00	\$43,411.20	\$50,459.13	\$87,971.52	\$135,442.94	\$166,877.76	\$220,758.72	\$240,293.76	\$208,309.92	\$305,921.28	\$117,465.60	\$1,576,911.83		
D. Transport and Disposal Costs (NRC-Licensed Facility)														
Chipped Volume Reduction (ft ³ /ft)	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069		
Chipped Volume per Wellfield (yd ³)	0.0	8.7	10.1	17.6	27.1	33.4	44.2	48.1	41.7	61.2	23.5			
Volume for Disposal Assuming 25% Void Space (yd ³)	0.0	10.9	12.6	22.0	33.9	41.8	55.3	60.1	52.1	76.5	29.4	394.6		
Transportation and Disposal Unit Cost (\$/yd ³ Unpackaged Bulk)	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64		
Subtotal Production and Injection Piping Transport and Disposal Costs	\$0.00	\$2,415.88	\$2,792.66	\$4,876.08	\$7,513.60	\$9,264.55	\$12,256.69	\$13,320.56	\$11,547.44	\$16,955.46	\$6,516.22	\$87,459.14		
Total Production and Injection Piping Costs	\$0.00	\$72,347.08	\$84,077.39	\$146,589.60	\$225,698.94	\$278,088.31	\$367,877.41	\$400,410.32	\$347,114.36	\$509,764.74	\$195,741.82	\$2,627,709.97		

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Wellfield Reclamation													
	Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Totals	
II. Trunklines													
A. Removal and Loading													
Trunkline Removal Unit Cost (\$/ft of pipe)	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	
Subtotal Trunkline Removal and Loading Costs	\$8,478.00	\$5,338.00	\$25,512.50	\$23,393.00	\$55,892.00	\$29,045.00	\$9,420.00	\$35,011.00	\$21,587.50	\$36,424.00	\$10,048.00	\$260,149.00	
B. Pipe Shredding													
Trunkline Shredding Unit Cost (\$/ft of pipe)	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	\$1.57	
Subtotal Trunkline Shredding Costs	\$8,478.00	\$5,338.00	\$25,512.50	\$23,393.00	\$55,892.00	\$29,045.00	\$9,420.00	\$35,011.00	\$21,587.50	\$36,424.00	\$10,048.00	\$260,149.00	
C. Equipment Costs													
Cat 924G Loader Unit Costs for removal (200/day)	\$12,921.12	\$8,135.52	\$38,883.00	\$35,652.72	\$85,183.68	\$44,266.80	\$14,356.80	\$53,359.44	\$32,901.00	\$55,512.96	\$15,313.92		
Shredder Unit Costs for shredding (200/day)	\$2,592.00	\$1,632.00	\$7,800.00	\$7,152.00	\$17,088.00	\$8,880.00	\$2,880.00	\$10,704.00	\$6,600.00	\$11,136.00	\$3,072.00		
Subtotal Equipment Costs	\$15,513.12	\$9,767.52	\$46,683.00	\$42,804.72	\$102,271.68	\$53,146.80	\$17,236.80	\$64,063.44	\$39,501.00	\$66,648.96	\$18,385.92	\$476,022.96	
D. Transport and Disposal Costs (NRC-Licensed Facility)													
Chipped Volume Reduction (6-inch) (ft ³ /ft)	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651	
Chipped Volume Reduction (8-inch) (ft ³ /ft)	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	0.1103	
Chipped Volume Reduction (10-inch) (ft ³ /ft)	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	0.1712	
Chipped Volume Reduction (12-inch) (ft ³ /ft)	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	0.2408	
Chipped Volume per Wellfield (yd ³)	20.4	10.4	111.9	91.3	299.6	126.0	48.7	181.8	111.9	153.6	50.3		
Volume for Disposal Assuming 25% Void Space (ft ³)	25.5	13.0	139.9	114.1	374.5	157.5	60.9	227.3	139.9	192.0	62.9	1507.5	
Transportation and Disposal Unit Cost (\$/ft ³)	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	
Subtotal Transport and Disposal Costs	\$5,651.82	\$2,881.32	\$31,007.44	\$25,289.12	\$83,004.18	\$34,908.30	\$13,497.88	\$50,378.77	\$31,007.44	\$42,554.88	\$13,941.16	\$334,122.31	
Total Trunkline Costs	\$38,120.94	\$23,324.84	\$128,715.44	\$114,879.84	\$297,059.86	\$146,145.10	\$49,574.68	\$184,464.21	\$113,683.44	\$182,051.84	\$52,423.08	\$1,330,443.27	
III. Downhole Pipe													
A. Removal and Loading													
Downhole Piping Removal Unit Cost (\$/ft of pipe)	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	\$0.080	
Downhole Hosing Removal Unit Cost (\$/ft of pipe)	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	\$0.160	
Removal of 1-1/4-inch stinger pipe	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,760.00	\$7,680.00	\$10,368.00	\$8,400.00	\$8,000.00	\$8,000.00	
Removal of downhole production pipe	\$96.00	\$1,600.00	\$2,400.00	\$1,760.00	\$4,000.00	\$3,600.00	\$8,320.00	\$5,200.00	\$7,600.00	\$5,040.00	\$7,800.00	\$7,800.00	
Removal of downhole hose	\$0.00	\$0.00	\$0.00	\$0.00	\$10,608.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Subtotal Downhole Piping Removal and Loading Costs	\$96.00	\$1,600.00	\$2,400.00	\$1,760.00	\$14,608.00	\$3,600.00	\$14,080.00	\$12,880.00	\$17,968.00	\$13,440.00	\$15,800.00	\$98,232.00	
B. Pipe Shredding													
Downhole Piping Shredding Unit Cost (\$/ft of pipe)	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	\$0.070	
Subtotal Downhole Piping Shredding Costs	\$84.00	\$1,400.00	\$2,100.00	\$1,540.00	\$3,500.00	\$3,150.00	\$12,320.00	\$11,270.00	\$15,722.00	\$11,760.00	\$13,825.00	\$76,671.00	
C. Equipment Costs													
Smeal Unit Costs for removal	\$60.00	\$1,000.00	\$1,500.00	\$1,100.00	\$2,500.00	\$2,250.00	\$8,800.00	\$8,050.00	\$11,230.00	\$8,400.00	\$9,875.00		
Shredder Unit Costs for shredding	\$25.60	\$426.67	\$640.00	\$469.33	\$1,066.67	\$960.00	\$3,754.67	\$3,434.67	\$4,791.47	\$3,584.00	\$4,213.33		
Subtotal Equipment Costs	\$85.60	\$1,426.67	\$2,140.00	\$1,569.33	\$3,566.67	\$3,210.00	\$12,554.67	\$11,484.67	\$16,021.47	\$11,984.00	\$14,088.33	\$78,131.41	

