

CIMARRON CORPORATION

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September 5, 2008

Mr. Kenneth Kalman
Office of Nuclear Materials Safety & Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 70-925; License No. SNM-928
NRC Response to August 31, 2007 Request for Closure

Dear Mr. Kalman:

Cimarron Corporation (Cimarron) received NRC's August 20, 2008 response to Cimarron's August 31, 2007 request for closure on certain issues related to groundwater. Cimarron appreciates NRC's authorization to abandon some of the monitoring wells at the site, and provides herein additional information pertaining to those wells for which NRC did not approve abandonment. In addition, Cimarron seeks clarification on two issues which were not addressed in the August 20 letter.

As stated in your letter, NRC had requested an electronic copy of all environmental monitoring data in a February 2008 e-mail. Cimarron provided NRC its environmental monitoring data in an April 2008 e-mail. However, when NRC requested all "environmental monitoring data" in the February 2008 e-mail, Cimarron extracted from its environmental database all data related to its environmental monitoring locations, as specified in Section 15 of the Cimarron Radiation Protection Program (RPP), "Environmental Monitoring". The environmental monitoring program at Cimarron includes 26 wells and two surface water locations. It does not include all the wells or potential surface water sampling locations at the site. Cimarron provided NRC only the environmental monitoring data for the 26 wells and two surface water sampling locations listed in Section 15 of the RPP, not recognizing that NRC wanted data for all the locations listed in the August 31, 2007 submittal.

NRC's letter states that, *"several monitoring wells ... have no environmental data or very limited data. Until Cimarron addresses this lack of data or can provide additional justification for eliminating these monitoring sites, the NRC staff is unable to determine whether monitoring these sites can be eliminated.* Cimarron has data for all the locations for which abandonment and/or discontinuance of monitoring was requested. Cimarron presents herein information on those locations your August 20 letter identified as not having sufficient data, including why Cimarron believes it is appropriate to abandon or retain those potential sampling locations.

Well 1319 Area

NRC requested that the following locations be retained for "continued monitoring": Wells 1348, 1349, and 1353. During Cimarron's 2003 site-wide groundwater assessment effort, all three of

these wells were installed downgradient of potential historical sources areas, where licensed material may have migrated to groundwater. Cimarron's intent was to learn if any of these historical sources could have impacted groundwater above the groundwater release criterion.

When removing the pipelines extending from the processing area to the uranium ponds, the locations of several leaks were discovered. Soil was excavated to below decommissioning criteria as needed to decommission these areas. The final status surveys of these areas are reported in the final status survey report for Subarea N. The locations of contaminated subsurface soil are shown in Appendix 2 of that report. Cimarron considered these former pipeline leaks to be potential historical sources which could have impacted groundwater.

Wells 1348 and 1353 were installed downgradient from two of these former pipeline leaks. Samples were collected from Well 1353 five times, and the attached data show that all results were within the normal range of background for groundwater. Samples were collected from Well 1348 six times, and the attached data show that results varied between 115 and 155 pCi/l, all well below the groundwater release criterion of 180 pCi/l total uranium.

Well 1349 was installed downgradient of a former lagoon and emergency waste pond. Samples were collected from Well 1349 four times, and the attached data show that results varied from less than 30 to slightly over 90 pCi/l total uranium.

Because the potential historical sources were removed over a decade prior to this groundwater assessment effort, groundwater in this area is being naturally remediated via natural attenuation. Uranium concentrations in Wells 1348 and 1349 should be declining, and the samples for which data was presented (2003 – 2004) were already below the release criterion for groundwater. Consequently, Cimarron does not believe continued monitoring is justified at these locations.

U-Pond #1 Area

NRC requested that the following locations be retained for "continued monitoring": Wells 1354 and 1355. These two wells were not installed for assessment of Uranium Pond #1. Like the wells discussed above, these were installed downgradient of potential historical sources of licensed material to groundwater during the 2003 site-wide groundwater assessment effort.

Well 1354 was installed during the assessment of impacted groundwater associated with Burial Ground #3. Samples were collected from Well 1354 four times, and the attached data show that results were consistently within the normal range of background for groundwater.

Like Wells 1348 and 1353 (discussed above), Well 1355 was installed downgradient from a former pipeline leak. When removing the pipelines extending from the processing area to the uranium ponds, soil was excavated at a location shown in Appendix 2 of the final status survey report for Subarea N immediately east (upgradient) of Well 1355. Samples were collected from Well 1355 four times, and the attached data show that results were consistently within the normal range of background for groundwater.

Cimarron does not believe continued monitoring is justified for either of these locations.

