CROW BUTTE RESOURCES, INC.
86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
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April 28,1997

Mr. Joseph Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
NMSS (T-7-J9)
Office of Nuclear Material Safety and Safeguard
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20850

RE: Docket No. 40-8943
License No. SUA-1534

Dear Mr. Holonich:

As reported in December 1996, a plugged and abandoned well, I752-14, was found to be leaking. This event and the fact that some mining solutions were leaked into the shallow aquifer at a depth of about 100 feet were reported to the Nebraska Department of Environmental Quality (NDEQ) and to the Nuclear Regulatory Commission (NRC). In January 1997, letters were sent to each agency detailing the remediation plan for this area. At this time, Crow Butte Resources (CBR) presents data showing that the clean up effort of this area is complete.

Remediation of this leak began on December 30, 1996 with the installation of a Grundfos jet pump to provide continuous pumping from the leak zone. A packer was set at about 110 feet to isolate the hole in the casing. The recovered water was pumped to a nearby injection mining well, I752a-14. To monitor the progress, the recovered solution was analyzed once per week for sodium, chloride, sulfate, alkalinity, conductivity, and uranium (U3O8).

Two wells were installed to delineate the spill. Well 752b is located approximately 63 feet northeast of I752-14 and well 752c was drilled 45 feet to the northwest. The samples collected from these delineation wells do not show any signs of contamination. These wells also provided baseline water quality data for the spill zone. CBR believes that the water being recovered from well I752-14 is baseline quality. To support this, water analyses from the well

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samplings from January 1997 througn April 24,1997 are included in Table 1 (attached). Also, a graph comparing the conductivity readings of the delineation wells and I752-14 versus time is attached.

As stated in line (1) of CBR's remediation plan for this leak, water will be pumped "until water analyses indicate the excursion has been recovered". At this time, analyses indicate the excursion has been recovered, therefore, CBR will stop pumping from well I752-14. Also, sampling of these wells will be discontinued. Upon approval from the NDEQ, CBR will plug I752-14 and the two remediation wells, 752b and 752c.

If you need any additional information regarding this matter, please contact me.

Sincerely,

Leland Huffman

Leland Huffman
Wellfield Engineer

Attachments

cc: Ross Scarano - Region IV
Stephen Collings
Rhonda Grantham

Table 1

Water Analyses January 2 - April 24, 1997
Pumping from Well I752-14
and Mine Unit 5 Shallow Monitor Wells in the Vicinity