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Wellfield Reclamation													
	Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Totals	
D. Transport and Disposal Costs (NRC-Licensed Facility)													
Chipped Volume Reduction - 1-1/4-inch stinger (ft ³ /ft)	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	
Chipped Volume Reduction - 2-inch downhole production (ft ³ /ft)	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	0.0074	
Volume Reduction - 3/8-inch hose (ft ³ /ft)	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	0.0313	
Chipped Volume - 1-1/4-inch stinger (ft ³)	0	0	0	0	0	0	317	422	570	462	440		
Chipped Volume - 2-inch downhole production (ft ³)	9	148	222	163	370	333	770	481	703	466	722		
Volume 3/8-inch hose (ft ³)	0	0	0	0	2075	0	0	0	0	0	0		
Volume for Disposal Assuming 25% Void Space (yd ³)	0.4	6.9	10.3	7.5	113.2	15.4	50.3	41.8	58.9	43.0	53.8	401.5	
Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64	\$221.64		
<i>Subtotal Downhole Piping Transport and Disposal Costs</i>	<i>\$88.66</i>	<i>\$1,529.32</i>	<i>\$2,282.89</i>	<i>\$1,662.30</i>	<i>\$25,089.65</i>	<i>\$3,413.26</i>	<i>\$11,148.49</i>	<i>\$9,264.55</i>	<i>\$13,054.60</i>	<i>\$9,530.52</i>	<i>\$11,924.23</i>	<i>\$88,988.47</i>	
Total Downhole Piping Costs	\$354.26	\$5,955.99	\$8,922.89	\$6,531.63	\$46,764.32	\$13,373.26	\$50,103.16	\$44,899.22	\$62,766.07	\$46,714.52	\$55,637.56	\$342,022.88	
IV. Surface Reclamation													
A. Removal and disposal of contaminated soil around wells													
Volume of contaminated soil (0.37 yd ³ per injection and production well)	1.11	48.47	56.61	100.64	165.02	183.52	216.45	244.57	192.03	297.48	164.28	1670.18	
Disposal of contaminated soil \$250.05 per yd ³	\$277.56	\$12,119.92	\$14,155.33	\$25,165.03	\$41,263.25	\$45,889.18	\$54,123.32	\$61,154.73	\$48,017.10	\$74,384.87	\$41,078.21	\$417,628.50	
Equipment (Cat 924G loader at 2 yd ³ /hr)	\$33.20	\$1,449.74	\$1,693.21	\$3,010.14	\$4,935.75	\$5,489.08	\$6,474.02	\$7,315.09	\$5,743.62	\$8,897.63	\$4,913.61	\$49,131.61	
Labor (1 man-hour per 2 Yd ³)	\$10.91	\$476.58	\$556.62	\$989.54	\$1,622.56	\$1,804.46	\$2,128.24	\$2,404.73	\$1,888.13	\$2,924.97	\$1,615.28	\$16,415.28	
<i>Subtotal removal and disposal of contaminated soil</i>	<i>\$321.67</i>	<i>\$14,046.24</i>	<i>\$16,405.16</i>	<i>\$29,164.71</i>	<i>\$47,821.56</i>	<i>\$53,182.72</i>	<i>\$62,725.58</i>	<i>\$70,874.53</i>	<i>\$55,648.85</i>	<i>\$86,207.47</i>	<i>\$47,607.10</i>	<i>\$484,005.61</i>	
B. Recontour and seeding													
Recontour and seeding (est. \$300/acre)	\$2,781.00	\$3,510.00	\$4,038.00	\$21,486.00	\$38,898.00	\$10,383.00	\$15,303.00	\$17,376.00	\$14,685.00	\$33,339.00	\$22,524.00	\$184,323.00	
<i>Subtotal Recontour and Seeding</i>	<i>\$2,781.00</i>	<i>\$3,510.00</i>	<i>\$4,038.00</i>	<i>\$21,486.00</i>	<i>\$38,898.00</i>	<i>\$10,383.00</i>	<i>\$15,303.00</i>	<i>\$17,376.00</i>	<i>\$14,685.00</i>	<i>\$33,339.00</i>	<i>\$22,524.00</i>	<i>\$184,323.00</i>	
Total Surface Reclamation	\$3,102.67	\$17,556.24	\$20,443.16	\$50,650.71	\$86,719.56	\$63,565.72	\$78,028.58	\$88,250.55	\$70,333.85	\$119,546.47	\$70,131.10	\$668,328.61	
IV. Well Houses													
Total Quantity	0	3	3	5	7	7	6	8	7.5	10	5.5		
Average Well House Weight (Lbs.) (Includes wellhead covers for each well)	9200	9200	9200	9200	9200	9200	9200	9200	9200	9200	9200		
A. Removal													
Dismantlement at 2-man-days per wellhouse (man-days)	0	6	6	10	14	14	12	16	15	20	11		
Dismantlement Labor Costs	\$0.00	\$943.92	\$943.92	\$1,573.20	\$2,202.48	\$2,202.48	\$1,887.84	\$2,517.12	\$2,359.80	\$3,146.40	\$1,730.52	\$19,507.68	
Equipment (Cat 924G at 2 hours per wellhouse) (hrs)	0	6	6	10	14	14	12	16	15	20	11		
Equipment Costs	\$0.00	\$358.92	\$358.92	\$598.20	\$837.48	\$837.48	\$717.84	\$957.12	\$897.30	\$1,196.40	\$658.02	\$7,417.68	
<i>Subtotal Well House Dismantlement Costs</i>	<i>\$0.00</i>	<i>\$1,302.84</i>	<i>\$1,302.84</i>	<i>\$2,171.40</i>	<i>\$3,039.96</i>	<i>\$3,039.96</i>	<i>\$2,605.68</i>	<i>\$3,474.24</i>	<i>\$3,257.10</i>	<i>\$4,342.80</i>	<i>\$2,388.54</i>	<i>\$26,925.36</i>	
B. Disposal													
Total Disposal Weight (9200 lbs per wellhouse) (Lbs)	0	27600	27600	46000	64400	64400	55200	73600	69000	92000	50600		
<i>Subtotal Disposal Costs</i>	<i>\$0.00</i>	<i>\$701.04</i>	<i>\$701.04</i>	<i>\$1,168.40</i>	<i>\$1,635.76</i>	<i>\$1,635.76</i>	<i>\$1,402.08</i>	<i>\$1,869.44</i>	<i>\$1,752.60</i>	<i>\$2,336.80</i>	<i>\$1,285.24</i>	<i>\$14,488.16</i>	
Total Well House Removal and Disposal Costs	\$0.00	\$2,003.88	\$2,003.88	\$3,339.80	\$4,675.72	\$4,675.72	\$4,007.76	\$5,343.68	\$5,009.70	\$6,679.60	\$3,673.78	\$41,413.52	
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	\$41,577.87	\$121,188.03	\$244,162.76	\$321,991.58	\$660,918.40	\$505,848.11	\$549,591.59	\$723,367.98	\$598,907.42	\$864,757.17	\$377,607.34	\$5,009,918.25	
TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL AND DISPOSAL COSTS	\$5,009,918.25												

