

CROW BUTTE RESOURCES, INC.

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February 21, 2006

United States Nuclear Regulatory Commission
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Material Radiation Protection Section
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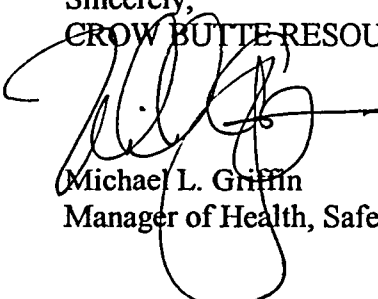
Subject: Semiannual Radiological Effluent and Environmental Monitoring Report
Source Materials License No. SUA-1534, Docket No. 40-8943

Dear Sir or Madam:

Enclosed please find one copy of the Semiannual Radiological Effluent and Environmental Monitoring Report for the Crow Butte Uranium Project. The report is provided in accordance with License Condition 12.1 of Source Materials License SUA-1534 and 10 CFR Part 40. This report covers the third and fourth quarters of 2005.

If you have any questions concerning the report, please feel free to call me at (308) 665-2215.

Sincerely,
CROW BUTTE RESOURCES, INC.


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Manager of Health, Safety, and Environmental Affairs

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CROW BUTTE RESOURCES, INC.



**CROW BUTTE URANIUM PROJECT
RADIOLOGICAL EFFLUENT
AND
ENVIRONMENTAL MONITORING
REPORT**

for

THIRD AND FOURTH QUARTERS, 2005

USNRC Source Materials License SUA 1534

CROW BUTTE RESOURCES, INC.

Second Half 2005 Semiannual Radiological Effluent and Environmental Monitoring Report



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1 WATER QUALITY MONITORING DATA

1.1 Excursion Monitoring

Biweekly excursion monitoring in the shallow aquifer and perimeter monitor wells was continued in Mine Units 2 through 9 during the third and fourth quarters of 2005.

PR-8 and IJ-13 remain on excursion status. These monitor wells are associated with Mine Units 2 and 3, which are currently undergoing groundwater restoration.

On May 2, 2005, Mine Unit 5 perimeter monitor well CM5-19 was placed on excursion status. This well had been trending up slowly for several months. Due to the geometry of the mining wells in this area of Mine Unit 5, overproduction could cause excursion in adjacent wells. Corrective actions were successful at recovery of mining solutions and CM5-19 was removed from excursion status on July 26, 2005.

On June 16, 2005 and June 28, 2005, Mine Unit 6 shallow monitor wells SM6-28 and SM6-12 were placed on excursion status. CBR believes that these excursions were due to increased groundwater levels caused by the significant amount of precipitation received at the facility during the spring and was not caused by mining activity. The excursion parameters returned to normal once the water levels started to decline. SM6-28 and SM6-12 were removed from excursion status on July 5, 2005 and July 26, 2005, respectively.

On August 4, 2005, Mine Unit 9 perimeter monitor well CM9-16 was placed on excursion status. This well had experienced a slow upward trend over several months. Overproducing in this area had been unsuccessful until a new production well was installed on October 14, 2005. The additional production was successful at recovering the mining solution in this area. CM9-16 was removed from excursion status on November 8, 2005.

Excursion reports have been submitted to NRC as required in License Condition 12.2. Complete excursion monitoring results are available on site for inspection. A summary table for monitor wells on excursion status during the second half of 2005 follows.

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Monitor Well ID	Date On Excursion	Date Off Excursion	Biweekly Sampling Resumed	Causal Factor(s)
SM6-28	16-Jun-05	5-Jul-05	28-Jul-05	High water tables due to heavy spring rains
SM6-12	28-Jun-05	26-Jul-05	22-Aug-05	High water tables due to heavy spring rains
CM5-19	2-May-05	26-Jul-05	22-Aug-05	Geometry of the Mine Unit
CM9-16	4-Aug-05	8-Nov-05	8-Dec-05	Well houses out of balance

1.2 Water Supply Wells and Surface Water

Summary sheets of quarterly radiological analytical data for the reporting period from all surface waters and water supply wells within one kilometer of the active wellfield boundary are included in Appendix A.

The reported radiological data are within the expected ranges for each well or stream. Samples were obtained from all sample locations with the exceptions noted in Appendix A.

2 OPERATIONAL

2.1 Production Data Summary

Mining operations continued through the third and fourth quarters of 2005. The average operating production flow rate was 4,103 gpm for the third quarter and 4,126 gpm for the fourth quarter. Injection and production totals from the totalizers and the calculated bleed totals for the reporting period are included in Appendix B.

The main injection trunkline is equipped with a continuous pressure sensor. The average and maximum injection pressures for each wellhouse are included in Appendix C in the Wellfield Injection Pressure table.

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2.2 Wastewater Summary

The total volume of wastewater discharged to the ponds was 1,466,870 gallons during the third quarter and 1,391,440 gallons during the fourth quarter. Currently, all five evaporation ponds contain wastewater.

Wastewater that is not disposed of in the evaporation ponds is injected into the Deep Disposal Well (DDW). Currently, the well is operated on a nearly continuous basis and 19,517,289 gallons of wastewater was injected into the well during the second half of 2005. A summary of the total volume of wastewater injected and the average radionuclide content is contained in Appendix D.

2.3 Effluent Release

10 CFR §40.65 requires licensees to report quantities of radionuclides in liquid and gaseous effluent releases to the environment. In the Application for Renewal of Source Materials License SUA-1534, submitted December 1995, Table 7.3(A) presented calculations of the annual radon emissions for the Crow Butte Plant. These calculations assumed a 7.04×10^{-4} Curies/m³ radon release from leaching operations and the radon release calculations for the second half of 2005 use this release rate estimate.

During the third quarter production occurred at an average flow rate of 4,103 gpm (15,532 lpm). Production was maintained continuously for 90 days during the third quarter with an operating factor of 99.98%. The production flow for the third quarter results in a calculated radon release of 1,020 Curies. During the fourth quarter production occurred at an average flow rate of 4,126 gpm (15,619 lpm). Production was maintained nearly continuously for 91 days during the fourth quarter with an operating factor of 99.84%. The production flow for the fourth quarter results in a calculated radon release of 1,036 Curies. Calculations for radon release from production operations are shown in Appendix E.

Additional wells were brought on line during the second half of 2005. Calculations for the start-up of 12.7 acres of a new wellfield are shown in Appendix E. The calculated radon released from start-up of 12.7 acres is 16 Curies.

