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, 2013

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

Subject: 2014 Surety Estimate – North Trend Expansion Area
Class III Underground Injection Control Permit Number NE 0210740

Dear Mr. Linder:

Attached is the 2014 Surety Estimate for the North Trend Expansion Area of 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 permit issued by the Nebraska Department of Environmental Quality (NDEQ).

The 2014 Surety Estimate is $7,566 with all costs being baselined to current day costs. The surety estimate for 2014 includes the abandonment costs associated with reclaiming seven perimeter monitoring wells.

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.

FSME20

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Josh Leftwich
Director, SHEQ

Enclosure

cc: ATTN: Document Control Desk, 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

GEORGE W. KLEIN
CERTIFIED PUBLIC ACCOUNTANT

355 MAIN STREET
CHADRON, NE 69337
telephone 308/432-4222
fax 308/432-4671
e-mail: kleincpa@bbc.net

September 23, 2013

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 2014 North Trend Expansion Area Surety Estimate. These findings were based on the review of the spreadsheet received September 16, 2013, with the Total 2014 Surety Bond estimate totaling $7,566.

No findings in the review of the results of the mathematical calculations used in the surety estimate worksheet.

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.

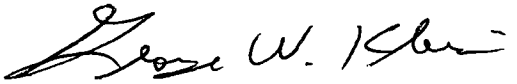
This agreed upon procedures review was conducted in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. I was not engaged to and did not conduct an audit on Crow Butte Resources Financial Statements, and accordingly, 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 2014 North Trend Expansion Area 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,



George W. Klein, CPA

GWK/srp

CROW BUTTE RESOURCES, INC.
URANIUM PROJECT 2014 NORTH TREND EXPANSION AREA
SURETY ESTIMATE
AGREED UPON PROCEDURES ENGAGEMENT REVIEW
Prepared 9/23/13

Received the original and revised spreadsheets for the 2014 North Trend Expansion Area Surety Estimate from Larry Teahon, SHEQ Manager at Crow Butte Resources, on 9/16/2013. Preformed review actions noted below. These changes did not affect the overall 2014 Estimate.

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. Compared amounts in master cost sheet to costs used for the 2014 Surety Estimate for the main mine area with no differences found. Selected cost elements in section II below for testing as part of the review of the main mine area estimate. As the same costs were used for the North Trend area estimate, the testing applies here as well.

II. The following expense costs and rates were selected for verification.

1) Marsha Harriger, 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 8/27/13 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.

2) In the prior year, 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) was $912 in the current and prior year estimate. We confirmed with SWANN that rates have remained the same as indicated on the master costs worksheet.

AGREED UPON PROCEDURES ENGAGEMENT REVIEW, page 2

3) Traced the Consumer Price Index (CPI) on the internet to a copy of the Bureau of Labor Statistics CPI Detailed report for August 2013 as well as to another internet site (fintrend.com) which provided a detailed report of the consumer price index. The CPI for all urban consumers rose to 233.504. Rate used for estimate, 233.5, appears reasonable for a rural consumer's index.

4) Received an excel spreadsheet from Larry Teahon showing the basis of their diesel price of $3.54 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 2013 was $3.86 and the monthly average for North Platte, NE, the nearest surveyed city, was $3.93. No change was made to the fuel price of $3.54 used in the Estimate.

5) Equipment rental rates for the drill rig and pulling unit used in the Estimate were obtained from Gale Land. This equipment is specialized and obtaining a third party confirmation is difficult. Confirmed on the report that the amounts used are based on the rates obtained from the contractor. The rental rate for the mixer was from Chadron Home Center. For confirmation, contacted the Chadron Home Center and obtained their rates for a shredder and concrete mixer. The mixer rate for a 24 hour period is $45.00/day divided by an 8 hour work day equals $5.63 per hour which rounded up is the same as the $6.00 per hour used in the Estimate.

Crow Butte Resources, Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

Total Restoration and Reclamation Cost Estimate

I.	Groundwater Restoration (Sheets 2 to 5)			$2,118
II.	Wellfield Reclamation (Sheets 6 to 9)			$3,935
III.	Commercial Plant Reclamation/Decommissioning (Sheets 10 to 13)			$0
V.	Evaporation Pond Reclamation (Sheets 14 to 17)			$0
VI.	Miscellaneous Site Reclamation (Sheets 18 to 20)			$0
VII.	Deep Disposal Well Reclamation (Sheet 21)			$0
	Subtotal Reclamation and Restoration Cost Estimate			$6,053
		Contract Administration	10%	$605
		Contingency	15%	$908
			TOTAL	$7,566

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

				Ground Water Restoration				
				Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
I.	**IX Treatment Costs**							
	PV's Required			3	3	3	3	3
	Total Kgals for Treatment			0	0	0	0	0
	IX Treatment Unit Cost ($/Kgal)	(Sheet 25)		$0.35	$0.35	$0.35	$0.35	$0.35
	Subtotal IX Treatment Costs per Wellfield			**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total IX Treatment Costs				**$0.00**	**$0.00**			
II.	**Reverse Osmosis Costs**							
	PV's Required			6	6	6	6	6
	Total Kgals for Treatment			0	0	0	0	0
	Reverse Osmosis Unit Cost ($/Kgal)	(Sheet 26)		$0.81	$0.81	$0.81	$0.81	$0.81
	Subtotal Reverse Osmosis Costs per Wellfield			**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total Reverse Osmosis Costs				**$0.00**	**$0.00**			
III.	**Recirculation Costs**							
	PV's Required			2	2	2	2	2
	Total Kgals for Treatment			0	0	0	0	0
	Recirculation Unit Cost ($/Kgal)	(Sheet 27)		$0.26	$0.26	$0.26	$0.26	$0.26
	Subtotal Recirculation Costs per Wellfield			**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total Recirculation Costs				**$0.00**	**$0.00**			
IV.	**Consumables**							
	Spare parts, filters and consumables =	$25,425.00	year					
	Active restoration period (months)			0.00	0.00	0.00	0.00	0.00
	Consumable usage (months restoration x annual rate estimate)			$0.00	$0.00	$0.00	$0.00	$0.00
	Subtotal Consumables per Mine Unit			**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total Consumables Costs				**$0.00**	**$0.00**			