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Well Abandonment															
		Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11	Total		
I.	Well Abandonment (Wellfields)														
	# of Production Wells	3	52	57	103	210	187	205	249	195	301	160			
	# of Injection Wells	0	79	96	169	236	309	380	412	324	503	284			
	# of Perimeter Monitoring Wells	11	10	7	7	23	26	8	20	13	33	19			
	# of Shallow Monitoring Wells	0	3	3	11	25	28	25	30	20	32	24			
	Total Number of Deep Wells	14	141	160	279	469	522	593	681	532	837	463	4691		
	Total Number of Shallow Wells	0	3	3	11	25	28	25	30	20	32	24	201		
	Average Diameter of Casing (inches)	5	5	5	5	5	5	5	5	5	5	5	5		
	Production, Injection and Perimeter Well Average Depth (ft)	665	631	774	698	675	515	762	500	770	480	775	659		
	Shallow Well Average Depth (ft)	200	200	200	200	200	200	200	200	200	150	188	194		
	Total Mine Unit Well Depth (ft)	9310	89571	124440	196942	321575	274430	456866	346500	413640	406560	363337	3003171		
	Well Abandonment Unit Cost (\$/ft. of well)	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77	\$0.77			
	Subtotal Abandonment Cost per Wellfield	\$7,168.70	\$68,969.67	\$95,818.80	\$151,645.34	\$247,612.75	\$211,311.10	\$351,786.82	\$266,805.00	\$318,502.80	\$313,051.20	\$279,769.49	\$2,312,441.67		
II.	Downhole Pump Disposal														
	Number of Downhole Pumps					1705									
	Pump Disposal Volume(ft3)					0.5									
	Total Pump Disposal Volume(yd3)					31.6							31.6		
	Downhole Pump Disposal Rate (\$/yd3)					\$221.64							221.64		
	Subtotal Downhole Pump Disposal					\$7,003.82							\$7,003.82		
	Total Wellfield Abandonment Costs					\$2,319,445.49									

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Plant Equipment Decommissioning				Commercial Plant	R.O. Building
I. Removal and Loading Costs					
	Tankage				
	Number of Contaminated Tanks		94		
	Volume of Contaminated Tank Construction Material (ft ³)		1814		
	Number of Chemical Tanks		21		
	Disposal Void Factor		1.25		
A.	Labor to Remove and Load Tankage				
	Number of Persons		2		
	Tanks/Day		1		
	Number of Days		115		
	\$/Day/Person		\$157.32		
	<i>Subtotal Removal Labor Costs</i>		<i>\$36,183.60</i>		
B.	Labor to Clean Chemical Tankage				
	Number of Persons		1		
	Tanks/Day		1		
	Number of Days		21		
	\$/Day/Person		\$157.32		
	<i>Subtotal Cleaning Labor Costs</i>		<i>\$3,303.72</i>		
C.	Equipment				
	Saws, scaffolding, etc.		\$6,000		
	<i>Subtotal Equipment Costs</i>		<i>\$6,000</i>		
Total Equipment Removal and Loading Costs				\$45,487.32	
II. Transportation and Disposal Costs (NRC-Licensed Facility)					
A.	Tankage				
	Volume of Tank Construction Material (ft ³)		1814		
	Volume for Disposal Assuming Void Space (yd ³)		84.0		
	Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)		\$221.64		
	<i>Subtotal Tankage Transportation and Disposal Costs</i>		<i>\$18,617.76</i>		
B.	Contaminated PVC Pipe				
	Volume of Shredded PVC Pipe (ft ³)		364.8		
	Volume for Disposal Assuming Void Space (yd ³)		16.9		
	Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)		\$221.64		
	<i>Subtotal Contaminated PVC Pipe Transportation and Disposal Costs</i>		<i>\$3,745.72</i>		
C.	Pumps				
	Volume of Process Pumps (yd ³) (no void factor used)		25.0		
	Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)		\$221.64		

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Plant Equipment Decommissioning				Commercial Plant	R.O. Building
			<i>Subtotal Pump Transportation and Disposal Costs</i>	<i>\$5,541.00</i>	
D.			Filters (injection, backwash and yellowcake filters)		
			Volume of Filters (yd ³) (no void factor used)	300.0	
			Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)	\$221.64	
			<i>Subtotal Filter Transportation and Disposal Costs</i>	<i>\$66,492.00</i>	
E.			Dryer		
			Dryer Volume (yd ³) (no void factor used)	29.6	
			Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)	\$221.64	
			<i>Total Dryer Transportation and Disposal Costs</i>	<i>\$6,560.54</i>	
			Total Contaminated Equipment Transportation and Disposal Costs	\$100,957.02	
III. Transportation and Disposal (Solid Waste for Landfill Disposal)					
A.			Cleaned Tankage		
			Volume of Tank Construction Material (ft ³)	405	
			Number of Landfill Trips	1	
			Transportation and Disposal Unit Cost (\$/Load)	\$912.00	
			<i>Subtotal Tankage Transportation and Disposal Costs</i>	<i>\$912.00</i>	
B.			Uncontaminated PVC Pipe		
			Volume of Shredded PVC Pipe (ft ³)	184.3	
			Number of Landfill Trips	1	
			Transportation and Disposal Unit Cost (\$/Load)	\$912.00	
			<i>Subtotal PVC Pipe Transportation and Disposal Costs</i>	<i>\$912.00</i>	
			Total Uncontaminated Equipment Transportation and Disposal Costs	\$1,824.00	
IV. Supervisory Labor Costs During Plant Decommissioning					
			Estimated Duration (months)	6	
			Engineer	\$54,027.00	
			Radiation Technician	\$34,155.00	
			Total Supervisory Labor Costs	\$88,182.00	
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY				\$236,450.34	
			Building Area (Ft ²)	34,138	10,000
			Building Equipment Removal and Disposal Cost per Square Foot	\$6.93	\$6.93
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS				\$236,450.34	\$69,300.00

