CROW BUTTE RESOURCES, INC.

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November 7, 2000

U.S. Nuclear Regulatory Commission
Mr. Philip Ting, Chief
Fuel Cycle Licensing Branch, FCSS
c/o Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Re: Source Materials License SUA-1534
Docket No. 40-8943
Monitor Well SM6-12 Upper Control Limit Exceedance – 60-Day Report

Dear Mr. Ting:

On September 8, 2000 during routine biweekly water sampling of Crow Butte Resources, Inc. (CBR) shallow monitor well SM6-12, the single parameter upper control limit (UCL) was exceeded for sodium, sulfate, chloride and conductivity. The concentration for alkalinity was at the multiple UCL. As required by License Condition 11.2 of SUA-1534, a second sample was collected within 48 hours and analyzed for the five excursion indicator parameters. The results of the second sample also exceeded the single UCL for sodium, sulfate, chloride, and conductivity and the multiple UCL was exceeded for alkalinity. Based upon these results, monitor well SM6-12 was placed on excursion status. This report is the 60-Day Excursion Report required by License Condition 12.2.

Shallow monitor well SM6-12 is located in Mine Unit 6 at the northern end of the Crow Butte mine. Shallow monitor wells are completed in the upper aquifer (Brule formation) above the mining zone (Chadron formation). As noted in the initial excursion report, CBR believes that a stuck pressure relief valve on a nearby injection well was the source of the excursion. The pressure relief valve for I-1274 had been stuck open by a piece of foreign material in the piping system. As a result, the pressure relief valve was releasing approximately 1 gallon per minute (gpm) into the wellhead cover. The saturation of the soil indicated that the injection solution had apparently penetrated the subsurface near the well casing. CBR estimated a maximum of 33,120 gallons of injection solution could have been released.

CBR reviewed wellfield records to determine the location of any abandoned exploration holes to determine if they could provide a potential conduit to the upper aquifer. The injection solution released on the surface at I-1274 did not reach any of the nearest abandoned exploration holes. CBR also performed mechanical integrity tests (MITs) on all nearby injection wells and SM6-12 to ensure

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that the excursion was not caused by the failure of a well casing. The MIT results were submitted with the initial excursion report and indicated that the excursion was not the result of a leak in a nearby well casing.

Upon discovery of the leaking pressure relief valve on September 8, CBR started the well pump in SM6-12 to recover mining solutions. The pump was operated at a flow rate of approximately 12 gpm. The pumped solutions were directed to production well P-1530 for return to the process plant. CBR monitored recovery flowrate, total gallons recovered, and well conductivity on a daily basis. Recovery operations were conducted until October 20, when results from the weekly sample taken on October 19 indicated that all parameters were at or below the applicable UCL. From September 9 to October 20, a total of 689,565 gallons were recovered from SM6-12. A graph is attached that relates the daily well conductivity and total gallons recovered.

In accordance with License Condition 11.2, CBR increased the sampling frequency for SM6-12 from biweekly to weekly. Attached are the results of samples taken between September 21 and November 2, 2000. The final three samples taken on October 19 and 26 and November 2 were at or below the applicable UCL for each parameter. Based upon the criteria in License Condition 11.2, the excursion in SM6-12 is considered concluded and the well will be returned to normal status.