The total radon emission due to leaching operations from the Crow Butte plant for the second half of 2005 was 2,072 Curies. This calculated release rate is comparable with the releases estimated in CBR's License Renewal Application.

Radon gas is also released from restoration activities. For restoration water that is treated by ion exchange only, the radon concentration is 0.697 μ Ci/l. Of the total restoration production flow it is assumed that 25% of the radon is released through wellfield loss and 10% of the remaining radon is released during pressurized ion exchange treatment. For water that is treated by reverse osmosis, it

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is assumed that 100% of the remaining radon is released. For water treated by reverse osmosis the radon concentration is 0.470 $\mu\text{Ci/l}$ after adjusting for wellfield loss and ion exchange loss.

During the second half of 2005, a total of 126,588,575 gallons (479,189,884 l) of restoration water was produced from Mine Units 2, 3 and 4. Based upon an estimated radon concentration of 0.697 $\mu\text{Ci/l}$, the total amount of radon in the restoration solution was calculated to be 334 Curies as shown in Appendix E. The estimated release of radon through wellfield loss at 25% of this total was 83 Curies. The plant loss for ion exchange treatment of the restoration water is estimated at 10% of the remaining radon, or 25 Curies.

Of the total amount of restoration water produced in the second half of 2005, no reverse osmosis treatment was performed due to limited waste water capacity in the ponds and the deep disposal well. The release of radon from reverse osmosis treatment is estimated to be 100% of the remaining radon, after correction for wellfield and ion exchange losses. These corrections result in an estimated radon concentration of 0.470 $\mu\text{Ci/l}$. The total estimated radon release from reverse osmosis treatment was 0 Curies. An additional 2.1 acres of wellfields were placed in restoration during the second half of 2005. The calculated radon released from start-up of 2.1 acres is 3 Curies. Calculations for the start-up of additional wellfield areas placed in restoration are shown in Appendix E.

Based upon the calculations shown in Appendix E, the total estimated semiannual radon emission for the second half of 2005 from restoration activities was 111 Curies. This resulted in a total estimated radon release from the Crow Butte project during the second half of 2005 of 2,183 Curies.

2.4 Restoration

Restoration activities continued in Mine Units 2, 3, and 4 during the second half of 2005. Restoration injection and production totals are included in Appendix B. Restoration injection pressures are included in Appendix C.

3 ENVIRONMENTAL MONITORING

3.1 Air Monitor Stations

Seven air monitoring stations are used to monitor the Crow Butte Plant. Ambient radon-222 concentrations and radionuclide concentrations in air for each monitoring site are listed in Appendix F. All air monitoring results were within expected historical ranges.

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3.2 TLD Monitors

Environmental TLD monitors are located at each air monitoring station. The results of the area TLD monitors fall within the expected ranges and are listed in Appendix G with the exception of the 4th quarter dosimeter for AM-6, which is the background station located in Crawford, Nebraska. The dosimetry vendor indicated that this dosimeter was not returned for processing. It is unclear whether the dosimeter was inadvertently lost at Crow Butte or in processing at Landauer. CBR has arranged for future environmental dosimeter shipments to be opened and inventoried by a representative at Landauer, who will make immediate notification to CBR if a dosimeter is missing.

3.3 Stream Sediments

Sediment samples are collected from three locations on Squaw Creek (S-1, S-2, and S-5), two locations on English Creek (E-1 and E-5), and from two impoundments on English Creek (I-3 and I-4) on an annual basis during the fourth quarter. The results of sediment sampling for 2005 are included in Appendix H.

The concentrations of natural uranium in several English Creek samples were well above regional background levels. CBR has noted these elevated concentrations in the English Creek drainage during preoperational monitoring, which indicates that these levels are anomalous natural background concentrations. Composite samples obtained from E-1 and E-2 as part of the preoperational sampling program from 1982 through 1986 had average results with elevated natural uranium (3.4 pCi/g) and lead-210 (1.4 pCi/g) when compared with the other surface water sample locations. Samples obtained in 1998 before mining operations began in this area showed similar elevated uranium concentrations.

The sample locations are in a wetland area in the upper course of English Creek and downstream impoundments. The area has a large amount of organic matter and low water flows as compared with the other surface water sampling locations for the project. CBR believes that the upper courses of English Creek are an area with reducing conditions that favor deposition of radionuclides. Appendix H contains a trend graph for English Creek sediment sample points since 1998 that shows the elevated uranium concentrations noted in past sediment samples.

Appendix A

Private Well and Surface Water Radiological Monitoring Results

Third and Fourth Quarter, 2005

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PRIVATE WELL AND SURFACE WATER RADIOLOGICAL MONITORING RESULTS

THIRD QUARTER, 2005

SAMPLE ID	DATE SAMPLED	URANIUM mg/l	URANIUM μCi/ml	RADIUM-226 pCi/l	RADIUM-226 precision \pm
Well #8	9/19/2005	0.016	1.10E-08	0.2	0.3
Well #11	WELL INOPERABLE-NO SAMPLE COLLECTED				
Well #12	9/19/2005	0.004	2.90E-09	ND	-
Well #24	9/22/2005	0.005	3.50E-09	0.2	0.3
Well #25	9/22/2005	0.006	3.80E-09	ND	-
Well #26	9/22/2005	0.009	6.20E-09	0.4	0.3
Well #28	9/16/2005	0.007	4.50E-09	ND	-
Well #41	9/22/2005	0.007	4.80E-09	0.4	0.3
Well #63	9/22/2005	0.019	1.30E-08	0.8	0.4
Well #125	9/23/2005	0.008	5.20E-09	0.4	0.3
Well #129	9/16/2005	0.008	5.10E-09	ND	-
Well #131	9/22/2005	0.005	3.30E-09	0.3	0.3
Well #133	9/22/2005	0.009	6.30E-09	ND	-
Well #134	9/19/2005	0.010	7.00E-09	0.3	0.3
Well #135	9/19/2005	0.018	1.20E-08	0.4	0.3
Well #138	9/23/2005	0.022	1.50E-08	0.8	0.3
Well #140	9/16/2005	0.011	7.50E-09	ND	-
Drinking Water Well	9/23/2005	0.007	5.00E-09	ND	-
Stream S-1	9/16/2005	0.004	2.80E-09	ND	-
Stream S-2	9/16/2005	0.004	2.80E-09	ND	-
Stream S-5	9/16/2005	0.005	3.40E-09	ND	-
Stream E-1 & E-2	9/16/2005	0.012	8.30E-09	0.2	0.4
Stream E-5	9/16/2005	0.004	2.60E-09	ND	-
Impoundment I-3	9/16/2005	0.007	4.50E-09	ND	-
Impoundment I-4	9/15/2005	0.009	6.20E-09	ND	-
Reporting Limit		0.0003	2.00E-10	0.2	-

ND-Not detected at the reporting limit

CROW BUTTE RESOURCES, INC.