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Building Demolition				Commercial Plant	R.O. Building
I.	Decontamination Costs				
A.	Wall Decontamination				
		Area to be Decontaminated (ft ²)		31,382	
		HCl Application Rate (Gallons/ft ²)		1	
		HCl Acid Cost		\$1.47	
		Subtotal Wall Decontamination Materials Costs		\$46,131.54	
B.	Concrete Floor Decontamination				
		Area to be Decontaminated (ft ²)		34138	
		HCl Application Rate (Gallons/ft ²)		2	
		HCl Acid Cost		\$1.47	
		Subtotal Floor Decontamination Materials Costs		\$100,365.72	
C.	Decontamination Labor				
		Labor (man-days)		60	
		Subtotal Decontamination Labor Cost		\$9,439.20	
D.	Decontamination Equipment Costs				
		Sprayer pump		\$500	
		Recycle pump		\$500	
		Sprayer with hose		\$1,000	
		Subtotal Decontamination Equipment Costs		\$2,000	
E.	Decontamination Waste Disposal (to Ponds)				
		Total gallons HCl waste		99,658	
		Pumping costs (5 HP/30 gpm)		\$989.52	
		Subtotal Decontamination Costs		\$158,925.98	
		Total Decontamination Costs		\$158,925.98	
II.	Demolition Costs				
		Assumptions (based on 2007 costs):			
		Dismantling interior steel, tanks, pumps, etc.		\$198,800.00	
		Dismantling plant building		\$99,400.00	
A.	Building Dismantling				
		Dismantle interior components (2007 \$'s escalated by CPI)		\$205,758.00	
		Plant building dismantling (2007 \$'s escalated by CPI)		\$102,879.00	
		Subtotal Building Dismantling		\$308,637.00	
B.	Concrete Floor Removal				
		Area of direct-dispose concrete floors (ft ²)		5,500	
		Removal Rate (\$/ft ²)		\$14.04	

Crow Butte Resources, Inc.
 Crow Butte Uranium Project 2012 Surety Estimate
 (Revised September 2011)

Building Demolition				Commercial Plant	R.O. Building
			<i>Subtotal Concrete Floor Removal</i>	\$77,220.00	
			Total Demolition Costs	\$385,857.00	
III.	Disposal Costs				
	A. Concrete Floor				
		Area of Direct-Dispose Concrete Floor (ft ²)		5,500	
		Average Thickness of Concrete Floor (ft)		0.50	
		Volume of Concrete Floor (ft ³)		2,750	
		Volume of Concrete Floor (Yd3)		102	
		Transportation and Disposal Unit Cost (\$/Yd ³) (Unpackaged Bulk)		\$221.64	
		<i>Subtotal Concrete Floor Disposal Costs</i>		\$22,607.28	
		Total Disposal Costs		\$22,607.28	
IV	Plant Site Reclamation				
	A. Plant Site Earthwork				
		Material to be Moved (Yd3)		20,000	
		D8N Bulldozer Earthwork Rate (Yd3/hr)		700	
		D8N Hourly Rate		\$182.00	
		<i>Subtotal Plant Site Earthwork</i>		\$5,200.00	
	B. Revegetation				
		Area requiring Revegetation (Ac)		4	
		Revegetation Unit Cost (\$/Ac)		\$300	
		<i>Subtotal Plant Site Revegetation</i>		\$1,200.00	
		Total Plant Site Reclamation Costs		\$6,400.00	
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS				\$573,790.26	
		Building Area (Ft2)		34,138	10,000
		Building Demolition Cost per Square Foot		\$16.81	\$16.81
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS				\$573,790.26	\$168,100.00

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Evaporation Pond Reclamation				Commercial Ponds	R&D Ponds	Total
Assumptions/Data:						
	Number of Ponds			3	2	
	Area of Ponds (ft ²)			250,000	50,000	
	Thickness of Liner Material (ft)			0.00833	0.0030	
	Leak detection piping size (in)			4	3	
	Leak detection piping length (ft/pond)			2,100	600	
	Earthwork Requirements (Yd ³ /pond)			60,000	30,000	
	Surface Restoration/Revegetation (Acres)			20	10	
	Sludge Production Rate (Yd ³ sludge/gal)				0.000000102	
	(1 Yd ³ sludge/9,772,000 gal R&D Phase)					
	Estimated 1991 to 2012 Total Production (gallons)			26,553,260,400		
	Liner Removal Rate (ft ² /man-day)			10,000	10,000	
	Sludge Removal Rate (Yd ³ /man-day)			8.33	8.33	
I. Pond Liner and Piping Removal						
A. Pond Liner and Piping Removal Labor						
	Area of Ponds			750,000	100,000	
	Liner Removal Rate (ft ² /Man-Day)			10,000	10,000	
	Total Man-Days			75	10	
	Labor Rate (\$/man-day)			\$157.32	\$157.32	
	<i>Subtotal Liner and Piping Removal Labor Costs</i>			<i>\$11,799.00</i>	<i>\$1,573.20</i>	<i>\$13,372.20</i>
B. Pond Liner and Piping Removal Equipment						
	Total Man-Days Removal Effort			75	10	
	Size of Crew			4	4	
	Total Days Removal Effort			18.75	2.5	
	Cat 924G Loader Hourly Rate (\$/hr)			\$59.82	\$59.82	
	<i>Subtotal Liner and Piping Removal Equipment Costs</i>			<i>\$8,973.00</i>	<i>\$1,196.40</i>	<i>\$10,169.40</i>
Total Pond Liner and Piping Removal Costs				\$20,772.00	\$2,769.60	\$23,541.60

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Evaporation Pond Reclamation							
					Commercial Ponds	R&D Ponds	Total
II. Pond Sludge Removal							
	Pond Sludge Estimate						
	Estimated Production Flow since 1991 (gal)				26,553,260,400		
	Historical Sludge Production Rate				0.000000102		
	Estimated Pond Sludge Volume (Yd3)				2,708	Cleaned following R&D	
A.	Pond Sludge Removal Labor						
	Pond Sludge Volume (Yd3)				2,708		2,708
	Sludge Removal Rate (Yd3/man-day)				8.33		
	Total Man-Days				325		
	Labor Rate (\$/man-day)				\$157.32		
	<i>Subtotal Pond Sludge Removal Labor Costs</i>				<i>\$51,129.00</i>	<i>\$0.00</i>	<i>\$51,129.00</i>
B.	Pond Sludge Removal Equipment						
	Total Man-Days Removal Effort				325		
	Size of Crew				3		
	Total Days Removal Effort				108		
	Cat 924G Loader Hourly Rate (\$/hr)				\$59.82		
	<i>Subtotal Pond Sludge Removal Equipment Costs</i>				<i>\$51,684.48</i>	<i>\$0.00</i>	<i>\$51,684.48</i>
	Total Pond Sludge Removal Costs				\$102,813.48	\$0.00	\$102,813.48
III. Pond Byproduct Material Disposal							
A.	Pond Liner Disposal						
	Area of Pond Liner (ft2)				750,000	100,000	
	Thickness of Pond Liner (ft)				0.00833	0.00300	
	Volume of Pond Liner (ft3)				6,248	300	
	Void Space Factor				1.25	1.25	
	Total Disposed Volume (yd3)				289	14	303.0
	Disposal Unit Costs (\$/yd3) (Unpackaged Bulk)				\$221.64	\$221.64	
	<i>Subtotal Pond Liner Disposal Costs</i>				<i>\$64,053.96</i>	<i>\$3,102.96</i>	<i>\$67,156.92</i>