Crow Butte Resources, Inc.
Crow Butte Project

Sample Location	Sample Date	Time If Multiple Daily Samples	Sampling Method	U3O8 (ppm)	Na (ppm)	Cl (ppm)	SO4 (ppm)	Conductivity (umhos / cm)	Alkalinity (ppm)
sm5-2	Baseline Average	—	—	0.014	97.33	7.43	32.43	477.67	198.33
sm5-2	07-Jan-97	—	pump jack	—	101	3.4	32	450	190
sm5-2	04-Feb-97	—	pump jack	—	98	3.9	33	460	180
sm5-2	04-Mar-97	—	pump jack	—	98	4.6	33	460	200
sm5-15	Baseline Average	—	—	0.009	129	31.83	53.33	633	213.33
sm5-15	14-Jan-97	—	pump jack	—	127	17	53	570	200
sm5-15	11-Feb-97	—	pump jack	—	126	19	53	580	195
sm5-15	11-Mar-97	—	pump jack	—	130	18	51	580	205
sm5-16	Baseline Average	—	—	0.011	102.33	9.83	39.33	496.67	196
sm5-16	14-Jan-97	—	pump jack	—	102	6.2	39	470	180
sm5-16	11-Feb-97	—	pump jack	—	100	6.2	38	460	180
sm5-16	11-Mar-97	—	pump jack	—	103	5.4	37	460	185
I752	02-Jan-97	—	jet pump	0.7	209	127	194	1330	290
I752	03-Jan-97	—	jet pump	—	—	—	—	1240	—
I752	06-Jan-97	—	jet pump	—	—	—	—	1125	—
I752	07-Jan-97	—	jet pump	—	—	—	—	1025	—
I752	08-Jan-97	—	jet pump	—	—	—	—	992	—
I752	09-Jan-97	—	jet pump	—	—	—	—	945	—
I752	13-Jan-97	—	jet pump	—	—	—	—	826	—
I752	14-Jan-97	—	jet pump	—	—	—	—	853	—
I752	15-Jan-97	—	jet pump	—	—	—	—	821	—
I752	16-Jan-97	—	jet pump	0.3	97	47	75	795	250
I752	17-Jan-97	—	jet pump	—	—	—	—	732	—
I752	20-Jan-97	—	jet pump	—	—	—	—	770	—
I752	21-Jan-97	—	jet pump	—	—	—	—	752	—
I752	22-Jan-97	—	jet pump	—	—	—	—	745	—
I752	23-Jan-97	—	jet pump	0.2	83	39	71	722	240
I752	24-Jan-97	—	jet pump	—	—	—	—	700	—
I752	27-Jan-97	—	jet pump	—	—	—	—	659	—
I752	28-Jan-97	—	jet pump	—	—	—	—	653	—
I752	29-Jan-97	—	jet pump	—	—	—	—	656	—
I752	30-Jan-97	—	jet pump	0.2	72	29	51	665	240
I752	31-Jan-97	—	jet pump	—	—	—	—	652	—
I752	03-Feb-97	—	jet pump	—	—	—	—	640	—
I752	04-Feb-97	—	jet pump	—	—	—	—	624	—
I752	05-Feb-97	—	jet pump	—	—	—	—	620	—
I752	06-Feb-97	—	jet pump	0.1	89	91	13	622	150
I752	07-Feb-97	—	jet pump	—	—	—	—	605	—
I752	10-Feb-97	—	jet pump	—	—	—	—	599	—
I752	11-Feb-97	—	jet pump	—	—	—	—	599	—
I752	12-Feb-97	—	jet pump	—	—	—	—	592	—
I752	13-Feb-97	—	jet pump	0.1	53	19	32	587	223
I752	14-Feb-97	—	jet pump	—	—	—	—	586	—

Table 1

Water Analyses January 2 - April 24, 1997
Pumping from Well I752-14
and Mine Unit 5 Shallow Monitor Wells in the Vicinity