Other Areas

NRC requested that the following locations be retained for “continued monitoring”: Wells 1339, 1344, T-69 and T-80. Well 1339 is located upgradient of the disposal trenches in which Option 2 soil is buried. Samples were collected from Well 1339 four times, and the attached data show that results were consistently within the normal range of background for groundwater. Consequently, Cimarron does not believe continued monitoring is justified at this location.

Well 1344 is downgradient of the BA#1 plume that will be remediated. Samples were collected from Well 1344 eight times, and the attached data show that results were consistently within the normal range of background for groundwater. Cimarron agrees that it would be advisable to retain this monitoring location. However, Cimarron does not plan to include Well 1344 in the list of environmental sampling locations in Section 15 of the RPP. The work plan for groundwater remediation identifies those wells that will be monitored in association with the BA#1 plume.

Wells T-69 and T-80 were installed during delineation of the Western Alluvial Area plume. Well T-80 was plugged and abandoned during that assessment based on on-site analysis of grab samples from the well immediately following its installation. Well T-80 is no longer available for monitoring. Samples were collected from Well T-69 three times, and the attached data show that results hover around 50 pCi/l total uranium. Although this is well below the groundwater release criterion, Cimarron agrees that it would be advisable to retain this monitoring location, since it is near the Western Alluvial Area plume. However, Cimarron does not plan to include T-69 in the list of environmental sampling locations in Section 15 of the RPP. The work plan for groundwater remediation identifies those wells that will be monitored in association with the Western Alluvial Area plume.

Surface Water Locations

NRC requested that the following locations be retained for “continued monitoring”: locations 1201, 1202, 1204, 1205, and 1209. Locations 1201 and 1202 represent upstream and downstream sample locations in the Cimarron River. Cimarron has already demonstrated to NRC that if the entire BA#1 plume were discharged into the Cimarron River over a single 24-hour period, the impact to the river would be approximately 1 pCi/l, which is within the range of variability for water in the river. Location 1204 is in a lake west of Highway 74, in Subarea J, which has been released for unrestricted use. Locations 1205 and 1209 are in the east and west lakes on the property east of Highway 74. Both ponds are uphill, upgradient, and upstream of areas of groundwater impact. Samples were collected from all these locations numerous times, and the attached data show no impact to surface water from licensed material.

Because there are no wells or facilities at any of the surface water locations, there is nothing to abandon. These locations were included in the environmental monitoring program presented in Section 15 of the RPP until 2006. Cimarron removed these locations from the program with NRC approval. Although these surface water features will remain and can be sampled in the future, Cimarron does not plan to include them in the list of environmental sampling locations in Section 15 of the RPP.

Summary

Cimarron requests NRC approval to abandon the following wells: Wells 1339, 1348, 1349, 1353, 1354, and 1355. Wells 1344 and T-69 and all surface water sampling locations will be retained, but Cimarron does not plan to add these locations to its environmental monitoring program as specified in Section 15 of the RPP. Well T-80 was plugged and abandoned in 2003.

Other Issues

In the August 31 submittal, Cimarron requested that NRC concur that groundwater in the Well 1319 Area now complies with license release criteria, and approve the abandonment of all wells in the Well 1319 Area. NRC approved the abandonment of all wells in the Well 1319 Area, but did not provide written concurrence that groundwater in this area complies with decommissioning criteria. Cimarron is reluctant to abandon these wells without documentation that NRC has concluded that groundwater in this area has been remediated and therefore requires no further monitoring.

In the August 31 submittal, Cimarron also requested that NRC concur that groundwater complies with license release criteria throughout the site, and approve the abandonment of all wells that were installed for groundwater assessment for Tc-99. NRC approved the abandonment of the wells installed for Tc-99 assessment, but did not provide written concurrence that complies with license criteria for Tc-99. Cimarron is reluctant to abandon these wells without documentation that NRC has concluded that groundwater complies with release criteria for Tc-99 and therefore requires no further monitoring.

Cimarron respectfully requests that NRC provide written concurrence that groundwater in the Well 1319 Area and Tc-99 site-wide comply with license release criteria. Cimarron will not abandon these wells until NRC provides this concurrence. In addition, Cimarron will not abandon these wells until DEQ approves their abandonment, since non-radiological constituents, which are under the jurisdiction of the DEQ, may be of concern at some of these locations.

If you have any questions regarding this submittal, please call me at 405-775-5194 (OKC) or 405-642-5152 (mobile).