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Evaporation Pond Reclamation							
					Commercial Ponds	R&D Ponds	Total
B.	Pond Piping Disposal						
		Total Length of Piping			6,300	1,200	
		Piping Volume Factor (ft3/ft)			0.0103	0.0069	
		Total Volume Pond Piping (ft3)			65	8	
		Void Space Factor			1.25	1.25	
		Total Disposed Volume (yd3)			3.0	0.4	3.4
		Disposal Unit Costs (\$/yd3) (Unpackaged Bulk)			\$221.64	\$221.64	
		<i>Subtotal Pond Piping Disposal Costs</i>			<i>\$664.92</i>	<i>\$88.66</i>	<i>\$753.58</i>
C.	Pond Sludge Disposal						
		Total Volume Pond Sludge (Yd3)			2,708		2,708
		Disposal Unit Costs (\$/yd3) (Soil rate)			\$250.05		
		<i>Subtotal Pond Sludge Disposal Costs</i>			<i>\$677,135.40</i>	<i>\$0.00</i>	<i>\$677,135.40</i>
		Total Byproduct Material Disposal Costs			\$741,854.28	\$3,191.62	\$745,045.90
IV	Pond Site Reclamation						
A.	Pond Earthwork Requirements						
		Earthwork Requirements Yd3)			180,000	60,000	
		D8N Bulldozer Earthwork Rate (Yd3/hr)			700	700	
		Total D8N Hours			257	86	
		D8N Hourly Rate			\$182.00	\$182.00	
		<i>Subtotal Pond Earthwork</i>			<i>\$46,774.00</i>	<i>\$15,652.00</i>	<i>\$62,426.00</i>
B.	Revegetation						
		Area requiring Revegetation (Ac)			20	10	
		Revegetation Unit Cost (\$/Ac)			\$300.00	\$300.00	
		<i>Subtotal Plant Site Revegetation</i>			<i>\$6,000.00</i>	<i>\$3,000.00</i>	
		Total Pond Site Reclamation Costs			\$52,774.00	\$18,652.00	\$71,426.00

Crow Butte Resources, Inc.
 Crow Butte Uranium Project 2012 Surety Estimate
 (Revised September 2011)

Evaporation Pond Reclamation						
				Commercial Ponds	R&D Ponds	Total
V. Supervisory Labor Costs During Pond Reclamation						
	Estimated Duration (months)			4		
	Engineer Rate (\$/month)			\$9,004.50		
	Total Engineer Labor			\$36,018.00		
	Radiation Technician Rate (\$/month)			\$5,692.50		
	Total Radiation Technician Labor			\$22,770.00		
	Total Supervisory Labor Costs			\$58,788.00	\$0.00	\$58,788.00
TOTAL EVAPORATION POND RECLAMATION PER POND				\$977,001.76	\$24,613.22	\$1,001,614.98
TOTAL EVAPORATION POND RECLAMATION COSTS				\$1,001,614.98		

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Miscellaneous Site Reclamation			
I.	Access Road Reclamation		
	Assumptions		
	Road Reclamation production rate (Yd ³ /hr)		200
	Length of Main Access Roads (ft)		18,100
	Average Main Access Road width (ft)		25
	Depth of Main Access Road Gravel Surface (ft)		1
	Surface Area of Main Access Road (Ac)		10.4
	Length of Wellfield Access Roads (ft)		57,700
	Average Wellfield Access Road width (ft)		12
	Depth of Wellfield Access Road Gravel Surface (ft)		0.5
	Surface Area of Wellfield Road (Ac)		15.9
	A. Main Access Road Dirtwork		
	Main Access Road Gravel Volume (Yd ³)		16,759
	Total reclamation time (hrs)		84
	D8N Unit Operating Cost (\$/hr)		\$182.00
	<i>Subtotal Main Access Road Gravel Roadbase Removal Costs</i>		<i>\$15,288.00</i>
	B. Wellfield Road Dirtwork		
	Wellfield Road Gravel Volume (Yd ³)		12,822
	Total reclamation time (hrs)		64
	D8N Unit Operating Cost (\$/hr)		\$182.00
	<i>Subtotal Wellfield Road Gravel Roadbase Removal Costs</i>		<i>\$11,648.00</i>
	E. Discing/Seeding		
	Assumptions		
	Surface Area (acres)		26.3
	Discing/Seeding Unit Cost (\$/acre)		\$300.00
	<i>Subtotal Discing/Seeding Costs</i>		<i>\$7,890.00</i>
	Total Access Road Reclamation Costs		\$34,826.00

Crow Butte Resources, Inc.
 Crow Butte Uranium Project 2012 Surety Estimate
 (Revised September 2011)

Miscellaneous Site Reclamation				
II.	Wastewater Pipeline Reclamation			
	Assumptions			
	Pipeline Removal Rate (ft./man-day)			67
	Pipeline Shredding Rate (ft./man-day)			1,500
	Number of Pond Pipelines			4
	Length of Pond Pipelines (ft)			3,500
	Number of RO Building Pipelines			4
	Length of RO Building Pipelines (ft)			300
	Average Pipe Size (Sch 40)			4
	A. Pipeline Removal Costs			
	Length of Pipelines (ft)			15,200
	Removal Rate (ft/man-day)			67
	Removal Labor Rate (\$/man-day)			\$157.32
	Cat 924G Loader Use (days)			227
	Cat 924G Loader Cost			\$108,633.12
	<i>Subtotal Pipeline Removal Costs</i>			<i>\$144,344.76</i>
	B. Pipeline Shredding Costs			
	Length of Pipelines (ft)			15,200
	Shredding Rate (ft/man-day)			1,500
	Shredding Labor Rate (\$/man-day)			\$157.32
	Shredder Use (days)			10
	Shredder Cost			\$960.00
	<i>Subtotal Pipeline Shredding Costs</i>			<i>\$2,533.20</i>