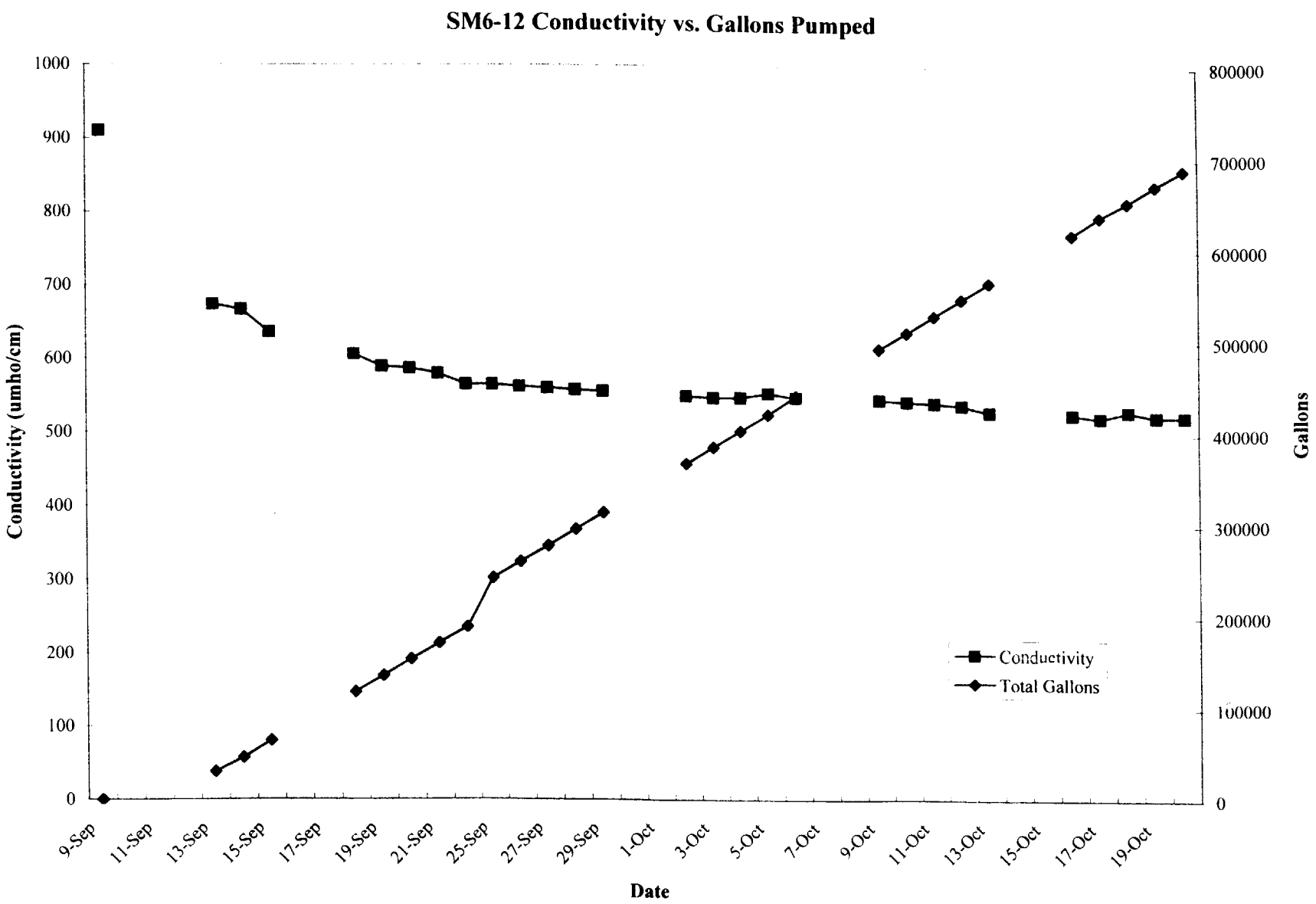
If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215.

Sincerely,
CROW BUTTE RESOURCES, INC.

Michael Griffin
Manager of Environmental and Regulatory Affairs

Enclosures: As Stated

cc: Mr. Steve Collings - CBR, Denver, Colorado
Mr. Mike Layton – USNRC, Uranium Recovery Branch