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

					Ground Water Restoration				
					Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
V.	Monitoring and Sampling Costs								
	Guideline 8 analysis =	$248.00	analysis						
	6 parameter in-house analysis =	$50.85	analysis						
	Total restoration wells				0	0	0	0	0
	Total monitor wells				7	0	0	0	0
	IX Treatment duration (months)				0.00	0.00	0.00	0.00	0.00
	Reverse Osmosis duration (months)				0.00	0.00	0.00	0.00	0.00
	Recirculation duration (months)				0.00	0.00	0.00	0.00	0.00
	Stabilization duration (months)				0	0	0	0	0
A.	Restoration Well Sampling								
1.	Well Sampling prior to restoration start								
	# of Wells				0	0	0	0	0
	$/sample				$248.00	$248.00	$248.00	$248.00	$248.00
2.	IX Treatment Sampling								
	# of Wells				0	0	0	0	0
	Total # samples				0	0	0	0	0
	$/sample				$50.85	$50.85	$50.85	$50.85	$50.85
3.	RO Sampling								
	# of Wells				0	0	0	0	0
	Total # samples				0	0	0	0	0
	$/sample				$50.85	$50.85	$50.85	$50.85	$50.85

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

			Ground Water Restoration				
			Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
4. Recirculation Sampling							
# of Wells			0	0	0	0	0
Total # samples			0	0	0	0	0
$/sample			$248.00	$248.00	$248.00	$248.00	$248.00
5. Stabilization Sampling (Guideline 8)							
# of Wells			0	0	0	0	0
Total # samples			0	0	0	0	0
$/sample			$248.00	$248.00	$248.00	$248.00	$248.00
6. Stabilization Sampling (6 parameter in-house)							
# of Wells			0	0	0	0	0
Total # samples			0	0	0	0	0
$/sample			$50.85	$50.85	$50.85	$50.85	$50.85
7. Monitor Well Sampling							
# of Wells			7	0	0	0	0
$/sample			$50.85	$50.85	$50.85	$50.85	$50.85
Total # samples (2.2/mo for entire period)			0	0	0	0	0
8. Other Laboratory Costs							
Radon, urinalysis, etc. =	$940.73	month					
Total for Other Laboratory Costs:			$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Monitoring and Sampling Costs per Mine Unit			**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total Monitoring and Sampling Costs			**$0.00**	**$0.00**			
VI. MIT Costs							
MIT Costs per Well			$75.65	$75.65	$75.65	$75.65	$75.65
Restoration period, plus stabilization			0.00	0.00	0.00	0.00	0.00
Remaining MIT's per 5 year cycle			4	0	0	0	0
Number of Wells MIT'd for Life of Mine Unit			7	0	0	0	0
Subtotal MIT Mine Unit			**$2,118.20**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
5-year MIT Costs for Disposal Wells	$8,170						
Number of DDWs	0						
Number of MITs per DDW	0						
Subtotal MIT DDW Costs		**$0**					
Total MIT Costs		**$0**					

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

				Ground Water Restoration				
				Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
VI.	**Supervisory Labor Cost**							
	Engineer Support =	$6,882.22	month					
	HP Technician support =	$5,510.52	month					
	Active restoration period (months)			0.00	0.00	0.00	0.00	0.00
	Stabilization period (months)			0	0	0	0	0
1	Engineer support during active restoration			$0.00	$0.00	$0.00	$0.00	$0.00
2	HP Technician support during active restoration			$0.00	$0.00	$0.00	$0.00	$0.00
3	Engineer support during final stabilization							
4	HP Technician support during final stabilization							
5	Cost reduction due to concurrent restoration of Mine Units						0.00	0.00
	Subtotal Supervisory Labor per Mine Unit			**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Total Supervisory Labor Costs				**$0.00**	**$0.00**			
TOTAL RESTORATION COST PER WELLFIELD				**$2,118.20**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
TOTAL GROUND WATER RESTORATION COSTS				**$2,118.20**				

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

	Wellfield Reclamation				
	Mine Unit 1	**Mine Unit 2**	**Mine Unit 3**	**Mine Unit 4**	**Mine Unit 5**
Wellfield Piping					
Assumptions:					
Number of Wellhouses	0	0	0	0	0
Total Mine Unit surface area (acres)	0.00	0.00	0.00	0.00	0.00
Total length of small diameter production and injection lines (laterals) (ft)	0	0	0	0	0
Total length of 3/8-inch hose (ft)			0	0	0
Total length 1-1/4-inch stinger pipe (ft)	0	0	0	0	0
Total length of 2-inch downhole production pipe (ft)	0	0	0	0	0
Total Length of Trunkline (6-inch) (ft)	0	0	0	0	0
Total Length of Trunkline (8-inch) (ft)	0	0	0	0	0
Total Length of Trunkline (10-inch) (ft)					
Total Length of Trunkline (12-inch) (ft)			0	0	0
Total Length of All Trunkline (ft)	0	0	0	0	0
Total number of production wells	0	0	0	0	0
Total number of injection wells	0	0	0	0	0
Total number of shallow monitor wells	0	0	0	0	0
Total number of perimeter monitor wells	7	0	0	0	0
I. Production and Injection Piping					
A. Removal and Loading					
Production and Injection Piping Removal Unit Cost ($/ft of pipe)	$0.67	$0.67	$0.67	$0.67	$0.67
Subtotal Production and Injection Piping Removal and Loading Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
B. Pipe Shredding					
Production and Injection Piping Shredding Unit Cost ($/ft of pipe)	$0.08	$0.08	$0.08	$0.08	$0.08
Subtotal Production and Injection Piping Removal and Loading Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
C. Equipment Costs					
Cat 924G Loader Unit Costs for removal (450'/day)	$0.00	$0.00	$0.00	$0.00	$0.00
Shredder Unit Costs for shredding (450'/day)	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Equipment Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
D. Transport and Disposal Costs (NRC-Licensed Facility)					
Chipped Volume Reduction (ft^3/ft)	0.0069	0.0069	0.0069	0.0069	0.0069
Chipped Volume per Wellfield (yd^3)	0.0	0.0	0.0	0.0	0.0
Volume for Disposal Assuming 25% Void Space (yd^3)	0.0	0.0	0.0	0.0	0.0
Transportation and Disposal Unit Cost ($/$yd^3$) Unpackaged Bulk	$234.76	$234.76	$234.76	$234.76	$234.76
Subtotal Production and Injection Piping Transport and Disposal Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Total Production and Injection Piping Costs	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