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Miscellaneous Site Reclamation			
C.	Pipeline Transportation and Disposal (NRC-Licensed Facility)		
	Pipe Diameter (inches)		4
	Chipped Volume Reduction (ft ³ /ft)		0.0103
	Subtotal Volume of Shredded PVC Pipe (yd ³)		5.8
	Disposal Void Factor		1.25
	Final Disposal Volume (yd ³)		7.25
	Transportation and Disposal Unit Cost (\$/yd ³) (Unpackaged Bulk)		\$221.64
	<i>Subtotal Pipeline Disposal Costs</i>		<i>\$1,606.89</i>
	Total Wastewater Pipeline Reclamation Costs		\$148,484.85
III.	Electrical Distribution System Removal		
	Assumptions		
	Length of High Voltage Lines		49,040
	High Voltage Line Removal Rate (\$/ft.)		\$2.17
	High Voltage Line Removal Cost (\$/ft.)		\$106,416.80
	Substation Removal		\$2,000.00
	Subtotal Electrical Distribution System Removal Costs		\$108,416.80
IV.	Supervisory Labor Costs During Miscellaneous Reclamation		
	Estimated Duration (months)		3
	Engineer Rate (\$/month)		\$9,004.50
	Total Engineer Labor		\$27,013.50
	Radiation Technician Rate (\$/month)		\$5,692.50
	Total Radiation Technician Labor		\$17,077.50
	Total Supervisory Labor Costs		\$44,091.00
TOTAL MISCELLANEOUS RECLAMATION COSTS			\$335,818.65

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Deep Disposal Well Reclamation						
I. Cost Basis						
					Well # 1	Well # 2
A.	Plugging and Abandonment					
	Cost Estimate from April 2009 2nd Well Permit Application for plugging and abandonment				\$60,292	\$60,292
	April 2009 CPI				213.2	213.2
	June 2011 CPI				225.7	225.7
	<i>Subtotal Escalated April 2009 Plugging and Abandonment Costs</i>				<i>\$63,826.94</i>	<i>\$63,826.94</i>
B.	Site Reclamation					
	Cost Estimate from April 2009 2nd Well Permit Application for site reclamation				\$2,500	\$2,500
	April 2009 CPI				213.2	213.2
	June 2011 CPI				225.7	225.7
	<i>Subtotal Escalated April 2009 Reclamation Costs</i>				<i>\$2,646.58</i>	<i>\$2,646.58</i>
	Subtotal Abandonment cost per well				\$66,473.52	\$66,473.52
TOTAL DEEP DISPOSAL WELL RECLAMATION COSTS					\$132,947.04	

Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

I-196 Brule Aquifer Restoration			
I.	Ground Water Sweep Costs		
	Assumptions		
	PV's Required from I-196a, I-196j and I-196n		3
	Total Gallons per Pore Volume		337,758
	Total Gallons to Treat		1,013,274
	Flow Rate (gpm)		3
	Pump Power Requirements (kwh)		3
	Power Cost (\$/kw)		\$0.0797
	Pumping Labor (man-day per day) (1hr/day)		0.125
	Sampling Labor (man-day per day) (.5hr/day)		0.0625
	Labor Rate (\$/man-day)		\$157.32
	Days to complete		235
	A. Electrical Costs		
	<i>Cost to pump 3 Pore Volumes</i>		<i>\$1,345.97</i>
	B. Labor Costs		
	<i>Labor for pumping 3 Pore Volumes</i>		<i>\$4,621.28</i>
	Total Ground Water Sweep Costs		\$5,967.25
II.	Monitoring and Sampling Costs		
	A. Labor Costs for Monitoring I-196a, I-196j, and I-196n		\$2,310.64
	B. Monitoring for I-196i, I-196m, and I-196l		\$2,310.64
	Total Monitoring and Sampling Costs		\$4,621.28

**Crow Butte Resources Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)**

I-196 Brule Aquifer Restoration				
III	Additional Ground Water Sweep			
		Pump from additional wells and monitor as above		\$10,588.53
		Drill 4 additional wells, 50 ft deep at \$26/ft.		\$5,200.00
	Total Additional Ground Water Sweep			\$15,788.53
IV	Well Abandonment			
		Abandon 14 wells at \$194/well		\$2,716.00
	Total Well Abandonment			\$2,716.00
TOTAL I-196 BRULE AQUIFER RESTORATION COSTS				\$29,093.06

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

GROUNDWATER RESTORATION																
GROUNDWATER IX TREATMENT (GIX) Unit Costs																
Assumptions:																
1. All pumps are 5 hp pumping at 32 gpm																
2. Cost of electricity =										\$0.0797	Kw hr					
3. Horsepower to kilowatt conversion =										0.746	Kw/HP					
4. Operator labor costs =										\$157.32	man-day					
5. Labor costs are based on 36 pumps at 1,150 gpm																
Wellfield Pumping Electrical Costs per 1000 Gallons (Includes bleed to the Deepwell / Evaporation Pond)																
1000	gal	X	5	hp	X	1	hr	X	0.746	kwh	X	\$ 0.0797				
			32	gpm		60	min		hp			kwh	= \$	0.155		
Wellfield Pumping Labor Costs per 1000 Gallons																
1000	gal	X	1	min	X	1	man-day	X	\$157.32		X	2	operators	= \$	\$0.190	
			1150	gal		1440	min		man-day							
Groundwater IX Production Rate																
1150	gal	X	60	min	X	24	hr	X	365	day	X	1	year	=	50,370,000	gallons
	min		hr			day			year			12	month			month
TOTAL GWS COSTS PER 1000 GALLONS													= \$	0.35		

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Groundwater Recirculation Unit Costs																
Assumptions:																
1. All pumps are 5 hp pumping at 32 gpm																
2. Cost of electricity =												\$0.0797	Kw hr			
3. Horsepower to kilowatt conversion =												0.746	Kw/HP			
4. Operator labor costs =												\$157.32	man-day			
5. System horsepower requirements for 1,150 gpm rated flow based upon:																
injection pump												30 hp				
Wellfield Pumping Electrical Costs per 1000 Gallons																
1000	gal	X	5	hp	X	1	hr	X	0.746	kwh	X	\$0.0797	= \$	0.155	per Kgal	
			32	gpm		60	min		hp			kwh				
Wellfield Injection Electrical Costs per 1000 Gallons																
1000	gal	X	30	hp	X	1	hr	X	0.746	kwh	X	\$0.0797	= \$	0.026	per Kgal	
			1150	gpm		60	min		hp			kwh				
Recirculation Labor Costs per 1000 Gallons																
1000	gal	X	1	min	X	1	man-day	X	\$157.32	man-day	X	1	operators	= \$	0.095	per Kgal
			1150	gal		1440	min									
Recirculation Production Rate																
1150	gal	X	60	min	X	24	hr	X	365	day	X	1	year	=	50,370,000	gallons
	min			hr			day		year			12	month			month
TOTAL RECIRCULATION COSTS PER 1000 GALLONS												= \$	0.28			