SM6-12 Conductivity vs. Gallons Pumped
Conductivity (umho/cm)
Gallons
Date
Conductivity
Total Gallons
1000
900
800
700
600
500
400
300
200
100
0
800000
700000
600000
500000
400000
300000
200000
100000
0
9-Sep
11-Sep
13-Sep
15-Sep
17-Sep
19-Sep
21-Sep
25-Sep
27-Sep
29-Sep
1-Oct
3-Oct
5-Oct
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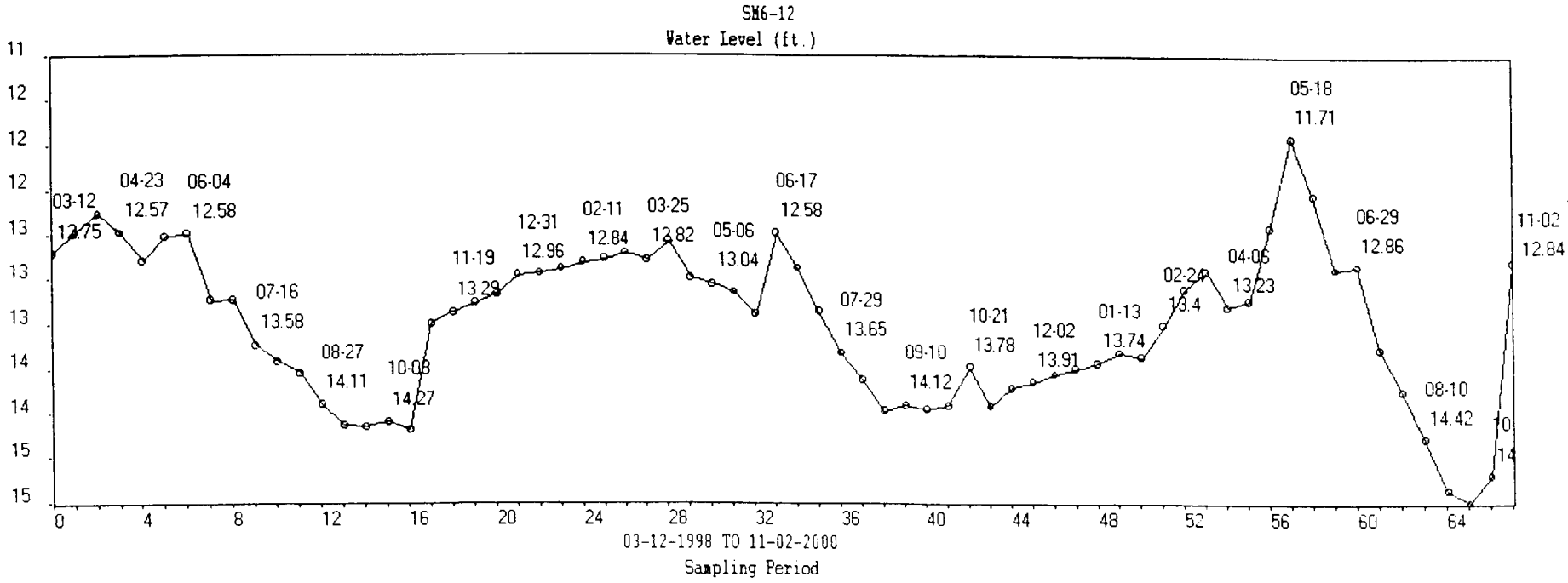
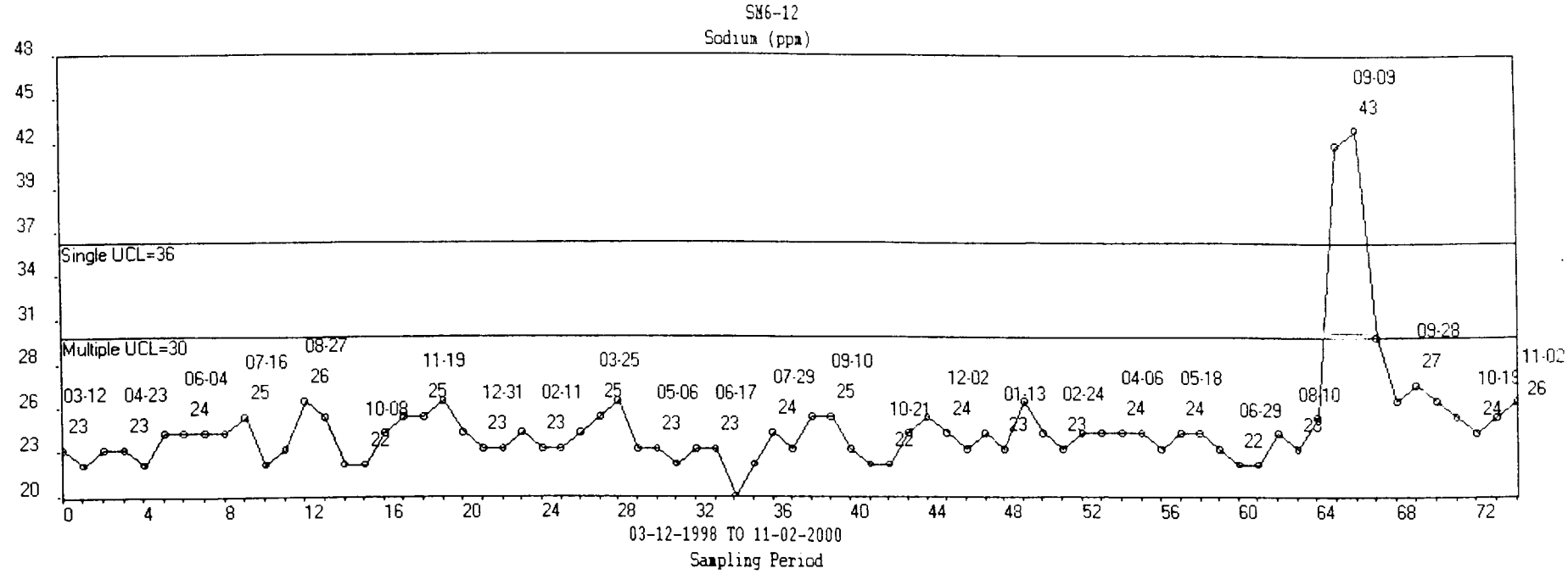
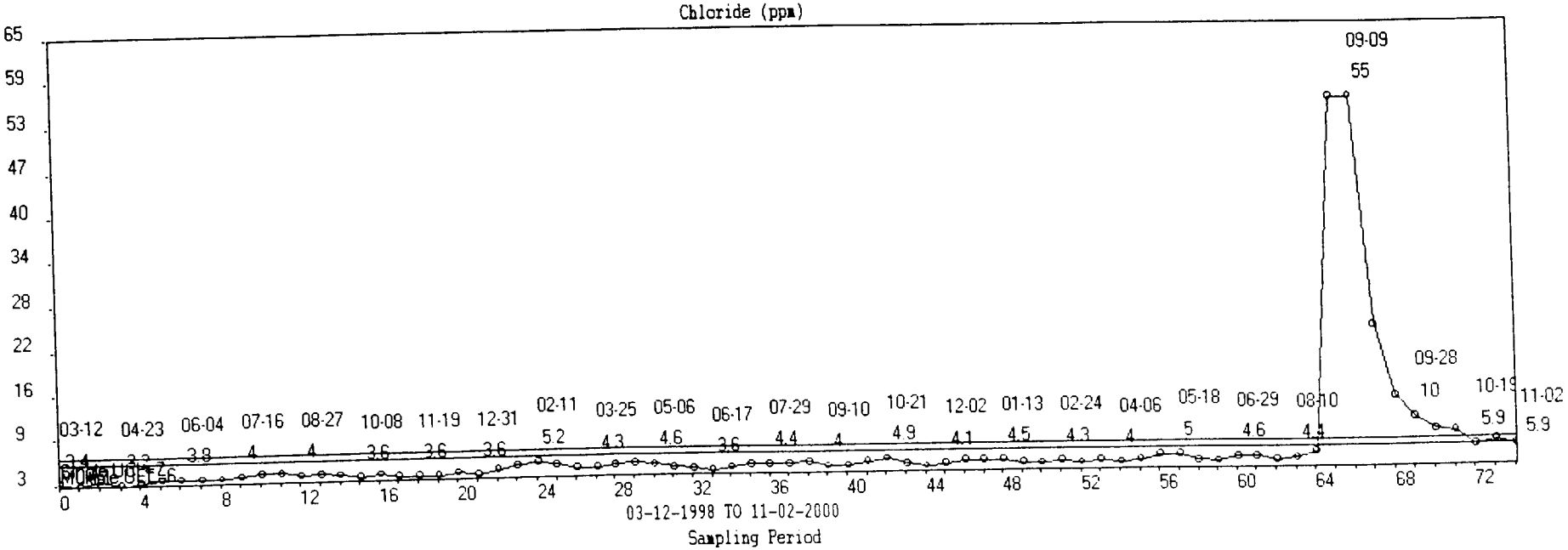
13-Oct
15-Oct
17-Oct
19-Oct