		Wellfield Reclamation				
		Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
II.	**Trunklines**					
A.	Removal and Loading					
	Trunkline Removal Unit Cost ($/ft of pipe)	$1.51	$1.51	$1.51	$1.51	$1.51
	Subtotal Trunkline Removal and Loading Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
B.	Pipe Shredding					
	Trunkline Shredding Unit Cost ($/ft of pipe)	$1.51	$1.51	$1.51	$1.51	$1.51
	Subtotal Trunkline Shredding Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
C.	Equipment Costs					
	Cat 924G Loader Unit Costs for removal (200'/day)	$0.00	$0.00	$0.00	$0.00	$0.00
	Shredder Unit Costs for shredding (200'/day)	$0.00	$0.00	$0.00	$0.00	$0.00
	Subtotal Equipment Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
D.	Transport and Disposal Costs (NRC-Licensed Facility)					
	Chipped Volume Reduction (6-inch) (ft^3/ft)	0.0651	0.0651	0.0651	0.0651	0.0651
	Chipped Volume Reduction (8-inch) (ft^3/ft)	0.1103	0.1103	0.1103	0.1103	0.1103
	Chipped Volume Reduction (10-inch) (ft^3/ft)	0.1712	0.1712	0.1712	0.1712	0.1712
	Chipped Volume Reduction (12-inch) (ft^3/ft)	0.2408	0.2408	0.2408	0.2408	0.2408
	Chipped Volume per Wellfield (yd^3)	0.0	0.0	0.0	0.0	0.0
	Volume for Disposal Assuming 25% Void Space (ft^3)	0.0	0.0	0.0	0.0	0.0
	Transportation and Disposal Unit Cost ($/$ft^3$)	$234.76	$234.76	$234.76	$234.76	$234.76
	Subtotal Transport and Disposal Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Total Trunkline Costs		**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
III.	**Downhole Pipe**					
A.	Removal and Loading					
	Downhole Piping Removal Unit Cost ($/ft of pipe)	$0.080	$0.080	$0.080	$0.080	$0.080
	Downhole Hosing Removal Unit Cost ($/ft of pipe)	$0.150	$0.150	$0.150	$0.150	$0.150
	Removal of 1-1/4-inch stinger pipe	$0.00	$0.00	$0.00	$0.00	$0.00
	Removal of downhole production pipe	$0.00	$0.00	$0.00	$0.00	$0.00
	Removal of downhole hose	$0.00	$0.00	$0.00	$0.00	$0.00
	Subtotal Downhole Piping Removal and Loading Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
B.	Pipe Shredding					
	Downhole Piping Shredding Unit Cost ($/ft of pipe)	$0.070	$0.070	$0.070	$0.070	$0.070
	Subtotal Downhole Piping Shredding Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
C.	Equipment Costs					
	Smeal Unit Costs for removal	$0.00	$0.00	$0.00	$0.00	$0.00
	Shredder Unit Costs for shredding	$0.00	$0.00	$0.00	$0.00	$0.00
	Subtotal Equipment Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*

Crow Butte Resources Inc.
North Trend Project 2014 Surety Estimate
(Revised September 2013)

	Wellfield Reclamation				
	Mine Unit 1	**Mine Unit 2**	**Mine Unit 3**	**Mine Unit 4**	**Mine Unit 5**
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
Chipped Volume Reduction - 2-inch downhole production (ft^3/ft)	0.0074	0.0074	0.0074	0.0074	0.0074
Volume Reduction - 3/8-inch hose (ft3/ft)	0.0313	0.0313	0.0313	0.0313	0.0313
Chipped Volume - 1-1/4-inch stinger (ft^3)	0	0	0	0	0
Chipped Volume - 2-inch downhole production (ft^3)	0	0	0	0	0
Volume 3/8-inch hose (ft3)	0	0	0	0	0
Volume for Disposal Assuming 25% Void Space (yd^3)	0.0	0.0	0.0	0.0	0.0
Transportation and Disposal Unit Cost ($/$yd^3$) (Unpackaged Bulk)	$234.76	$234.76	$234.76	$234.76	$234.76
Subtotal Downhole Piping Transport and Disposal Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Total Downhole Piping Costs	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
IV. Surface Reclamation					
A. Removal and disposal of contaminated soil around wells					
Volume of contaminated soil (0.37 yd3 per injection and production well)	0	0	0	0	0
Disposal of contaminated soil $234.52 per yd3	$0.00	$0.00	$0.00	$0.00	$0.00
Equipment (Cat 924G loader at 2 yd3/hr)	$0.00	$0.00	$0.00	$0.00	$0.00
Labor (1 man-hour per 2 Yd3)	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal removal and disposal of contaminated soil	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
B. Recontour and seeding					
Recontour and seeding (est. $300/acre)	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal Recontour and Seeding	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Total Surface Reclamation	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
IV. Well Houses					
Total Quantity	0	0	0	0	0
Average Well House Weight (Lbs.) (Includes wellhead covers for each well)	9200	9200	9200	9200	9200
A. Removal					
Dismantlement at 2-man-days per wellhouse (man-days)	0	0	0	0	0
Dismantlement Labor Costs	$0.00	$0 00	$0.00	$0.00	$0.00
Equipment (Cat 924G at 2 hours per wellhouse) (hrs)	0	0	0	0	0
Equipment Costs	$0 00	$0.00	$0.00	$0.00	$0.00
Subtotal Well House Dismantlement Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
B. Disposal					
Total Disposal Weight (9200 lbs per wellhouse) (Lbs)	0	0	0	0	0
Subtotal Disposal Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Total Well House Removal and Disposal Costs	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
TOTAL REMOVAL AND DISPOSAL COSTS PER WELLFIELD	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
TOTAL WELLFIELD BUILDINGS AND EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$0.00**				