PRIVATE WELL AND SURFACE WATER RADIOLOGICAL MONITORING RESULTS

FOURTH QUARTER, 2005

SAMPLE ID	DATE SAMPLED	URANIUM mg/l	URANIUM µCi/ml	RADIUM-226 pCi/l	RADIUM-226 precision ±
Well #8	12/16/2005	0.015	1.00E-08	ND	-
Well #11	12/12/2005	0.009	5.70E-09	ND	-
Well #12	12/12/2005	0.004	2.70E-09	ND	-
Well #24	12/12/2005	0.005	3.20E-09	ND	-
Well #25	12/12/2005	0.005	3.70E-09	ND	-
Well #26	12/12/2005	0.009	6.00E-09	ND	-
Well #28	12/16/2005	0.005	3.40E-09	ND	-
Well #41	12/16/2005	WELL INOPERABLE-NO SAMPLE COLLECTED			
Well #63	12/16/2005	0.017	1.20E-08	0.8	0.7
Well #125	12/16/2005	0.006	3.90E-09	ND	-
Well #129	12/16/2005	0.007	4.40E-09	ND	-
Well #131	12/12/2005	0.005	3.20E-09	ND	-
Well #133	12/12/2005	0.009	6.20E-09	ND	-
Well #134	12/12/2005	0.009	6.00E-09	0.9	0.7
Well #135	12/12/2005	WELL INOPERABLE-NO SAMPLE COLLECTED			
Well #138	12/12/2005	0.014	9.70E-09	1.3	0.8
Well #140	12/16/2005	0.011	7.20E-09	1.3	0.8
Drinking Water Well	12/16/2005	0.007	4.50E-09	ND	-
Stream S-1	11/7/2005	0.004	2.90E-09	ND	-
Stream S-2	11/7/2005	0.004	2.80E-09	ND	-
Stream S-5	11/7/2005	0.005	3.10E-09	1.2	0.8
Stream E-1 & E-2	11/7/2005	0.018	1.20E-08	ND	-
Stream E-5	11/7/2005	0.007	4.40E-09	2.7	1.9
Impoundment I-3	11/7/2005	0.074	5.00E-08	1.0	0.7
Impoundment I-4	11/7/2005	0.015	1.00E-08	ND	-
Reporting Limit		0.0003	2.00E-10	0.2	-

ND-Not detected at the reporting limit

Appendix B

Plant Production and Waste Totals

Third and Fourth Quarter, 2005

WASTE VOLUME
Third Quarter 2005

TOTALIZER	PLANT TO PONDS	PLANT TO DDW	RESTORATION TO DDW	CLEAN WATER INTO PLANT	DDW TOTAL INJECTED	TRUCKS TO POND
July	526,340	2,565,672	719,114	361,879	3,284,766	
August	506,840	2,080,617	1,099,058	439,049	3,179,675	
September	352,040	2,466,776	390,691	364,759	2,857,467	
TOTAL GAL. EOQ	1,385,220	7,113,065	2,208,863	1,165,687	9,321,928	81,650

TOTAL 3rd QTR VOLUME DISCHARGED TO WASTE PONDS =	1,466,870 GALLONS
TOTAL 3rd QTR VOLUME DISCHARGED TO DEEP WELL =	9,321,928 GALLONS
TOTAL 3rd QTR VOLUME DISCHARGED TO WASTE PONDS + DPWELL =	10,788,798 GALLONS
TOTAL 3rd QTR VOLUME WF BLEED FROM WELLFIELDS =	9,623,111 GALLONS

WELLFIELD BLEED
Third Quarter 2005

MONTH	July	August	September
BLEED	1.5%	1.2%	1.4%

PLANT FLOW
Third Quarter 2005

AVERAGE OPERATING FLOW RATE =	4,103 GPM EOQ
TOTAL GALLONS PRODUCED =	543,596,709 GALLONS EOQ
TOTAL GALLONS INJECTED =	500,307,906 GALLONS EOQ

	TOTAL GALS. PRODUCED	TOTAL GALS. INJECTED	HOURS IN MONTH	HOURS IN PRODUCTION	AVERAGE PROD. GPM	AVERAGE COM INJ GPM	AVERAGE REST INJ GPM	HRS. DOWN TIME
Prev. YTD	1,117,237,383	1,041,122,882	4,434	4,434				0.5
July	188,219,724	171,475,261	744	744	4,216	3,841	443	0
August	181,606,484	167,814,867	744	720	4,068	3,759	429	0
September	173,770,500	161,017,778	720	744	4,022	3,727	368	0
EOQ TOTAL	543,596,709	500,307,906	2,208	2,208	4,103	3,776	414	0
YTD TOTAL	1,660,834,092	1,541,430,788	6,642	6,642	4,168	3,868	433	0.5

	TOTAL MUII GALS PRODUCED	TOTAL MUIII GALS PRODUCED	TOTAL MUIV GALS PRODUCED	TOTAL BRINE GALS PRODUCED	TOTAL PERM GALS PRODUCED	COMM BLEED TO RO FEED	MUIII BLEED TO DDW
Prev. YTD	2,950,825	55,805,102	82,948,839	9,389,541	35,920,892	59,132	4,542,022
July	1,214,202	6,624,063	14,363,022	321,875	1	10,019	397,239
August	1,144,926	6,866,942	12,822,677	745,289	0	11,096	353,769
September	1,162,966	6,765,838	9,699,335	399,775	0	9,084	-9,084
EOQ TOTAL	3,522,094	20,256,843	36,885,034	1,466,939	1	30,199	741,924
YTD TOTAL	6,472,919	76,061,945	119,833,873	10,856,480	35,920,893	89,331	5,283,946

WASTE VOLUME
Fourth Quarter 2005

TOTALIZER	PLANT TO PONDS	PLANT TO DDW	RESTORATION TO DDW	CLEAN WATER INTO PLANT	DDW TOTAL INJECTED	TRUCKS TO POND
October	756,300	3,400,642	0	340,744	3,400,642	
November	507,510	3,237,722	358	309,790	3,238,080	
December	93,430	3,556,639	0	13,005	3,556,639	
TOTAL GAL. EOQ	1,357,240	10,195,003	358	663,539	10,195,361	34,200