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

WELL ABANDONMENT Unit Costs									
Assumptions:									
1	Use backhoe for 0.25 hr/well to dig, cut off, and cap well.								
2	Drill rig used 2.5 hrs to plug well.								
3	Labor for installing chips, etc. will require 2 workers at 0.5 hrs per well								
Well Abandonment Costs							Cost per ft (based on 700 ft wells)		
	Labor Costs	1	hours	X	\$ 19.67	per hour	=	\$ 19.67	\$0.0281
	Cat 416 Backhoe	0.25	hours	X	\$ 50.28	per hour	=	\$ 12.57	\$0.0180
	Drill rig	2.5	hours	X	\$ 164.00	per hour	=	\$ 410.00	\$0.5857
	Well Cap	1	each	X	\$ 9.00	each	=	\$ 9.00	\$0.0129
Materials per foot of well (Variable Cost)									
	Cement	0.0714	lbs/ft	X	\$ 0.080	per pound	=	\$	\$0.0057
	Bentonite Chips	0.007	tubes/ft	X	\$ 7.46	per tube	=	\$	\$0.0522
	Plug Gel	0.0086	sacks/ft	X	\$ 8.00	per sack	=	\$	\$0.0688
Total Estimated Cost per Foot:									\$0.77

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Master Cost Basis

Mine Unit Data

	Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5	Mine Unit 6	Mine Unit 7	Mine Unit 8	Mine Unit 9	Mine Unit 10	Mine Unit 11
Total number of production wells	3	52	57	103	210	187	205	249	195	301	160
Total number of injection wells	0	79	96	169	236	309	380	412	324	503	284
Total number of shallow monitor wells	0	3	3	11	25	28	25	30	20	32	24
Total number of perimeter monitor wells	11	10	7	7	23	26	8	20	13	33	19
Total number of restoration wells	10	12	18	43	59	55	25	30	21	34	25
Wellfield Area (ft ²)	403,712	509,600	586,188	3,119,671	5,647,809	1,507,647	2,222,190	2,522,911	2,132,355	4,841,018	3,270,634
Wellfield Area (acres)	9.27	11.70	13.46	71.62	129.66	34.61	51.01	57.92	48.95	111.13	75.08
Affected Ore Zone Area (ft ²)	403,712	509,600	586,188	3,119,671	5,647,809	1,507,647	2,222,190	2,522,911	2,132,355	4,841,018	3,270,634
Avg. Completed Thickness	19.6	16.3	12.5	12.9	14.6	15.4	12.3	16.4	16.4	18.2	21.8
Porosity	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Affected Volume (ft ³)	7,912,755	8,306,480	7,327,350	40,243,756	82,458,011	23,217,764	27,332,937	41,375,740	34,970,622	88,106,528	71,299,821
Flare Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Kgallons per Pore Volume	20,597	21,622	19,073	104,756	214,642	60,437	71,149	107,703	91,030	229,345	185,596
Number of Patterns in Unit(s)											
Current	0	52	57	96	187	187	205	248	195	300	160
Estimated next report	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	0	52	57	96	187	187	205	248	195	300	160
Number of Wells in Unit(s)											
Production Wells											
Current	3	52	57	103	210	187	205	249	195	301	160
Estimated next report	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	3	52	57	103	210	187	205	249	195	301	160
Injection Wells											
Current	0	79	96	169	236	309	380	412	324	503	284
Estimated next report	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	0	79	96	169	236	309	380	412	324	503	284
Shallow Monitor Wells											
Current	0	3	3	11	25	28	25	30	20	32	24
Estimated next report	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	0	3	3	11	25	28	25	30	20	32	24
Perimeter Monitor Wells											
Current	11	10	7	7	23	26	8	20	13	33	19
Estimated next report	0	0	0	0	0	0	0	0	0	0	0
Total Estimated	11	10	7	7	23	26	8	20	13	33	19
Number of Wells per Wellfield	14	144	163	290	494	550	618	711	552	869	487
Total Number of Wells	4892										
Average Well Depth (ft) - Deep Wells	665	631	774	698	675	515	762	500	770	480	775
Average Well Depth (ft) - Shallow Wells	200	200	200	200	200	200	200	200	200	150	188

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Master Cost Basis

Electrical Costs			
Power cost (adj for current actual cost)	2011 Rate	2012 Est Rate	kwHr
	\$0.0797	\$0.0797	
Kilowatt to Horsepower	0.746	0.746	Kw/HP
Horsepower per gallon per minute	0.167	0.167	HP/gpm
Labor Rates			
Operator Labor Cost	2011 Rate	2012 Est Rate (CPI)	day
	\$152.00	\$157.32	
Pulling Unit Operator	\$237.00	\$245.30	day
Engineer Cost	\$8,700.00	\$9,004.50	month
Radiation Technician Costs	\$5,500.00	\$5,692.50	month
Chemical Costs			
Antiscalant for RO (adj for current actual cost)	2011 Rate	2012 Est Rate	gal
	\$15.45	\$15.45	
Reductant (adj for current actual cost)	\$0.20	\$0.20	lb
Cement (adj for current actual cost)	\$0.07	\$0.08	pound
Bentonite Tubes (adj for current actual cost)	\$7.46	\$7.46	tube
Salt (adj for current actual cost)	\$218.00	\$218.00	ton
Plug Gel (adj for current actual cost)	\$8.00	\$8.00	sack
Well Cap (adj for current actual cost)	\$9.00	\$9.00	each
Hydrochloric Acid (adj for current actual cost)	\$1.13	\$1.47	gallon
Analytical Costs			
Guideline 8 (contract lab adjusted for current contract cost)	\$200.00	\$200.00	analysis
6 parameter (in-house) Est Rate (CPI)	\$51.00	\$52.79	analysis
Other (radon, bio, etc.) Est Rate (CPI)	\$925.00	\$957.38	month
Spare Parts			
Restoration spare parts estimate	2011 Rate	2012 Est Rate (CPI)	year
	\$50,000.00	\$51,750.00	

CPI Escalators (CPI-U, U.S. City Average)	
1988 CPI (average)	118.3
April 2009 CPI (deep well estimate)	213.2
2010 CPI (June 2010 used in last update)	218.0
Current CPI (June 2011)	225.7
2011 Escalation Factor	1.035