Sincerely,



Jeff Lux
Senior Project Manager

Cc: Jack Whitten, NRC Region IV
David Cates, DEQ
Mike Broderick, DEQ

**Radiological Environmental Data
Cimarron Site
Location 1201**

1201		Gross Alpha pCi/l	Gross Beta pCi/l	Tc-99 pCi/L	U-234 pCi/l	U-235 pCi/l	U-238 pCi/l	U-Total pCi/l
6/13/1995	T	3.2	12.1		0.6		0.3	0.9
6/12/1997	T	14.50 U			5.50	0.10 U	2.50	8.10
5/26/1998	T				4.20	0.60	2.70	7.50
6/28/1999	T	13.1	75.5		2.1		1.2	3.3
7/5/2000	T	3.63 U	10.90		2.82	0.14	1.95	4.91
6/25/2001	D	-2.43 U	7.87		2.46	0.12	1.91	4.49
6/27/2002	N	12.20 U	2.71 U		1.94	0.23	1.33	3.50
6/23/2003	D	-1.23 U	1.69 U		1.52	0.13	0.88	2.53
8/26/2004	D	11.90 U	-0.13 U		2.11	0.17	1.56	3.84
5/24/2005	D	5.09 U	28.60		3.22 J	0.51 UJ	2.26 J	5.99
5/24/2006	D		20.00 U		2.07	0.18	1.60	3.85

**Radiological Environmental Data
Cimarron Site
Location 1202**

1202		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
6/13/1995	T	3.9	94.8		1.3	0.3	1.4	3
12/11/1995	T	2.10	16.20		2.30	0.20	1.90	4.40
6/12/1997	T	15.40 U	15.70 U		4.10	0.10	3.10	7.30
5/26/1998	T	U	U		3.7	0.6	2.4	6.7
6/23/1999	T	9.55	5.78 U	U	2.07	0.15 J	1.48	3.70
6/29/1999	T	9.5	30.6		1.8	0.2	1.3	3.3
7/5/2000	T	4.23 U	23.00		2.65	0.05 U	1.58	4.28
6/25/2001	D	1.38 U	10.10		2.53	0.10	2.04	4.67
6/27/2002	N	3.07 U	18.20 U		1.72	0.54	1.15	3.41
6/23/2003	D	2.09 U	5.31 U		2.55	0.11	1.71	4.37
8/26/2004	D	-1.62 U	10.00 U		2.00	0.36	1.48	3.84
5/24/2005	D	1.69 U	31.60	81.30 U	2.82	0.25 J	1.87	4.94
5/24/2006	D		22.60		1.67	0.07	1.26	3.00

**Radiological Environmental Data
Cimarron Site
Location 1204**

1204		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
6/13/1995	T	1.1	11.9		1.3	U	0.5	1.8
11/7/1996	T	2.3	13					
6/12/1997	T	5.5 U	14.9		1.6	U	0.5	2.1
6/12/1997	T	11.8	12.7		4.3	U	1.6	5.9
6/12/1997	T	12.5	13.9		3.5	0.1 U	0.6	4.2
5/26/1998	T	1.7	10.4		1.8	0.7	1.5	4
6/28/1999	T	2.6	10		1.2	U	0.3	1.5
6/29/2000	T	0.452 U	3.94		0.0682 U	-0.0065 U	0.108	0.16968
6/25/2001	D	5.58	4.85 U		1.92	0.13	0.525	2.575
6/27/2002	N	4.01 U	16.9		0.926	0.112	0.245	1.283
6/23/2003	D	4.45	7.31		2.91	0.456	1	4.366
8/26/2004	D	10 U	-0.0586 U		0.433	0.063	0.154	0.65
5/24/2005	D	7.61	13.5		6.46 J	0.845 J	1.83 J	9.135
5/24/2006	D	6.33 J	11.9		4.14	0.255	1.35	5.745

**Radiological Environmental Data
Cimarron Site
Location 1205**

1205		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
6/13/1995	T	1.3	3.3		0.3	0.1	0.2	0.6
6/9/1997	T	8.90	8.90		0.50	U	0.20	0.70
5/26/1998	T	U	6.30		0.60	0.10	0.10	0.80
6/24/1999	T	0.6	4.7		0.3	U	0.4	0.7
6/29/2000	T	1.00 U	4.32		0.04 U	0.02 U	0.06 U	0.11
6/25/2001	N	1.74 U	6.87 U		0.35	-0.01 U	0.26	0.60
6/27/2002	N	-0.17 U	3.60 U		0.47	0.08	0.23	0.78
6/23/2003	D	-1.20 U	0.12 U		0.36	0.03 U	0.27	0.66
8/26/2004	D	10.00 U	10.00 U		0.40	0.10 U	0.18	0.68
5/24/2005	D	0.56 U	9.44		0.63	0.07 J	0.37	1.07
5/24/2006	D		7.08 U		0.39	0.03 U	0.26	0.68