TOTAL 4th QTR VOLUME DISCHARGED TO WASTE PONDS =	1,391,440 GALLONS
TOTAL 4th QTR VOLUME DISCHARGED TO DEEP WELL =	10,195,361 GALLONS
TOTAL 4th QTR VOLUME DISCHARGED TO WASTE PONDS + DPWELL =	11,586,801 GALLONS
TOTAL 4th QTR VOLUME WF BLEED FROM WELLFIELDS =	10,923,262 GALLONS

WELLFIELD BLEED
Fourth Quarter 2005

MONTH	October	November	December
BLEED	2.1%	1.9%	2.0%

PLANT FLOW
Fourth Quarter 2005

AVERAGE OPERATING FLOW RATE =	4,126 GPM EOQ
TOTAL GALLONS PRODUCED =	546,591,544 GALLONS EOQ
TOTAL GALLONS INJECTED =	526,695,164 GALLONS EOQ

	TOTAL GALS. PRODUCED	TOTAL GALS. INJECTED	HOURS IN MONTH	HOURS IN PRODUCTION	AVERAGE PROD. GPM	AVERAGE COM INJ GPM	AVERAGE REST INJ GPM	HRS. DOWN TIME
Prev. YTD	1,660,834,092	1,541,430,788	6,642	6,642				0.5
October	185,485,899	179,809,378	744	744	4,155	4,028	442	0
November	176,987,333	169,304,269	720	715	4,097	3,919	418	4.8
December	184,118,311	177,581,517	744	744	4,125	3,978	428	0
EOQ TOTAL	546,591,544	526,695,164	2,208	2,203	4,126	3,976	429	4.8
YTD TOTAL	2,207,425,636	2,068,125,952	8,850	8,845	4,157	3,895	432	5.3

	TOTAL MUII GALS PRODUCED	TOTAL MUIII GALS PRODUCED	TOTAL MUIV GALS PRODUCED	TOTAL BRINE GALS PRODUCED	TOTAL PERM GALS PRODUCED	COMM BLEED TO RO FEED	MUIII BLEED TO DDW
Prev. YTD	6,472,919	76,061,945	119,833,873	10,856,480	35,920,893	83,911	5,283,946
October	1,208,173	7,506,181	13,675,481	-397,239	0	9,251	397,239
November	1,074,849	7,149,063	12,867,333	-353,411	0	8,150	353,769
December	1,229,381	7,680,102	13,534,041	7,424	0	7,424	-7,424
EOQ TOTAL	3,512,403	22,335,346	40,076,855	-743,226	0	24,825	743,584
YTD TOTAL	9,985,322	98,397,291	159,910,728	10,113,254	35,920,893	108,736	6,027,530

Appendix C

Wellfield Injection Pressures

Third and Fourth Quarter, 2005

Third Quarter 2005

Third Quarter 2005										
	WF HOUSE #3		WF HOUSE #4		WF HOUSE #5		WF HOUSE #6		WF HOUSE #7	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	0	0	31	34	20	49	34	45	0	0
August	0	0	42	347	21	25	34	35	3	17
September	0	0	33	38	21	24	26	35	17	18
AVERAGE	0	0	35	347	21	49	31	45	7	18
	WF HOUSE #8		WF HOUSE #9		WF HOUSE #10		WF HOUSE #11		WF HOUSE #12	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	25	26	66	74	0	0	0	0	87	660
August	26	26	64	75	0	0	0	0	66	76
September	19	26	53	76	0	0	0	0	54	77
AVERAGE	23	26	61	76	0	0	0	0	69	660
	WF HOUSE #13		WF HOUSE #14		WF HOUSE #15		WF HOUSE #16		WF HOUSE #17	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	61	68	94	95	69	75	0	0	77	78
August	59	71	92	95	67	79	0	0	75	80
September	51	90	93	95	56	85	0	0	77	78
AVERAGE	57	90	93	95	64	85	0	0	76	80
	WF HOUSE #18		WF HOUSE #19		WF HOUSE #20		WF HOUSE #21		WF HOUSE #22	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	0	0	83	90	85	89	97	99	95	98
August	1	26	80	94	85	88	97	98	95	97
September	0	0	65	93	85	95	97	99	96	98
AVERAGE	0	26	76	94	85	95	97	99	95	98
	WF HOUSE #23		WF HOUSE #24		WF HOUSE #25		WF HOUSE #26		WF HOUSE #27	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	0	0	96	98	97	99	96	99	98	99
August	0	0	97	98	96	99	95	98	98	99
September	0	0	97	99	97	99	96	98	97	99
AVERAGE	0	0	96	99	97	99	96	99	97	99
	WF HOUSE #28		WF HOUSE #29		WF HOUSE #30		WF HOUSE #31		WF HOUSE #32	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	0	0	68	70	60	65	32	42	43	47
August	0	0	0	0	64	65	36	48	47	50
September	0	0	0	0	67	70	39	40	50	50
AVERAGE	0	0	72	78	64	70	36	48	48	50
	WF HOUSE #33		WF HOUSE #34		WF HOUSE #35		WF HOUSE #36		WF HOUSE #37	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	44	48	97	99	97	99	97	99	95	98
August	48	50	97	99	96	98	97	99	95	97
September	51	52	96	99	97	98	97	99	96	98
AVERAGE	47	52	97	99	97	99	97	99	95	98
	WF HOUSE #38		WF HOUSE #39		WF HOUSE #40		WF HOUSE #41		WF HOUSE #42	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	96	99	92	98	64	95	53	57	41	45
August	96	98	96	98	96	98	57	61	46	50
September	95	98	95	98	95	98	61	65	52	98
AVERAGE	96	99	84	98	85	98	57	65	46	98
	WF HOUSE #43									
	AVERAGE	MAXIMUM								
July	45	49								
August	46	50								
September	52	98								
AVERAGE	48	62								