Crow Butte Resources Inc.
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			Well Abandonment				
			Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
I.	**Well Abandonment (Wellfields)**						
	# of Production Wells		0	0	0	0	0
	# of Injection Wells		0	0	0	0	0
	# of Perimeter Monitoring Wells		7	0	0	0	0
	# of Shallow Monitoring Wells		0	0	0	0	0
	Total Number of Deep Wells		7	0	0	0	0
	Total Number of Shallow Wells		0	0	0	0	0
	Average Diameter of Casing (inches)		5	5	5	5	5
	Production, Injection and Perimeter Well Average Depth (ft)		550	0	0	0	0
	Shallow Well Average Depth (ft)		200	0	0	0	0
	Total Mine Unit Well Depth (ft)		3850	0	0	0	0
	Well Abandonment Unit Cost ($/ft. of well)		$1.01	$1.01	$1.01	$1.01	$1.01
	Subtotal Abandonment Cost per Wellfield		**$3,888.50**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
II.	**Downhole Pump Disposal**						
	Number of Downhole Pumps	11					
	Pump Disposal Volume(ft3)	0.5					
	Total Pump Disposal Volume(yd3)	0.2					
	Downhole Pump Disposal Rate ($/yd3)	$234.76					
	Subtotal Downhole Pump Disposal		**$46.95**				
Total Wellfield Abandonment Costs			**$3,935.45**				

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Plant Equipment Decommissioning	Satellite Plant
I. Removal and Loading Costs	
Tankage	
Number of Contaminated Tanks	0
Volume of Contaminated Tank Construction Material (ft^3)	0
Number of Chemical Tanks	0
Disposal Void Factor	1.25
A. Labor to Remove and Load Tankage	
Number of Persons	2
Tanks/Day	1
Number of Days	0
$/Day/Person	$151.44
Subtotal Removal Labor Costs	*$0.00*
B. Labor to Clean Chemical Tankage	
Number of Persons	1
Tanks/Day	1
Number of Days	0
$/Day/Person	$151.44
Subtotal Cleaning Labor Costs	*$0.00*
C. Equipment	
Saws, scaffolding, etc.	$0
Subtotal Equipment Costs	*$0*
Total Equipment Removal and Loading Costs	**$0.00**
II. Transportation and Disposal Costs (NRC-Licensed Facility)	
A. Tankage	
Volume of Tank Construction Material (ft^3)	0
Volume for Disposal Assuming Void Space (yd^3)	0.0
Transportation and Disposal Unit Cost ($/$yd^3$) (Unpackaged Bulk)	$234.76
Subtotal Tankage Transportation and Disposal Costs	*$0.00*
B. Contaminated PVC Pipe	
Volume of Shredded PVC Pipe (ft^3)	0
Volume for Disposal Assuming Void Space (yd^3)	0.0
Transportation and Disposal Unit Cost ($/$yd^3$) (Unpackaged Bulk)	$234.76
Subtotal Contaminated PVC Pipe Transportation and Disposal Costs	*$0.00*
C. Pumps	
Volume of Process Pumps (yd^3) (no void factor used)	0.0

Plant Equipment Decommissioning	
	Satellite Plant
Transportation and Disposal Unit Cost ($/yd^3) (Unpackaged Bulk)	$234.76
Subtotal Pump Transportation and Disposal Costs	*$0.00*
D. Filters (injection, backwash and yellowcake filters)	
Volume of Filters (yd^3) (no void factor used)	0.0
Transportation and Disposal Unit Cost ($/yd^3) (Unpackaged Bulk)	$234.76
Subtotal Filter Transportation and Disposal Costs	*$0.00*
E. Dryer	
Dryer Volume (yd^3) (no void factor used)	0.0
Transportation and Disposal Unit Cost ($/yd^3) (Unpackaged Bulk)	$234.76
Total Dryer Transportation and Disposal Costs	*$0.00*
Total Contaminated Equipment Transportation and Disposal Costs	**$0.00**
III. Transportation and Disposal (Solid Waste for Landfill Disposal)	
A. Cleaned Tankage	
Volume of Tank Construction Material (ft^3)	0
Number of Landfill Trips	0
Transportation and Disposal Unit Cost ($/Load)	$912.00
Subtotal Tankage Transportation and Disposal Costs	*$0.00*
B. Uncontaminated PVC Pipe	
Volume of Shredded PVC Pipe (ft^3)	0
Number of Landfill Trips	0
Transportation and Disposal Unit Cost ($/Load)	$912.00
Subtotal PVC Pipe Transportation and Disposal Costs	*$0.00*
Total Uncontaminated Equipment Transportation and Disposal Costs	**$0.00**
IV. Supervisory Labor Costs During Plant Decommissioning	
Estimated Duration (months)	0
Engineer	$0.00
Radiation Technician	$0.00
Total Supervisory Labor Costs	**$0.00**
SUBTOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS PER FACILITY	$0.00
Building Area (Ft2)	1
Building Equipment Removal and Disposal Cost per Square Foot	$0.00
TOTAL EQUIPMENT REMOVAL AND DISPOSAL COSTS	**$0.00**

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Building Demolition	Satellite Plant
I. Decontamination Costs	
A. Wall Decontamination	
Area to be Decontaminated (ft^2)	0
HCl Application Rate (Gallons/ft^2)	1
HCl Acid Cost	$1.41
Subtotal Wall Decontamination Materials Costs	$0.00
B. Concrete Floor Decontamination	
Area to be Decontaminated (ft^2)	0
HCl Application Rate (Gallons/ft^2)	2
HCl Acid Cost	$1.41
Subtotal Floor Decontamination Materials Costs	$0.00
C. Decontamination Labor	
Labor (man-days)	0
Subtotal Decontamination Labor Cost	$0.00
D. Decontamination Equipment Costs	
Sprayer pump	$0
Recycle pump	$0
Sprayer with hose	$0
Subtotal Decontamination Equipment Costs	$0
E. Decontamination Waste Disposal (to Ponds)	
Total gallons HCl waste	0
Pumping costs (5 HP/30 gpm)	$0.00
Subtotal Decontamination Costs	$0.00
Total Decontamination Costs	**$0.00**
II. Demolition Costs	
Assumptions (based on 2007 costs):	
Dismantling interior steel, tanks, pumps, etc.	$0.00
Dismantling plant building	$0.00
A. Building Dismantling	
Dismantle interior components (2007 $'s escalated by CPI)	$0.00
Plant building dismantling (2007 $'s escalated by CPI)	$0.00
Subtotal Building Dismantling	*$0.00*
B. Concrete Floor Removal	
Area of direct-dispose concrete floors (ft2)	0
Removal Rate ($/ft2)	$0.00