Crow Butte Resources, Inc.
Crow Butte Project

Sample Location	Sample Date	Time If Multiple Daily Samples	Sampling Method	U3O8 (ppm)	Na (ppm)	Cl (ppm)	SO4 (ppm)	Conductivity (umhos / cm)	Alkalinity (ppm)
I752	18-Feb-97	—	jet pump	—	—	—	—	576	—
I752	19-Feb-97	—	jet pump	—	—	—	—	569	—
I752	20-Feb-97	—	jet pump	0.2	49	15	31	564	225
I752	21-Feb-97	—	jet pump	—	—	—	—	566	—
I752	24-Feb-97	—	jet pump	—	—	—	—	561	—
I752	25-Feb-97	—	jet pump	—	—	—	—	556	—
I752	26-Feb-97	—	jet pump	—	—	—	—	548	—
I752	27-Feb-97	—	jet pump	0.2	44	15	28	551	225
I752	28-Feb-97	—	jet pump	—	—	—	—	541	—
I752	03-Mar-97	—	jet pump	—	—	—	—	541	—
I752	04-Mar-97	—	jet pump	—	—	—	—	538	—
I752	05-Mar-97	—	jet pump	—	—	—	—	541	—
I752	06-Mar-97	—	jet pump	0.1	41	13	25	539	230
I752	07-Mar-97	—	jet pump	—	—	—	—	534	—
I752	10-Mar-97	—	jet pump	—	—	—	—	533	—
I752	11-Mar-97	—	jet pump	—	—	—	—	531	—
I752	12-Mar-97	—	jet pump	—	—	—	—	—	—
I752	13-Mar-97	—	jet pump	<.1	39	10	22	525	230
I752	14-Mar-97	—	jet pump	—	—	—	—	528	—
I752	17-Mar-97	—	jet pump	—	—	—	—	524	—
I752	18-Mar-97	—	jet pump	—	—	—	—	521	—
I752	19-Mar-97	—	jet pump	—	—	—	—	—	—
I752	20-Mar-97	—	jet pump	<.1	38	10	21	521	225
I752	21-Mar-97	—	jet pump	—	—	—	—	517	—
I752	24-Mar-97	—	jet pump	—	—	—	—	513	—
I752	25-Mar-97	—	jet pump	—	—	—	—	513	—
I752	26-Mar-97	—	jet pump	—	—	—	—	513	—
I752	27-Mar-97	—	jet pump	0.1	35	9	19	510	220
I752	31-Mar-97	—	jet pump	—	—	—	—	503	—
I752	01-Apr-97	—	jet pump	—	—	—	—	501	—
I752	02-Apr-97	—	jet pump	—	—	—	—	507	—
I752	03-Apr-97	—	jet pump	0.1	32	9	17	508	213
I752	07-Apr-97	—	jet pump	—	—	—	—	498	—
I752	08-Apr-97	—	jet pump	—	—	—	—	497	—
I752	09-Apr-97	—	jet pump	—	—	—	—	496	—
I752	10-Apr-97	—	jet pump	0.1	35	9	17	505	188
I752	11-Apr-97	—	jet pump	—	—	—	—	501	—
I752	14-Apr-97	—	jet pump	—	—	—	—	500	—
I752	15-Apr-97	—	jet pump	—	—	—	—	497	—
I752	16-Apr-97	—	jet pump	—	—	—	—	497	—
I752	17-Apr-97	—	jet pump	<.1	31	7.2	15	500	220
I752	18-Apr-97	—	jet pump	—	—	—	—	499	—
I752	21-Apr-97	—	jet pump	—	—	—	—	495	—
I752	22-Apr-97	—	jet pump	—	—	—	—	495	—
I752	23-Apr-97	—	jet pump	—	—	—	—	495	—
I752	24-Apr-97	—	jet pump	0.1	28	7	16	495	225

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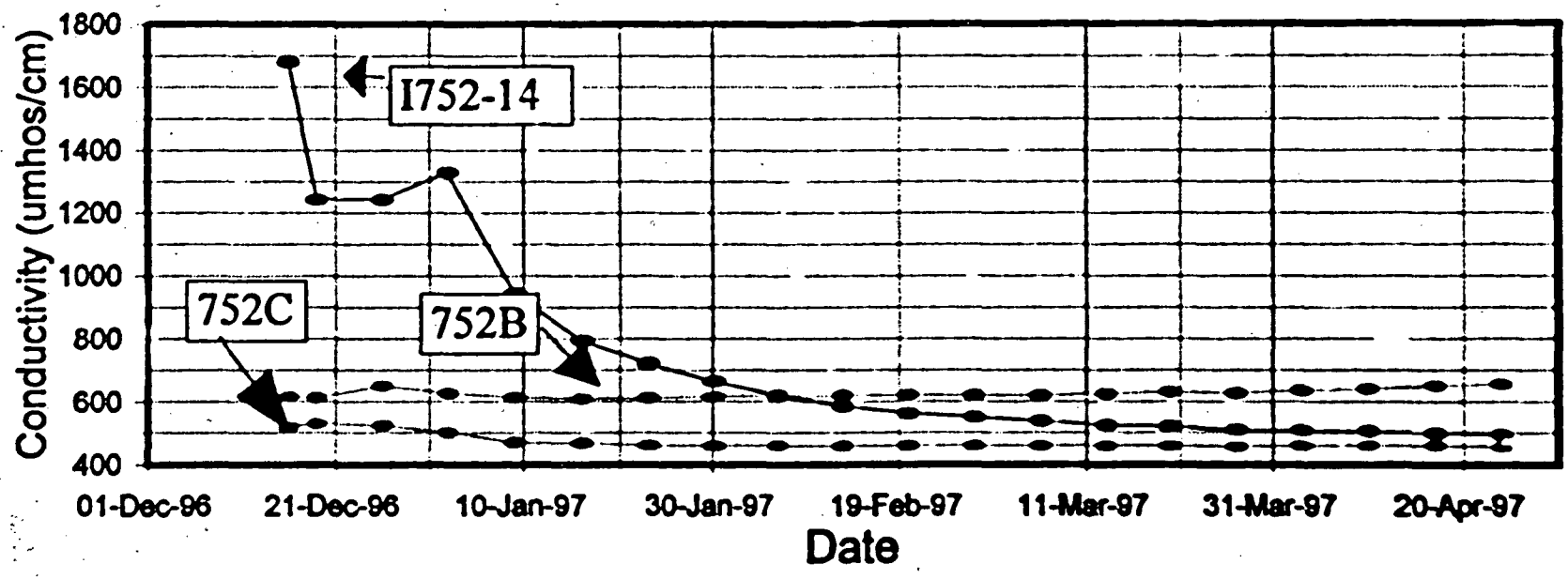
Crow Butte Project