SM6-12
Water Level (ft.)
03-12 12.75
04-23 12.57
06-04 12.58
07-16 13.58
08-27 14.11
10-08 14.27
11-19 13.29
12-31 12.96
02-11 12.84
03-25 12.82
05-06 13.04
06-17 12.58
07-29 13.65
09-10 14.12
10-21 13.78
12-02 13.91
01-13 13.74
02-24 13.4
04-06 13.23
05-18 11.71
06-29 12.86
08-10 14.42
11-02 12.84
03-12-1998 TO 11-02-2000
Sampling Period


SM6-12
Sodium (ppm)
Single UCL=36
Multiple UCL=30
03-12 23
04-23 23
06-04 24
07-16 25
08-27 26
10-08 22
11-19 25
12-31 23
02-11 23
03-25 25
05-06 23
06-17 23
07-29 24
09-10 25
10-21 22
12-02 24
01-13 23
02-24 23
04-06 24
05-18 24
06-29 22
08-10 28
09-09 43
09-28 27
10-19 24
11-02 26
03-12-1998 TO 11-02-2000
Sampling Period

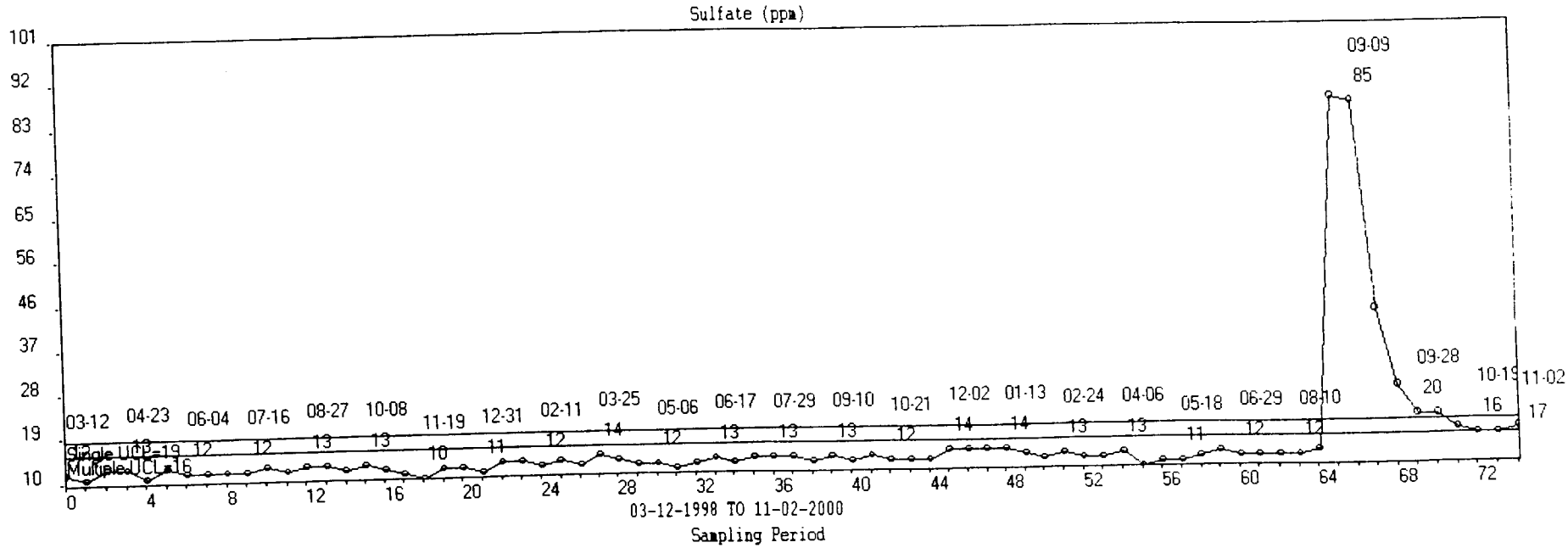
SM6-12

Chloride (ppm)