WELLFIELD INJECTION PRESSURE - PSI										
Fourth Quarter 2005										
	WF HOUSE #3		WF HOUSE #4		WF HOUSE #5		WF HOUSE #6		WF HOUSE #7	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	0	0	35	36	23	32	26	27	17	18
November	1	35	34	40	24	45	26	46	15	28
December	0	0	38	40	27	32	28	28	15	17
AVERAGE	0	35	36	40	25	45	27	46	16	28
	WF HOUSE #8		WF HOUSE #9		WF HOUSE #10		WF HOUSE #11		WF HOUSE #12	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	19	23	71	76	0	0	0	0	73	80
November	17	20	70	88	3	74	3	75	68	79
December	21	50	77	80	0	4	0	0	78	85
AVERAGE	19	50	73	88	1	74	1	75	73	85
	WF HOUSE #13		WF HOUSE #14		WF HOUSE #15		WF HOUSE #16		WF HOUSE #17	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	66	73	92	95	75	80	8	52	76	78
November	65	80	89	96	74	82	3	95	75	80
December	72	75	94	98	81	85	2	50	79	80
AVERAGE	68	80	92	96	77	85	5	95	77	80
	WF HOUSE #18		WF HOUSE #19		WF HOUSE #20		WF HOUSE #21		WF HOUSE #22	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	0	0	90	95	85	86	95	98	96	98
November	3	85	87	96	83	92	94	99	92	98
December	0	0	95	98	87	90	96	98	95	97
AVERAGE	1	85	91	98	85	92	95	99	95	98
	WF HOUSE #23		WF HOUSE #24		WF HOUSE #25		WF HOUSE #26		WF HOUSE #27	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	0	0	95	97	95	98	97	98	96	99
November	3	96	93	98	90	99	91	98	89	98
December	6	100	95	98	96	98	96	98	95	98
AVERAGE	3	100	94	98	94	99	95	98	94	99
	WF HOUSE #28		WF HOUSE #29		WF HOUSE #30		WF HOUSE #31		WF HOUSE #32	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	0	0	75	78	67	69	39	42	49	51
November	2	70	2	70	62	68	37	42	46	52
December	6	62	6	62	66	70	38	40	49	52
AVERAGE	3	70	73	79	65	70	38	42	48	52
	WF HOUSE #33		WF HOUSE #34		WF HOUSE #35		WF HOUSE #36		WF HOUSE #37	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	50	52	97	99	97	99	96	99	95	97
November	47	53	90	98	83	99	84	99	89	97
December	50	52	95	99	95	99	94	98	96	97
AVERAGE	49	53	94	99	92	99	92	99	93	97
	WF HOUSE #38		WF HOUSE #39		WF HOUSE #40		WF HOUSE #41		WF HOUSE #42	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	91	95	78	97	82	91	60	64	50	52
November	75	93	75	93	75	93	57	69	57	95
December	91	98	91	98	91	98	60	90	92	95
AVERAGE	91	98	80	98	83	98	59	90	66	95
	WF HOUSE #43		WF HOUSE #44							
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM						
October	54	65	0	0						
November	50	64	57	95						
December	53	87	92	95						
AVERAGE	51	87	74	60						

Appendix D

Deep Disposal Well Injection Radiological Data

Third and Fourth Quarter, 2005

Crow Butte Uranium Mine
Deep Disposal Well Injection Radiological Data

Month	Total Gallons Injected	Average Natural Uranium (mg/l)	Total Natural Uranium Injected (mg)	Total Natural Uranium Injected (uCi)	Average Radium-226 (pCi/l)	Total Radium- 226 Injected (uCi)
July-05	3,287,786	4	4.98E+07	3.37E+04	747	9.30E+03
August-05	3,176,675	8	9.62E+07	6.51E+04	961	1.16E+04
September-05	2,857,467	6	6.49E+07	4.39E+04	1,050	1.14E+04
October-05	3,400,642	15	1.93E+08	1.31E+05	629	8.10E+03
November-05	3,238,080	8	9.81E+07	6.64E+04	1,060	1.30E+04
December-05	3,556,639	9	1.21E+08	8.20E+04	983	1.32E+04
Totals	19,517,289		6.23E+08	4.22E+05		6.65E+04

Appendix E
Radon Release Calculations
Third and Fourth Quarter, 2005

Radon Effluent Release Calculation (Production and Startup)

Third Quarter 2005 Radon Release from Leaching Operations:

Curies/M3	Production Flow (liters)	Radon-222 Decay Constant	Operating Days	Operating Factor	M3/liter conversion	Hours/Day Conversion	Minutes/Hour Conversion	Total Radon Release from Leaching
7.04E-04	15,532	0.72	90	99.98%	0.001	24	60	1,020

Fourth Quarter 2005 Radon Release from Leaching Operations:

Curies/M3	Production Flow (liters)	Radon-222 Decay Constant	Operating Days	Operating Factor	M3/liter conversion	Hours/Day Conversion	Minutes/Hour Conversion	Total Radon Release from Leaching
7.04E-04	15,619	0.72	91	99.84%	0.001	24	60	1,036

Second Half 2005 Radon Release From Startup:

Curies/M3	Total Acres of New Wellfield	Meter3/Acre Conversion	Orebody Thickness (meters)	Porosity	Total Radon Release from Startup
7.04E-04	13	4,074	1.52	0.29	16

Total Estimated Second Half 2005 Radon Release from Production:

2,072

Radon Effluent Release Calculation (Restoration)

Second Half 2005 Radon Release From Restoration:

Total Restoration Flow (liters)	Microcuries/liter	Curies/Microcurie	Production Potential
479,189,884	0.697	1.00E-06	334
Wellfield Loss (25% of Production Potential):			
Ion Exchange Loss (10% of Production Potential minus Wellfield Loss):			
Reverse Osmosis Loss (100% of remaining activity at 0.470 microcuries/liter)			
Total Reverse Osmosis Flow (liters)	Microcuries/liter	Curies/Microcurie	
0	0.470	1.00E-06	

Second Half 2005 Radon Release From Startup of New Restoration:

Curies/M3	Total Acres of New Wellfield	Meter3/Acre Conversion	Orebody Thickness (meters)	Porosity	Total Radon Release from Startup
7.04E-04	2.1	4074	1.52	0.29	3

Total Estimated Radon Release from Restoration:

111

Total Estimated Radon Release, Second Half 2005:

2,183

Appendix F
Environmental Air Monitoring Results
Third and Fourth Quarter, 2005

Crow Butte Resources, Inc.
Crow Butte Uranium Project

Track Etch Cup Ambient Radon Concentrations

*Air Monitoring Station
No.*

Period: July 5, 2005 to January 3, 2006

	Gross Count	Average Radon Concentration (x 10 ⁻⁹ µCi/ml)	Accuracy (x 10 ⁻⁹ µCi/ml)	Percent Effluent Concentration
AM-1	37.8	0.2	0.03	2.0%
AM-2	155.0	0.9	0.07	9.0%
AM-3	41.0	0.2	0.03	2.0%
AM-4	55.3	0.3	0.04	3.0%
AM-5	207.5	1.1	0.08	11.0%
AM-6	48.7	0.3	0.04	3.0%
AM-8	87.5	0.5	0.05	5.0%
AB-1 (AM-1 Duplicate)	77.2	0.4	0.05	4.0%
AB-2 (AM-2 Duplicate)	172.5	0.9	0.07	9.0%
AB-3 (AM-3 Duplicate)	78.3	0.4	0.05	4.0%
AB-5 (AM-5 Duplicate)	148.5	0.8	0.07	8.0%
AB-6 (AM-6 Duplicate)	69.0	0.4	0.05	4.0%
AB-8 (AM-8 Duplicate)	106.9	0.6	0.06	6.0%
LLD (x 10 ⁻⁹ µCi/ml)				0.2
Effluent Concentration Limit, 10 CFR 20 App B Column 2:				10



HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2006

SAMPLE ID: AM-1

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-001 01/03/2005 - 04/01/2005 Air Volume in mLs 5.15E+09	^{235}U	1.54E-16	N/A	1.00E-16	9.00E-14	1.71E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	2.08E-14	1.44E-15	2.00E-15	6.00E-13	3.47E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-001 04/04/2005 - 07/05/2005 Air Volume in mLs 5.80E+09	^{235}U	1.75E-16	N/A	1.00E-16	9.00E-14	1.95E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	1.02E-14	1.28E-15	2.00E-15	6.00E-13	1.70E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-001 07/05/2005 - 10/03/2005 Air Volume in mLs 5.38E+09	^{235}U	1.30E-16	N/A	1.00E-16	9.00E-14	1.45E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	2.51E-14	2.42E-15	2.00E-15	6.00E-13	4.18E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-001 10/3/2006 - 1/3/2006 Air Volume in mLs 5.43E+09	^{235}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
	^{226}Ra	1.56E-16	1.29E-16	1.00E-16	9.00E-13	1.84E-02
	^{210}Pb	2.73E-14	2.01E-15	2.00E-15	6.00E-13	4.54E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES
REPORT DATE: January 24, 2006
SAMPLE ID: AM-2

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-002 01/03/2005 - 04/01/2005 Air Volume in mLs 4.79E+09	^{235}U	9.22E-16	N/A	1.00E-16	9.00E-14	1.02E+00
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	2.16E-14	1.55E-15	2.00E-15	6.00E-13	3.59E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-002 4/1/2005 - 7/5/2005 Air Volume in mLs 5.42E+09	^{235}U	1.71E-15	N/A	1.00E-16	9.00E-14	1.90E+00
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	9.26E-15	1.33E-15	2.00E-15	6.00E-13	1.54E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-002 07/05/2005 - 10/03/2005 Air Volume in mLs 5.03E+09	^{235}U	8.55E-16	N/A	1.00E-16	9.00E-14	9.50E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	2.39E-14	2.60E-15	2.00E-15	6.00E-13	3.98E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-002 10/3/2006 - 1/3/2006 Air Volume in mLs 4.41E+09	^{235}U	1.81E-16	N/A	1.00E-16	9.00E-14	2.02E-01
	^{226}Ra	2.04E-16	1.59E-16	1.00E-16	9.00E-13	2.27E-02
	^{210}Pb	2.70E-14	2.31E-15	2.00E-15	6.00E-13	4.50E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2006

SAMPLE ID: AM-3

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-003 01/03/2005 - 04/01/2005 Air Volume in mLs 4.92E+09	^{235}U	1.95E-16	N/A	1.00E-16	9.00E-14	2.17E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	2.10E-14	1.50E-15	2.00E-15	6.00E-13	3.50E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-003 4/1/2005 - 7/5/2005 Air Volume in mLs 5.65E+09	^{235}U	3.09E-16	N/A	1.00E-16	9.00E-14	3.44E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	1.05E-14	1.31E-15	2.00E-15	6.00E-13	1.75E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-003 07/05/2005 - 10/03/2005 Air Volume in mLs 5.25E+09	^{235}U	1.52E-16	N/A	1.00E-16	9.00E-14	1.69E-01
	^{226}Ra	2.86E-16	1.71E-16	1.00E-16	9.00E-13	3.17E-02
	^{210}Pb	1.67E-14	2.36E-15	2.00E-15	6.00E-13	2.78E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-003 10/3/2006 - 1/3/2006 Air Volume in mLs 5.32E+09	^{235}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	^{210}Pb	1.94E-14	1.82E-15	2.00E-15	6.00E-13	3.23E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2006

SAMPLE ID: AM-4

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-004 01/03/2005 - 04/01/2005 Air Volume in mLs 5.28E+09	^{nat} U	1.82E-16	N/A	1.00E-16	9.00E-14	2.02E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	1.96E-14	1.40E-15	2.00E-15	6.00E-13	3.26E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-004 4/1/2005 - 7/5/2005 Air Volume in mLs 6.03E+09	^{nat} U	3.42E-16	N/A	1.00E-16	9.00E-14	3.80E-01
	²²⁶ Ra	1.31E-15	2.36E-16	1.00E-16	9.00E-13	1.45E-01
	²¹⁰ Pb	1.43E-14	1.31E-15	2.00E-15	6.00E-13	2.39E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-004 07/05/2005 - 10/03/2005 Air Volume in mLs 5.54E+09	^{nat} U	2.17E-16	N/A	1.00E-16	9.00E-14	2.41E-01
	²²⁶ Ra	2.35E-16	1.44E-16	1.00E-16	9.00E-13	2.61E-02
	²¹⁰ Pb	2.29E-14	2.38E-15	2.00E-15	6.00E-13	3.82E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-004 10/3/2006 - 1/3/2006 Air Volume in mLs 5.50E+09	^{nat} U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	2.56E-14	1.95E-15	2.00E-15	6.00E-13	4.27E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2006