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Building Demolition		
		Satellite Plant
	Subtotal Concrete Floor Removal	*$0.00*
	Total Demolition Costs	**$0.00**
III.	**Disposal Costs**	
	A. Concrete Floor	
	Area of Direct-Dispose Concrete Floor (ft^2)	0
	Average Thickness of Concrete Floor (ft)	0.00
	Volume of Concrete Floor (ft^3)	0
	Volume of Concrete Floor (Yd3)	0
	Transportation and Disposal Unit Cost ($/$Yd^3$) (Unpackaged Bulk)	$234.76
	Subtotal Concrete Floor Disposal Costs	*$0.00*
	Total Disposal Costs	**$0.00**
IV	**Plant Site Reclamation**	
	A. Plant Site Earthwork	
	Material to be Moved (Yd3)	0
	D8N Bulldozer Earthwork Rate (Yd3/hr)	1
	D8N Hourly Rate	$499.64
	Subtotal Plant Site Earthwork	*$0.00*
	B. Revegetation	
	Area requiring Revegetation (Ac)	0
	Revegetation Unit Cost ($/Ac)	$300
	Subtotal Plant Site Revegetation	*$0.00*
	Total Plant Site Reclamation Costs	**$0.00**
SUBTOTAL BUILDING DEMOLITION AND DISPOSAL COSTS		$0.00
	Building Area (Ft2)	34,138
	Building Demolition Cost per Square Foot	$0.00
TOTAL BUILDING DEMOLITION AND DISPOSAL COSTS		**$0.00**

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Evaporation Pond Reclamation							Commercial Ponds
	Assumptions/Data:						
		Number of Ponds					0
		Area of Ponds (ft2)					0
		Thickness of Liner Material (ft)					0.00000
		Leak detection piping size (in)					0
		Leak detection piping length (ft/pond)					0
		Earthwork Requirements (Yd3/pond)					0
		Surface Restoration/Revegetation (Acres)					0
		Sludge Production Rate (Yd3 sludge/gal)					0.000000102
		(1 Yd3 sludge/9,772,000 gal R&D Phase)					
		Estimated for 2012 Total Production (gallons)					0
		Liner Removal Rate (ft2/man-day)					10,000
		Sludge Removal Rate (Yd3/man-day)					8.33
I.	**Pond Liner and Piping Removal**						
	A.	Pond Liner and Piping Removal Labor					
		Area of Ponds					0
		Liner Removal Rate (ft2/Man-Day)					10,000
		Total Man-Days					0
		Labor Rate ($/man-day)					$151.44
		Subtotal Liner and Piping Removal Labor Costs					*$0.00*
	B.	Pond Liner and Piping Removal Equipment					
		Total Man-Days Removal Effort					0
		Size of Crew					4
		Total Days Removal Effort					0
		Cat 924G Loader Hourly Rate ($/hr)					$195.80
		Subtotal Liner and Piping Removal Equipment Costs					*$0.00*
	Total Pond Liner and Piping Removal Costs						**$0.00**

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Evaporation Pond Reclamation	Commercial Ponds
II. Pond Sludge Removal	
Pond Sludge Estimate	
Estimated Production Flow since 1991 (gal)	0
Historical Sludge Production Rate	0.000000102
Estimated Pond Sludge Volume (Yd3)	0
A. Pond Sludge Removal Labor	
Pond Sludge Volume (Yd3)	0
Sludge Removal Rate (Yd3/man-day)	8.33
Total Man-Days	0
Labor Rate ($/man-day)	$151.44
Subtotal Pond Sludge Removal Labor Costs	*$0.00*
B. Pond Sludge Removal Equipment	
Total Man-Days Removal Effort	0
Size of Crew	3
Total Days Removal Effort	0
Cat 924G Loader Hourly Rate ($/hr)	$195.80
Subtotal Pond Sludge Removal Equipment Costs	*$0.00*
Total Pond Sludge Removal Costs	**$0.00**
III. Pond Byproduct Material Disposal	
A. Pond Liner Disposal	
Area of Pond Liner (ft2)	0
Thickness of Pond Liner (ft)	0.00000
Volume of Pond Liner (ft3)	0
Void Space Factor	1.25
Total Disposed Volume (yd3)	0
Disposal Unit Costs ($/yd3) (Unpackaged Bulk)	$234.76
Subtotal Pond Liner Disposal Costs	*$0.00*

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Evaporation Pond Reclamation			
			Commercial Ponds
	B. Pond Piping Disposal		
	Total Length of Piping		0
	Piping Volume Factor (ft3/ft)		0.0103
	Total Volume Pond Piping (ft3)		0
	Void Space Factor		1.25
	Total Disposed Volume (yd3)		0.0
	Disposal Unit Costs ($/yd3) (Unpackaged Bulk)		$234.76
	Subtotal Pond Piping Disposal Costs		*$0.00*
	C. Pond Sludge Disposal		
	Total Volume Pond Sludge (Yd3)		0
	Disposal Unit Costs ($/yd3) (Soil rate)		$234.52
	Subtotal Pond Sludge Disposal Costs		*$0.00*
	Total Byproduct Material Disposal Costs		**$0.00**
IV	**Pond Site Reclamation**		
	A. Pond Earthwork Requirements		
	Earthwork Requirements Yd3)		0
	D8N Bulldozer Earthwork Rate (Yd3/hr)		700
	Total D8N Hours		0
	D8N Hourly Rate		$499.64
	Subtotal Pond Earthwork		*$0.00*
	B. Revegetation		
	Area requiring Revegetation (Ac)		0
	Revegetation Unit Cost ($/Ac)		$300.00
	Subtotal Piant Site Revegetation		*$0.00*
	Total Pond Site Reclamation Costs		**$0.00**

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Evaporation Pond Reclamation		
		Commercial Ponds
V.	**Supervisory Labor Costs During Pond Reclamation**	
	Estimated Duration (months)	0
	Engineer Rate ($/month)	$6,882.22
	Total Engineer Labor	$0.00
	Radiation Technician Rate ($/month)	$5,510.52
	Total Radiation Technician Labor	$0.00
	Total Supervisory Labor Costs	**$0.00**
TOTAL EVAPORATION POND RECLAMATION PER POND		**$0.00**
TOTAL EVAPORATION POND RECLAMATION COSTS		**$0.00**