Equipment Costs						
<u>Equipment</u>	<u>Base</u>	<u>Labor Costs</u>	<u>Repair Reserve Costs</u>	<u>Fuel Costs</u>	<u>Mob & Demob (\$/hr)</u>	<u>Total (\$/hr)</u>
	<u>Rental</u>					
	<u>Rate</u>					
	(\$/hr)	(\$/hr)	(\$/hr)	(\$/hr)		
Cat 924G Loader	\$26.50	\$19.67	\$3.00	\$10.65	inc.	\$59.82
Cat 416 Backhoe	\$16.50	\$19.67	\$3.10	\$11.01	inc.	\$50.28

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
(Revised September 2011)

Master Cost Basis

Shredder	\$12.00			inc	inc	\$12.00
Cat D8N Bulldozer	\$110.00	\$19.67	\$11.50	\$40.83	inc.	\$182.00
Pulling Unit	\$37.50	inc	inc	inc	inc	\$37.50
Mixing Unit	\$5.00			inc	inc	\$5.00
Drill Rig	\$164.00	inc	inc	inc	inc	\$164.00
Basis:						
Drill rig based on current 2011 contract.						
Equipment rates based on Cost Reference Guide - Equipment Watch 2011 updated addition.						
Aug 11 costs for off-road fuel:	\$3.550	gallon				
Labor rate based on current operator labor rate						

Pipe Volumes			
<u>Nominal Pipe Size</u>	<u>Wall Thickness (in.)</u>	<u>Pipe OD (in.)</u>	<u>Volume per foot (ft³/ft)</u>
3/8-inch O2 hose		0.37500	0.03130
2-inch Sch. 40 downhole	0.15400	2.37500	0.00740
1-1/4-inch Sch. 40 stinger	0.14000	1.66000	0.00440
2-inch SDR 13.5 inj & prod.	0.14815	2.29630	0.00690
4-inch SDR 35	0.11430	4.22860	0.01030
6-inch Sch. 40 process pipe	0.28000	6.56000	0.03840
6-inch Trunkline	0.49100	6.56600	0.06510
8-inch Trunkline	0.63900	8.54800	0.11030
10-inch Trunkline	0.79600	10.65400	0.17120
12-inch Trunkline	0.94400	12.63700	0.24080

Pipe Removal and Shredding Costs				
<u>Activity</u>	<u>Removal Rate (ft/man- day)</u>	<u>Shredding Rate (ft/man-day)</u>	<u>Labor Rate (day)</u>	<u>Activity Cost per foot</u>
2-inch SDR 13.5 inj & prod. Removal	225		\$157.32	\$0.70
2-inch SDR 13.5 inj & prod. Shredding		1920	\$157.32	\$0.08
Trunkline Removal	100		\$157.32	\$1.57
Trunkline Shredding		100	\$157.32	\$1.57
Downhole Pipe Removal	2000		\$157.32	\$0.08
Downhole Pipe Shredding		2250	\$157.32	\$0.07
Downhole Hose Removal	1000		\$157.32	\$0.16

Crow Butte Resources, Inc.
Crow Butte Uranium Project 2012 Surety Estimate
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Master Cost Basis

Waste and RO Building Pipeline Removal	67		\$157.32	\$2.35
Waste and RO Building Pipeline Shredding		1500	\$157.32	\$0.10

Waste Form	Fee		Waste Disposal Costs		Transport Cost		Total Transportation and Disposal	
			Density Correction Factor (Tons/Yd3)	Fee per Cubic Yard				
Soil, Bulk Byproduct Material	\$166.75	per Ton	0.54	\$90.05	\$160.00	per Yd3	\$250.05	per Yd3
Unpackaged Bulk Byproduct Material (e.g., pipe, equipment)	\$146.75	per Ton	0.42	\$61.64	\$160.00	per Yd3	\$221.64	per Yd3
Solid Waste (landfill)	\$0.02540	per Lb			Incl.	per Lb	\$0.02540	per Lb
Solid Waste (landfill)	\$912.00	per Load			Incl.	per Load	\$912.00	per Load
Void Factor (for disposal)	1.25							

Plant Dismantling							
Plant Components:	Number	Units	Estimated Disposal		Activity	Units	2010 Cost
			Volume	Units			
Contaminated Tanks	94	each	19.3	FT3 each	Dismantle interior steel, tanks, piping and electrical:		\$ 198800
Uncontaminated Tanks	21	each	19.3	FT3 each	Dismantle Plant Building		\$ 99400
Pumps	135	each	5	FT3 each	Concrete floor removal rate	Current Cost \$/ft2	14.04
Downhole Pumps	1705	each	0.5	FT3 each			
Contaminated Piping	9500	feet					
Uncontaminated Piping	4800	feet	See estimate by piping size and material				
Filters	81	each	100	FT3 each			
Dryer	2	each	400	FT3 each			
Average PVC Pipe Diameter (inches)	6						

Plant Decontamination				
Direct Dispose Plant Floor Area	5500	ft2	Decon Solution (HCl) Floor Application Rate	2 gal/ft2
Uncontaminated Plant Floor Area	7270	ft2		
Decontaminated Plant Floor Area*	34138	ft2		
Average concrete thickness	0.5	ft		
Plant Wall Area	31382	ft2	Decon Solution (HCl) Wall Application Rate	1 gal/ft2

MESSENGER/COURIER RECEIPT

10-12-11

TO: ~~XXXXXXXXXX~~ Ron Burrows

OFFICE FSME BUILDING TWTFN ROOM NUMBER 8F5

FROM: Cameco

OFFICE ADM BUILDING OWFN ROOM NUMBER 81-C10

DESCRIPTION
USPS Certified envelope
7007.2680.0002.5823.3577

MESSENGER/COURIER SIGNATURE

MESSENGER/COURIER DATE RECEIVED 10-12
TIME RECEIVED 8:30 am
MEC

MESSENGER/COURIER DATE RECEIVED
TIME RECEIVED

RECIPIENT'S SIGNATURE

RECIPIENT DATE RECEIVED 10/12/11
TIME RECEIVED 8:45 am
P. Burrows

- SENDER:**
1. Complete "DATE OF REQUEST," "TO:," "FROM:," and unclassified "DESCRIPTION" blocks.
 2. Obtain MESSENGER/COURIER signature, date received, and time received in first blocks provided.
 3. Retain "SENDER'S SUSPENSE COPY."

- MESSENGER/COURIER:**
1. Deliver package to recipient or next messenger/courier enroute to addressee.
 2. Obtain MESSENGER/COURIER or RECIPIENT signature, date received, and time received in the appropriate blocks provided.

- RECIPIENT:**
1. Provide signature, date received, and time received in the appropriate blocks.
 2. Retain RECIPIENT'S COPY.
 3. Return original to messenger/courier immediately, who will return it to the sender.