SAMPLE ID: AM-5

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-005 01/03/2005 - 04/01/2005 Air Volume in mLs 5.09E+09	^{nat} U	3.49E-16	N/A	1.00E-16	9.00E-14	3.88E-01
	²²⁶ Ra	1.31E-16	1.12E-16	1.00E-16	9.00E-13	1.45E-02
	²¹⁰ Pb	1.80E-14	1.42E-15	2.00E-15	6.00E-13	3.01E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-005 4/1/2005 - 7/5/2005 Air Volume in mLs 5.64E+09	^{nat} U	2.92E-16	N/A	1.00E-16	9.00E-14	3.24E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	1.13E-14	1.33E-15	2.00E-15	6.00E-13	1.89E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-005 07/05/2005 - 10/03/2005 Air Volume in mLs 4.52E+09	^{nat} U	3.76E-16	N/A	1.00E-16	9.00E-14	4.18E-01
	²²⁶ Ra	4.20E-16	2.21E-16	1.00E-16	9.00E-13	4.67E-02
	²¹⁰ Pb	2.48E-14	2.85E-15	2.00E-15	6.00E-13	4.13E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-005 10/3/2006 - 1/3/2006 Air Volume in mLs 4.37E+09	^{nat} U	1.33E-16	N/A	1.00E-16	9.00E-14	2.03E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	2.31E-14	2.20E-15	2.00E-15	6.00E-13	3.85E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

HIGH VOLUME AIR SAMPLING REPORT	
CLIENT:	CROW BUTTE RESOURCES
REPORT DATE:	January 24, 2006
SAMPLE ID:	AM-6

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-006 01/03/2005 - 04/01/2005 Air Volume in mLs 4.99E+09	^{nat} U	1.05E-16	N/A	1.00E-16	9.00E-14	1.16E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	1.84E-14	1.45E-15	2.00E-15	6.00E-13	3.07E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-006 4/1/2005 - 7/5/2005 Air Volume in mLs 5.91E+09	^{nat} U	1.24E-16	N/A	1.00E-16	9.00E-14	1.37E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	1.08E-14	1.27E-15	2.00E-15	6.00E-13	1.80E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-006 07/05/2005 - 10/03/2005 Air Volume in mLs 5.45E+09	^{nat} U	1.10E-16	N/A	1.00E-16	9.00E-14	1.22E-01
	²²⁶ Ra	3.67E-16	1.83E-16	1.00E-16	9.00E-13	4.08E-02
	²¹⁰ Pb	2.48E-14	2.46E-15	2.00E-15	6.00E-13	4.13E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-006 10/3/2006 - 1/3/2006 Air Volume in mLs 5.43E+09	^{nat} U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	2.39E-14	1.92E-15	2.00E-15	6.00E-13	3.99E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2006

SAMPLE ID: AM-8

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05040208-007 01/03/2005 - 04/01/2005 Air Volume in mLs 4.95E+09	^{nat} U	1.72E-16	N/A	1.00E-16	9.00E-14	1.91E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	1.62E-14	1.42E-15	2.00E-15	6.00E-13	2.71E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05070304-007 4/1/2005 - 7/5/2005 Air Volume in mLs 4.78E+09	^{nat} U	2.90E-16	N/A	1.00E-16	9.00E-14	3.22E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	9.53E-15	1.49E-15	2.00E-15	6.00E-13	1.59E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C05100310-007 07/05/2005 - 9/16/2005 Air Volume in mLs 4.20E+09	^{nat} U	1.43E-16	N/A	1.00E-16	9.00E-14	1.59E-01
	²²⁶ Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
	²¹⁰ Pb	2.67E-14	3.07E-15	2.00E-15	6.00E-13	4.44E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration $\mu\text{Ci/mL}$	Error Estimate $\mu\text{Ci/mL}$	L.L.D. $\mu\text{Ci/mL}$	Effluent Conc.* $\mu\text{Ci/mL}$	% Effluent Concentration
C06010241-007 10/3/2006 - 1/3/2006 Air Volume in mLs 5.66E+09	^{nat} U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
	²²⁶ Ra	1.59E-16	1.41E-16	1.00E-16	9.00E-13	1.77E-02
	²¹⁰ Pb	1.06E-14	1.48E-15	2.00E-15	6.00E-13	1.77E+00

Final prep volume is 0.95 liter

LLD's are from Reg. Guide 4.14

*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Week for Radium-226

Day for Lead-210

Appendix G
Environmental TLD Monitoring Results
Third and Fourth Quarter, 2005

Crow Butte Resources
 Attn: Rhonda Grantham
 PO Box 169
 Crawford, NE 69339

SPHERICAL X9 ENVIRONMENTAL REPORT

Prepared by Landauer, Inc.

Account Number:	306192
Process Number:	X9SP GG805
Received Date:	6-Oct-05
Report Date:	14-Oct-05
Released by:	LCC

							Net Values after control subtraction			
							Mean Ambient Dose Equivalent (mrem)	Mean Ambient Dose Equivalent (mrem)	Standard Deviation (mrem)	95% Confidence Interval (mrem)
Participant No.	Name/Description	Reading 1 (mrem)	Reading 2 (mrem)	Reading 3 (mrem)	Reading 4 (mrem)	Reading 5 (mrem)				
Quarterly Monitoring Period starting:		July 1, 2005								
	Control	36	36	35	36	35	36		0.5	0.7
1001	AM-1	41	40	36	43	43	41	5	2.9	3.6
1002	AM-2	41	41	41	40	44	41	5	1.5	1.9
1003	AM-6	40	42	38	41	42	41	5	1.7	2.1
1008	AM-8	42	39	42	46	43	42	6	2.5	3.1
1009	AM-3	42	44	44	38	39	41	5	2.8	3.5
1010	AM-4	40	33	38	40	38	38	2	2.9	3.5
1011	AM-5	37	42	36	20	25	32	0	9.1	11.3

95% Confidence Interval is based on the standard error of the mean

Crow Butte Resources
 Attn: Rhonda Grantham
 PO Box 169
 Crawford, NE 69339

SPHERICAL X9 ENVIRONMENTAL REPORT

Prepared by Landauer, Inc.