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Miscellaneous Site Reclamation					
I.	**Access Road Reclamation**				
	Assumptions				
		Road Reclamation production rate (Yd3/hr)			1
		Length of Main Access Roads (ft)			1
		Average Main Access Road width (ft)			1
		Depth of Main Access Road Gravel Surface (ft)			1
		Surface Area of Main Access Road (Ac)			0.0
		Length of Wellfield Access Roads (ft)			0
		Average Wellfield Access Road width (ft)			0
		Depth of Wellfield Access Road Gravel Surface (ft)			0.0
		Surface Area of Wellfield Road (Ac)			0.0
	A.	Main Access Road Dirtwork			
		Main Access Road Gravel Volume (Yd3)			0
		Total reclamation time (hrs)			0
		D8N Unit Operating Cost ($/hr)			$499.64
		Subtotal Main Access Road Gravel Roadbase Removal Costs			*$0.00*
	B.	Wellfield Road Dirtwork			
		Wellfield Road Gravel Volume (Yd3)			0
		Total reclamation time (hrs)			0
		D8N Unit Operating Cost ($/hr)			$499.64
		Subtotal Wellfield Road Gravel Roadbase Removal Costs			*$0.00*
	E.	Discing/Seeding			
		Assumptions			
		Surface Area (acres)			0.0
		Discing/Seeding Unit Cost ($/acre)			$300.00
		Subtotal Discing/Seeding Costs			*$0.00*
	Total Access Road Reclamation Costs				**$0.00**

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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			0
		Length of Pond Pipelines (ft)			0
		Average Pipe Size (Sch 40)			0
	A.	Pipeline Removal Costs			
		Length of Pipelines (ft)			0
		Removal Rate (ft/man-day)			67
		Removal Labor Rate ($/man-day)			$151.44
		Cat 924G Loader Use (days)			0
		Cat 924G Loader Cost			$0.00
		Subtotal Pipeline Removal Costs			*$0.00*
	B.	Pipeline Shredding Costs			
		Length of Pipelines (ft)			0
		Shredding Rate (ft/man-day)			1,500
		Shredding Labor Rate ($/man-day)			$151.44
		Shredder Use (days)			0
		Shredder Cost			$0.00
		Subtotal Pipeline Shredding Costs			*$0.00*

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Miscellaneous Site Reclamation		
C.	Pipeline Transportation and Disposal (NRC-Licensed Facility)	
	Pipe Diameter (inches)	0
	Chipped Volume Reduction (ft^3/ft)	0.0103
	Subtotal Volume of Shredded PVC Pipe (yd^3)	0.0
	Disposal Void Factor	1.25
	Final Disposal Volume (yd3)	0.00
	Transportation and Disposal Unit Cost ($/$yd^3$) (Unpackaged Bulk)	$234.76
	Subtotal Pipeline Disposal Costs	*$0.00*
Total Wastewater Pipeline Reclamation Costs		**$0.00**
III.	**Electrical Distribution System Removal**	
	Assumptions	
	Length of High Voltage Lines	0
	High Voltage Line Removal Rate ($/ft.)	$0.00
	High Voltage Line Removal Cost ($/ft.)	$0.00
	Substation Removal	$0.00
	Subtotal Electrical Distribution System Removal Costs	**$0.00**
IV.	**Supervisory Labor Costs During Miscellaneous Reclamation**	
	Estimated Duration (months)	0
	Engineer Rate ($/month)	$6,882.22
	Total Engineer Labor	$0.00
	Radiation Technician Rate ($/month)	$5,510.52
	Total Radiation Technician Labor	$0.00
	Total Supervisory Labor Costs	**$0.00**
TOTAL MISCELLANEOUS RECLAMATION COSTS		**$0.00**

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Deep Disposal Well Reclamation			
I.	**Cost Basis**		
	A.	Plugging and Abandonment	
		Cost Estimate from subcontractor (August 2012)	N/A
		June 2012 CPI	229.5
		June 2012 CPI	233.5
		Subtotal Escalated June 2012 Plugging and Abandonment Costs	*$0.00*
	B.	Site Reclamation	
		Cost Estimate from subcontractor (August 2012)	N/A
		June 2012 CPI	229.5
		June 2012 CPI	233.5
		Subtotal Escalated June 2012 Reclamation Costs	*$0.00*
	Subtotal Abandonment cost per well		**$0.00**
TOTAL DEEP DISPOSAL WELL RECLAMATION COSTS			**$0.00**

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GROUNDWATER RESTORATION
GROUNDWATER IX TREATMENT (GIX) Unit Costs

Assumptions:

1.	All pumps are 5 hp pumping at 32 gpm		
2.	Cost of electricity =	$0.0845	Kw hr
3.	Horsepower to kilowatt conversion =	0.746	Kw/HP
4.	Operator labor costs =	$151.44	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	$ 0.0845		= $	0.164		
			32	gpm		60	min		hp			kwh					

Wellfield Pumping Labor Costs per 1000 Gallons

1000	gal	X	1	min	X	1	man-day	X	$151.44		X	2	operators	= $	$0.183		
			1150	gal		1440	min		man-day								

Groundwater IX Production Rate

1000	gal	X	60	min	X	24	hr	X	365	day	X	1	year	=	*43,800,000*	*gallons*	
	min			hr			day			year		12	month			*month*	

TOTAL GWS COSTS PER 1000 GALLONS		**= $**	**0.35**	

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Groundwater Reverse Osmosis (RO) Treatment Unit Costs

Assumptions:

1.	All pumps are 5 hp pumping at 32 gpm		
2	Membrane Replacement	$0.015	per 1000 gal
3	Cost of electricity =	$0.0845	Kw hr
4	Horsepower to kilowatt conversion =	0.746	Kw/HP
5	Operator labor costs =	$151.44	man-day
6	RO System horsepower requirements for 600 gpm rated flow based upon:		
	RO Unit Pump — 195 hp		
	Permeate/Injection pump — 60 hp		
	Waste pump (I (Bleed - Deepwell / Evap Ponds) — 12 hp		
	TOTAL: — 267 hp		
7	Chemical costs:		
	Reductant =	$0.550	lb
	Antiscalant =	$15.45	gal