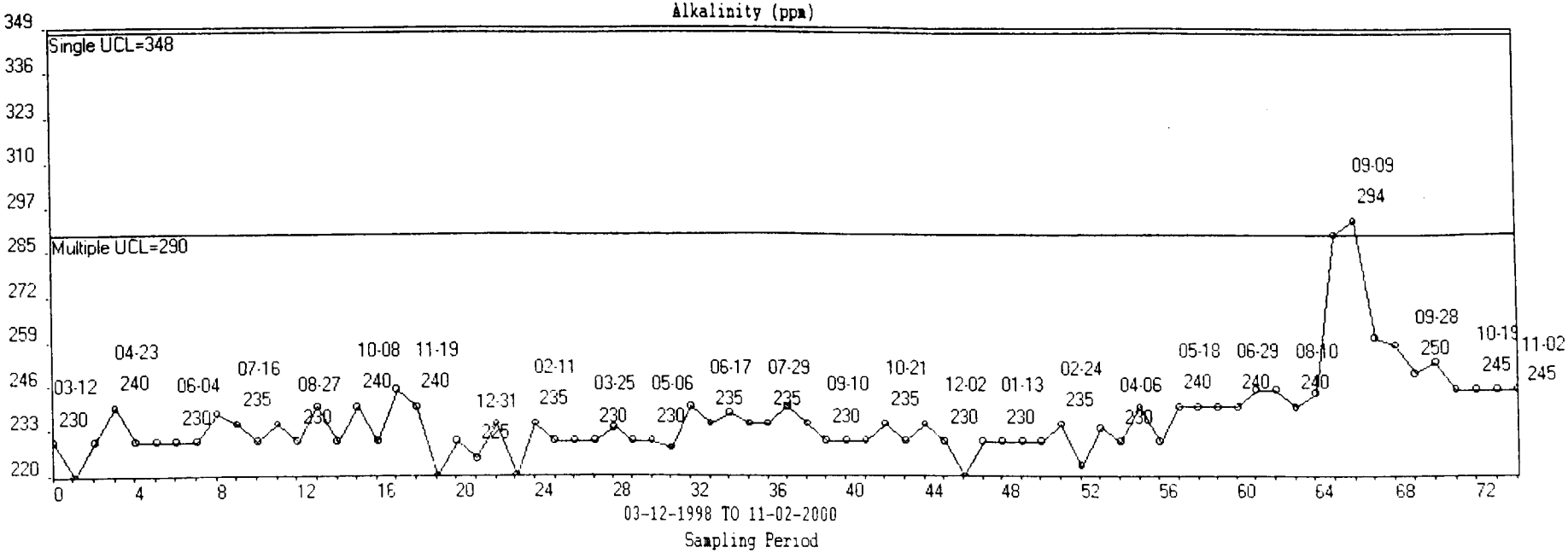
SM6-12

Sulfate (ppm)