Account Number:	306192
Process Number:	X9SP GH240
Received Date:	6-Jan-06
Report Date:	16-Jan-06
Released by:	CAS

Net Values
 after control
 subtraction

Participant No.	Name/Description	Reading 1 (mrem)	Reading 2 (mrem)	Reading 3 (mrem)	Reading 4 (mrem)	Reading 5 (mrem)	Mean Ambient Dose Equivalent (mrem)	Mean Ambient Dose Equivalent (mrem)	Standard Deviation (mrem)	95% Confidence Interval (mrem)
Quarterly Monitoring Period starting:		October 1, 2005								
	Control	33	34	35	33	33	34		0.9	1.1
1001	AM-1	39	42	41	40	46	42	8	2.7	3.3
1002	AM-2	41	40	40	41	38	40	6	1.2	1.5
1003	AM-6	dosimeter not returned								
1008	AM-8	41	42	38	41	41	41	7	1.5	1.9
1009	AM-3	42	41	43	39	41	41	7	1.5	1.8
1010	AM-4	44	45	38	43	41	42	8	2.8	3.4
1011	AM-5	42	45	40	43	42	42	8	1.8	2.3

95% Confidence Interval is based on the standard error of the mean

Appendix H
Sediment Monitoring Results
Third and Fourth Quarter, 2005



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-024
Client Sample ID: Stream S-1

Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	0.66	mg/kg-dry	D	0.07		SW6020	12/28/05 00:38 / sml
RADIONUCLIDES - TOTAL							
Lead 210	ND	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.3	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.09	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-025
Client Sample ID: Stream S-2

Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	0.49	mg/kg-dry	D	0.07		SW6020	12/28/05 00:45 / sml
RADIONUCLIDES - TOTAL							
Lead 210	ND	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.6	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.1	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-026
Client Sample ID: Stream S-5

Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	0.47	mg/kg-dry	D	0.07		SW6020	12/28/05 01:00 / sml
RADIONUCLIDES - TOTAL							
Lead 210	ND	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.6	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.1	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-027
Client Sample ID: Stream E1

Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	2.94	mg/kg-dry	D	0.07		SW6020	12/28/05 01:08 / sml
RADIONUCLIDES - TOTAL							
Lead 210	ND	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.8	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.1	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-028
Client Sample ID: Stream E5

Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	1.64	mg/kg-dry	D	0.07		SW6020	12/28/05 01:15 / sml
RADIONUCLIDES - TOTAL							
Lead 210	1.4	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Lead 210 precision (±)	0.5	pCi/g-dry				NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.7	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.1	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-030
Client Sample ID: Impoundment I3

Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	6.25	mg/kg-dry	D	0.07		SW6020	12/28/05 19:37 / sml
RADIONUCLIDES - TOTAL							
Lead 210	ND	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.7	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.1	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Crow Butte Resources
Project: 4th Qtr Environmental Water and Yearly Sediment
Lab ID: C05120938-029
Client Sample ID: Impoundment I4

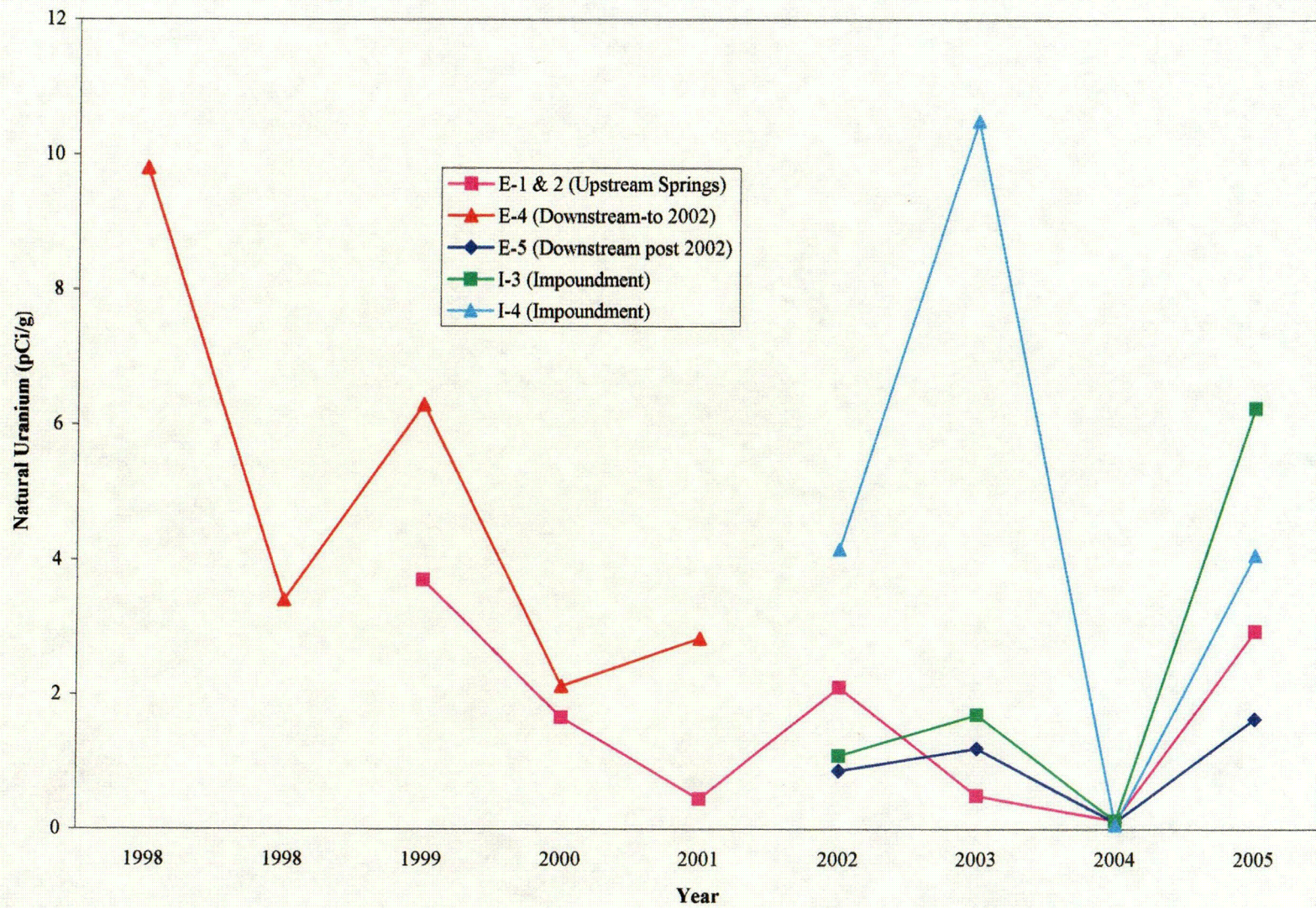
Report Date: 01/09/06
Collection Date: 11/07/05
Date Received: 12/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS - TOTAL							
Uranium	4.07	mg/kg-dry	D	0.07		SW6020	12/28/05 01:22 / sml
RADIONUCLIDES - TOTAL							
Lead 210	ND	pCi/g-dry		0.2		NERHL-65-4	12/23/05 10:30 / ph
Radium 226	0.6	pCi/g-dry		0.2		E903.0	12/23/05 13:00 / trs
Radium 226 precision (±)	0.1	pCi/g-dry				E903.0	12/23/05 13:00 / trs

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

English Creek Sediment Uranium Concentration



COI