Membrane Replacement Costs per 1000 Gallons

600 gal X $660 membrane cost / month / 26,280,000 gallons month = $ 0.015 per Kgal

Wellfield Pumping Electrical Costs per 1000 Gallons

600 gal X (5 hp / 32 gpm) X 1 hr / 60 min X 0.746 kwh / hp X $ 0.0845 / kwh = $ 0.098 per Kgal

Reverse Osmosis Electrical Costs per 1000 Gallons

600 gal X (267 hp / 600 gpm) X 1 hr / 60 min X 0.746 kwh / hp X $ 0.0845 / kwh = $ 0.281 per Kgal

Reverse Osmosis Labor Costs per 1000 Gallons

600 gal X (1 min / 600 gal) X 1 man-day / 1440 min X $151.44 / man-day X 2 operators = $ $0.210 per Kgal

Treatment chemical costs per 1000 Gallons

Antiscalant:

600 gal X (0.000008330 gal antiscalant / 1 gal) X $15.45 / gal antiscalant = $ $0.077 per Kgal

Reductant:

600 gal X (0.000382 lbs reductant / 1 gal) X $0.550 / lb reductant = $ $0.126 per Kgal

Reverse Osmosis Production Rate

600 gal/min X 60 min/hr X 24 hr/day X 365 day/year X 1 year/12 month = *26,280,000 gallons/month*

TOTAL RO COSTS PER 1000 GALLONS = $ 0.81

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Groundwater Recirculation Unit Costs

Assumptions:

1. All pumps are 5 hp pumping at 32 gpm
2. Cost of electricity = $0.0845 Kw hr
3. Horsepower to kilowatt conversion = 0.746 Kw/HP
4. Operator labor costs = $151.44 man-day
5. System horsepower requirements for 1,150 gpm rated flow based upon:
   injection pump 0 hp

Wellfield Pumping Electrical Costs per 1000 Gallons

	1000	gal	X	5	hp	X	1	hr	X	0.746	kwh	X	$	0.0845		= $	0.164	per Kgal
				32	gpm		60	min		hp				kwh				

Wellfield Injection Electrical Costs per 1000 Gallons

	1000	gal	X	0	hp	X	1	hr	X	0.746	kwh	X	$	0.0845		= $	0.000	per Kgal
				1150	gpm		60	min		hp				kwh				

Recirculation Labor Costs per 1000 Gallons

	1000	gal	X	1	min	X	1	man-day	X	$151.44		X		1	operators	= $	0.091	per Kgal
				1150	gal		1440	min		man-day								

Recirculation Production Rate

	1000	gal	X	60	min	X	24	hr	X	365	day	X		1	year	=	*43,800,000*	*gallons*
		min			hr			day			year			12	month			*month*

TOTAL RECIRCULATION COSTS PER 1000 GALLONS	= $	**0.26**

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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	$ 18.93	per hour		=$	18.93	$0.0270	
	Cat 416 Backhoe										
		0.25	hours	X	$ 123.78	per hour		=$	30.95	$0.0442	
	Drill rig										
		2.5	hours	X	$ 218.18	per hour		=$	545.45	$0.7792	
	Well Cap	1	each	X	$ 12.20	each		=$	12.20	$0.0174	
Materials per foot of well (Variable Cost)											
	Cement	0.0714	lbs/ft	X	$ 0.130	per pound		=$		$0.0093	
	Bentonite Chips	0.007	tubes/ft	X	$ 8.50	per tube		=$		$0.0595	
	Plug Gel	0.0086	sacks/ft	X	$ 8.50	per sack		=$		$0.0731	
Total Estimated Cost per Foot:										**$1.01**	

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FIVE YEAR MECHANICAL INTEGRITY TESTS (MIT)

Assumptions:

1 Pulling Unit for 8 hr/day
2 MIT Unit for 8 hr/day
3 Labor for operation of pulling unit requires 2 workers (one operator & one laborer)
4 Labor for operation of MIT Unit requires 1 worker

MIT Costs per Well

Equipment and Labor:

Pulling Unit includes one operator					
8 hours	X	$ 18.93	per hour	=$	151.44
Laborer					
8 hours	X	$ 18.93	per hour	=$	151.44
MIT Unit includes one operator					
8 hours	X	$ 18.93	per hour	=$	151.00
			TOTAL MIT COST PER DAY	**=$**	453.88
Wells Completed		6	per day		

MIT COSTS PER WELL =$ 75.65

MIT COSTS PER DEEP DISPOSAL WELL (2012 Cost) =$ **8170**

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Master Cost Basis

Mine Unit Data

		Mine Unit 1	Mine Unit 2	Mine Unit 3	Mine Unit 4	Mine Unit 5
Total number of production wells		0	0	0	0	0
Total number of injection wells		0	0	0	0	0
Total number of shallow monitor wells		0	0	0	0	0
Total number of perimeter monitor wells		7	0	0	0	0
Total number of restoration wells		0	0	0	0	0
Wellfield Area (ft2)		0	0	0	0	0
Wellfield Area (acres)		0.00	0.00	0.00	0.00	0.00
Affected Ore Zone Area (ft2)		0	0	0	0	0
Avg. Completed Thickness		19.6	0	0	0	0
Porosity		0.29	0	0	0	0
Affected Volume (ft3)		0	0	0	0	0
Flare Factor		1.2	1.2	1.2	1.2	1.2
Kgallons per Pore Volume		0	0	0	0	0
Number of Patterns in Unit(s)						
	Current	0	0	0	0	0
	Estimated next report	0	0	0	0	0
	Total Estimated	0	0	0	0	0
Number of Wells in Unit(s)						
Production Wells						
	Current	0	0	0	0	0
	Estimated next report	0	0	0	0	0
	Total Estimated	0	0	0	0	0
Injection Wells						
	Current	0	0	0	0	0
	Estimated next report	0	0	0	0	0
	Total Estimated	0	0	0	0	0
Shallow Monitor Wells						
	Current	0	0	0	0	0
	Estimated next report	0	0	0	0	0
	Total Estimated	0	0	0	0	0
Perimeter Monitor Wells						
	Current	0	0	0	0	0
	Estimated next report	7	0	0	0	0
	Total Estimated	7	0	0	0	0
Number of Wells per Wellfield		7	0	0	0	0
Total Number of Wells		7				
Average Well Depth (ft) - Deep Wells		550	0	0	0	0
Average Well Depth (ft) - Shallow Wells		200	0	0	0	0