Sample Location	Sample Date	Time If Multiple Daily Samples	Sampling Method	U3O8 (ppm)	Na (ppm)	Cl (ppm)	SO4 (ppm)	Conductivity (umhos / cm)	Alkalinity (ppm)
752b	02-Jan-97	—	bailer	—	—	—	—	629	—
752b	09-Jan-97	—	bailer	—	—	—	—	614	—
752b	16-Jan-97	—	bailer	—	—	—	—	611	—
752b	23-Jan-97	—	bailer	0.1	90	92	15	613	150
752b	30-Jan-97	—	bailer	<.1	—	91	15	619	—
752b	06-Feb-97	—	bailer	—	—	—	—	621	—
752b	13-Feb-97	—	bailer	—	—	—	—	622	—
752b	20-Feb-97	—	bailer	0.1	90	94	13	623	145
752b	27-Feb-97	—	bailer	—	—	—	—	622	—
752b	06-Mar-97	—	bailer	—	—	—	—	622	—
752b	13-Mar-97	—	bailer	—	—	—	—	626	—
752b	20-Mar-97	—	bailer	<.1	92	96	12	631	145
752b	27-Mar-97	—	bailer	—	—	—	—	629	—
752b	03-Apr-97	—	bailer	—	—	—	—	638	—
752b	10-Apr-97	—	bailer	—	—	—	—	642	—
752b	17-Apr-97	—	bailer	<.1	97	107	12	651	140
752b	24-Apr-97	—	bailer	—	—	—	—	657	—
752c	02-Jan-97	—	bailer	—	—	—	—	503	—
752c	09-Jan-97	—	bailer	—	—	—	—	470	—
752c	16-Jan-97	—	bailer	—	—	—	—	469	—
752c	23-Jan-97	—	bailer	<.1	74	54	10	461	112.5
752c	30-Jan-97	—	bailer	<.1	—	52	10	460	—
752c	06-Feb-97	—	bailer	—	—	—	—	462	—
752c	13-Feb-97	—	bailer	—	—	—	—	459	—
752c	20-Feb-97	—	bailer	<.1	74	54	8	460	130
752c	27-Feb-97	—	bailer	—	—	—	—	460	—
752c	06-Mar-97	—	bailer	—	—	—	—	460	—
752c	13-Mar-97	—	bailer	—	—	—	—	460	—
752c	20-Mar-97	—	bailer	<.1	73	52	8	460	125
752c	27-Mar-97	—	bailer	—	—	—	—	457	—
752c	03-Apr-97	—	bailer	—	—	—	—	461	—
752c	10-Apr-97	—	bailer	—	—	—	—	461	—
752c	17-Apr-97	—	bailer	<.1	72	52	7	461	130
752c	24-Apr-97	—	bailer	—	—	—	—	458	—

Well I752-14

Conductivity vs Time