**Radiological Environmental Data
Cimarron Site
Location 1209**

1209		Gross Alpha pCi/L		Gross Beta pCi/L		Tc-99 pCi/L		U-234 pCi/L		U-235 pCi/L		U-238 pCi/L		U-Total pCi/L		
6/12/1995	T		U		6.7				0.3		0.1			U		0.4
6/9/1997	T		2.3		7.7				1.7		0.1		1.1			2.9
5/26/1998	T		U		3.4				0.4			U	0.2			0.6
6/23/1999	T		0.6		4				0.6		0.1		0.8			1.5
6/29/2000	T		2.18		6.44				1.54		-0.01	U	0.509			2.0362
6/25/2001	N		0.89	U	5.52	U			0.163		0.01	U	0.118			0.29
6/27/2002	N		-0.16	U	6.61	U			0.18		0.04	U	0.20			0.43
6/23/2003	D		-0.93	U	3.03				0.14		0.08		0.15			0.38
8/26/2004	D		10.00	U	10.00	U			0.127		0.10	U	0.10			0.33
5/24/2005	D		0.53	U	11.1				0.49	J	0.106	J				
5/24/2006	D				7.97	U			0.319		0.03	U	0.172			0.52

**Radiological Environmental Data
Cimarron Site
Well 1339**

1339		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
2/20/1997	T	40.3	9.8		11	0.2	3.7	14.9
6/18/1998	T		82.4		13.5	0.3	4.2	18
6/29/1999	T	9.1			14.6	0.3	3.5	18.4
6/26/2002	N	20.50	20.00		16.3	2.32	4.09	22.71

**Radiological Environmental Data
Cimarron Site
Well 1344**

1344		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
10/1/1997	T	24.4	17.5	9	5	0.1	3.5	8.6
12/16/1997	T	4.1	10		1.7	U	1	2.7
3/6/1998	T	0.3	6.9		2.5	0.1 U	1.9	4.5
6/17/1998	T	7.7	16.5		4.4	0.4	3.1	7.9
6/23/1999	T	14.9	24.5		4.7	0.3	3.8	8.8
7/5/2000	T	7.37	7.65		3.06	0.0811 U	2.12	5.2611
6/27/2001	N	5.64 U	8.85		2.40	0.11	1.92	4.43
8/29/2002	D				0.79	0.08 U	0.87	1.74

**Radiological Environmental Data
Cimarron Site
Well 1348**

1348		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
4/24/2003	N	122	29.6		87.7	3.98	27.5	119.18
6/25/2003	D	129.00	31.50		90.20	8.98	28.80	127.98
9/22/2003	D	130.00	31.40		80.30	11.90	26.00	118.20
3/2/2004	D	135	18.6		106	6.05	34.7	146.75
5/25/2004	D	139.00	31.80		111.00	9.01	33.30	153.31
9/1/2004	D	160.00	28.80		96.10	8.32	32.30	136.72

**Radiological Environmental Data
Cimarron Site
Well 1349**

1349		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
4/24/2003	N	72.1	11.2		76.4	3.17	11.9	91.47
6/25/2003	D	63.10	11.10		58.80	3.69	9.55	72.04
9/22/2003	D	31.30	16.30		21.90	2.61	4.81	29.32
9/1/2004	D	44.5	10	U	34	2.67	6.79	43.46

**Radiological Environmental Data
Cimarron Site
Well 1353**

1353		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
4/24/2003	N	7.47	2.46 U		4.66	0.21	2.18	7.05
6/20/2003	D	4.56	3.29 U		2.20	0.08 U	0.94	3.22
9/22/2003	D	6.75	3.50 U		2.31	0.26	1.24	3.81
3/2/2004	D	9.35	U		1.72	0.08	1.00	2.80
9/1/2004	D	6.49	10.00 UJ		2.13	0.466	1.12	3.716

**Radiological Environmental Data
Cimarron Site
Well 1354**

1354		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
7/16/2003	D	8.6	19.3		2.53	0.147	1.81	4.487
9/22/2003	D	10.5	32.4		1.52	0.145	1.25	2.915
3/2/2004	D	23.6	48.7		1.48	0.116	1.23	2.826
9/1/2004	D	16.2	76.8		1.44	0.194	1.45	3.084

**Radiological Environmental Data
Cimarron Site
Well 1355**

1355		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
7/16/2003	D	7.48	5.74		2.12	0.12	1.41	3.65
9/22/2003	D	4.00 U	6.96		1.67	0.15	1.04	2.86
3/2/2004	D	4.18		U	1.40	0.07	1.05	2.52
9/1/2004	D	10 U	8.87		1.35	0.204	0.822	2.376

**Radiological Environmental Data
Cimarron Site
Well T-69**

T-69		Gross Alpha pCi/L	Gross Beta pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	U-Total pCi/L
4/19/2004	D	42.2	94.9		32.6	4.03	13.1	49.73
9/9/2004	D	52.00	94.40		32.60	4.31	12.70	49.61
9/21/2005	D	59.10 J	104.00		37.00	2.87 J	13.70	53.57