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Electrical Costs			
	2013	2014	
Power cost (adj for current actual cost)	$0.0803	$0.0845	kwHr
Kilowatt to Horsepower	0.746	0.746	Kw/HP
Horsepower per gallon per minute	0.167	0.167	HP/gpm
Labor Rates			
	2013 Rate	2014 Est Rate (CPI)	
Operator Labor Cost	$148.91	$151.44	day
Pulling Unit Operator	$148.91	$151.44	day
Engineer Cost	$6,767.18	$6,882.22	month
Radiation Technician Costs	$5,418.41	$5,510.52	month
Costs are from: Nebraska Department of Labor			
Chemical Costs			
	2013 Rate	2014 Est Rate	
Antiscalant for RO (adj for current actual cost)	$15.45	$15.45	gal
Reductant (adj for current actual cost)	$0.55	$0.55	lb
Cement (adj for current actual cost)	$0.13	$0.13	pound
Bentonite Tubes (adj for current actual cost)	$8.50	$8.50	tube
Salt (adj for current actual cost)	$132.00	$132.00	ton
Plug Gel (adj for current actual cost)	$8.50	$8.50	sack
Well Cap (adj for current actual cost)	$12.20	$12.20	each
Hydrochloric Acid (adj for current actual cost)	$1.41	$1.41	gallon
Costs are based off of current invoices			
Analytical Costs			
Guideline 8 (contract lab adjusted for current contract cost)	$248.00	$248.00	analysis
6 parameter Est Rate (CPI)	$50.00	$50.85	analysis
Other (radon, bioassays, etc.) Est Rate (CPI)	$925.00	$940.73	month
Costs are based upon third party lab fees			
Spare Parts			
	2013 Rate	2014 Est Rate (CPI)	
Restoration spare parts estimate	$25,000.00	$25,425.00	year

CPI Escalators (CPI-U, U.S. City Average)	
1988 CPI (average)	118.3
June 2012 CPI (deep well estimate)	229.5
2012 CPI (June 2012 used in last update)	229.5
Current CPI (June 2013)	233.5
2013 Escalation Factor	1.02

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Equipment Costs

Equipment	Base Rental Rate ($/hr)	Labor Costs ($/hr)	Repair Reserve Costs ($/hr)	Fuel Costs ($/hr)	Mob & Demob ($/hr)	Total ($/hr)
Cat 924H Loader	$42.50	$18.93	$123.75	$10.62	inc	$195.80
Cat 420E Backhoe	$25.88	$18.93	$68.00	$10.97	inc.	$123.78
Pipe Clhipper	$8.01			inc	inc	$8.01
Cat D8T Bulldozer	$110.00	$18.93	$330.00	$40.71	inc.	$499.64
Pulling Unit	$44.81	inc	inc	inc	inc	$44.81
Mixing Unit	$6.00			inc	inc	$6.00
Drill Rig	$218.18	inc	inc	inc	inc	$218.18

Basis:
Drill rig based on current 2013 contract.
Equipment rates based on Cost from NMC Cat Rental August 2013
Aug 13 costs for off-road fuel: $3.540 gallon

Pipe Volumes

Nominal Pipe Size	Wall Thickness (in.)	Pipe OD (in.)	Volume per foot (ft3/ft)
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

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Pipe Removal and Shredding Costs

Activity	*Removal Rate (ft/man-day)*	*Shredding Rate (ft/man-day)*	*Labor Rate (day)*	*Activity Cost per foot*
2-inch SDR 13.5 inj & prod. Removal	225		$151.44	$0.67
2-inch SDR 13.5 inj & prod. Shredding		1920	$151.44	$0.08
Trunkline Removal	100		$151.44	$1.51
Trunkline Shredding		100	$151.44	$1.51
Downhole Pipe Removal	2000		$151.44	$0.08
Downhole Pipe Shredding		2250	$151.44	$0.07
Downhole Hose Removal	1000		$151.44	$0.15
Waste and RO Building Pipeline Removal	67		$151.44	$2.26
Waste and RO Building Pipeline Shredding		1500	$151.44	$0.10

Waste Disposal Costs

Waste Form	*Fee*		*Density Correction Factor (Tons/Yd3)*	*Fee per Cubic Yard*	*Transport Cost*		*Total Transportation and Disposal*	
Soil, Bulk Byproduct Material	$138.00	per Ton	0.54	$74.52	$160.00	per Yd3	$234.52	per Yd3
Unpackaged Bulk Byproduct Material (e.g., pipe, equipment)	$178.00	per Ton	0.42	$74.76	$160.00	per Yd3	$234.76	per Yd3
Solid Waste (landfill)	$0.07	per Lb			Incl.	per Lb	$0.07000	per Lb
Solid Waste (landfill)	$912.00	per Load			Incl.	per Load	$912.00	per Load
Void Factor (for disposal)	1.25							

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Plant Dismantling

Plant Components:	*Number*	*Units*	*Estimated Disposal Volume*	*Units*
Contaminated Tanks	0	each	19.3	Ft3 each
Uncontaminated Tanks	0	each	19.3	Ft3 each
Pumps	0	each	5	Ft3 each
Downhole Pumps	11	each	0.5	Ft3 each
Contaminated Piping	0	feet		
Uncontaminated Piping	0	feet	See estimate by piping size and material	
Filters	0	each	100	Ft3 each
Dryer	0	each	400	Ft3 each
Average PVC Pipe Diameter (inches)	3			

Activity	*Units*		*2012 Cost*
Dismantle interior steel, tanks, piping, electrical, and Plant Building		$	0
Concrete floor removal rate	Current Cost	$/ft2	0

Plant Decontamination

Direct Dispose Plant Floor Area	0	ft2	Decon Solution (HCl) Floor Application Rate	2 gal/ft2
Uncontaminated Plant Floor Area	0	ft2		
Decontaminated Plant Floor Area*	0	ft2		
Average concrete thickness	0	ft		
Plant Wall Area	0	ft2	Decon Solution (HCl) Wall Application Rate	1 gal/ft2