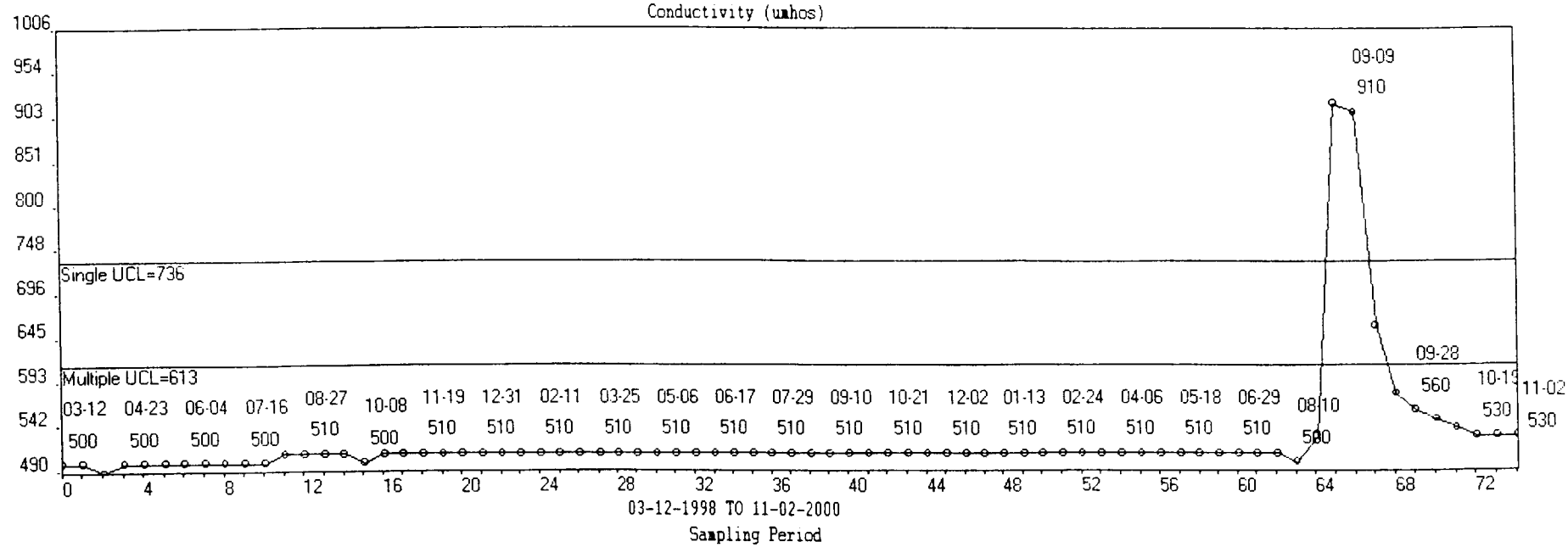
SM6-12

Alkalinity (ppm)



SM6-12

Conductivity (umhos)



Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 09-21-2000
Analysis Date: 09-22-2000

Analyst: SM/LG

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	119	50	13	560	205
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4	115	43	8.1	540	210
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5	113	38	7.4	530	215
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	107	19	3.7	480	230
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	113	15	5.9*	500	235
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	65	24*	6.6	500	210
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	119	45	10	560	218
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	26*	26*	13*	580*	258
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	37	7.3*	3.7*	480	240
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11	53	19*	2.2*	340	145
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12	86	41	3.0*	440	165*
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13	72	23	3.0*	370	155
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5	403	374	181	1930	290
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	417	369	181	1960	300
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2 Sample Date: 09-28-2000 Analyst: LG/TF
Analysis Date: 09-29-2000

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3					
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4					
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5					
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6					
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7					
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8					
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10					
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	27	20*	10*	560	250
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17					
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11					
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12					
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13					
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5					
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6					
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

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Sample Date: 10-05-2000
Analysis Date: 10-06-2000

Analyst: LG/TF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	119	52	12*	550	200
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4	115	45	8.5	530	215
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5	112	38	6.9*	520	210
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	106	18*	3.3*	480	228
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	112	15	5.3*	510	240
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	64	25	5.9*	490	205
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	117	46	9.8	560	220
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	26	20	8.2*	550	253
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	37	6.9*	3.3*	480	235
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11	52	19	1.6*	340	140
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12	85	43	3.3*	440	170
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13	70	23	3.3*	370	160
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5	407	371	181	1930	290
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	413	375	182	1960	300
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2 | Sample Date: 10-12-2000 | Analysis Date: 10-13-2000 | Analyst: SM/TF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3					
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4					
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5					
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6					
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7					
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8					
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10					
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	25	17*	7.9	540	245
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17					
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11					
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12					
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13					
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5					
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6					
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 10-19-2000
Analysis Date: 10-20-2000

Analyst: SN-LGTF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	119	50	11.5	560	200
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4	114	42*	7.9*	530	208
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5	114	39	7.2	520	210
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	106	17*	3.6*	480	225
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	112	15	5.3	510	245
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	64	25	6.2	490	210
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	117	46	8.5*	550	220
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	24	16*	5.9*	530	245
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	37	7.2	3.3	480	238
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11	53	18*	1.6	340	150*
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12	87	41	3.3	440	170
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13	72	23	2.6*	370	160
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5	405	361	181	1930	295
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	412	363	181	1950	295
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

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Sample Date: 11-02-2000
Analysis Date: 11-03-2000

Analyst:

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	120	51	12.4*	560	205
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4	116	43	7.9	540	215
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5	115	38	7.1	530	215
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	106	18*	3.3*	490	230
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	114	15	5.3	500	240
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	65	25	5.9	490	215
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	118	47	8.5	550	215
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	26	17*	5.9*	530	245
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	38	7.4	3.3	480	240
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11	55	19*	2.0*	340	150
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12	88	42	3.9*	440	170
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13	71	24	2.6	370	155
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5	405	368	179	1940	285
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	407	370	181	1960	295
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.