

CROW BUTTE RESOURCES, INC.

86 Crow Butte Road
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Crawford, Nebraska 69339-0169



(308) 665-2215
(308) 665-2341 – FAX

April 23, 2001

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

Subject: Source Materials License SUA-1534
Docket Number 40-8943
SM6-13 Monitor Well Excursion Final Report

Dear Mr. Gillen:

On March 1, 2001 during routine biweekly water sampling of Crow Butte Resources, Inc. (CBR) shallow monitor well SM6-13, the single parameter upper control limit (UCL) was exceeded for sulfate. As required by 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 sulfate. In addition, the multiple UCL was exceeded for chloride. Based upon these results, monitor well SM6-13 was placed on excursion status. CBR submitted an initial report of the excursion on March 5, 2001.

By letter dated August 23, 2000, CBR proposed alternate methods for calculation of UCLs for shallow monitor wells with good water quality. The purpose of the proposed calculational changes was to prevent reporting false excursions due to natural variation of background water quality. The U.S. Nuclear Regulatory Commission (NRC) approved these changes in Amendment 8 to SUA-1534 on February 1, 2001. The Nebraska Department of Environmental Quality (NDEQ) approved a similar change in CBR's Class III Underground Injection Control (UIC) Permit NE0122611.

On April 18, 2001, the CBR Safety and Environmental Review Panel (SERP) met to review proposed changes to the UCLs in Mine Units 5, 6, and 7 which met the criterion from License Condition 10.4(C). The CBR SERP approved these changes, including new sulfate and chloride UCLs for SM6-13. The new UCL for sulfate was set at 29 mg/l with a new single UCL calculated at 35 mg/l. The new UCL for chloride was set at 21 mg/l with a new single UCL of 25 mg/l.

Attached are the results of weekly monitoring that were performed on SM6-13 from March 1 through April 12, 2001. Also attached is a graph of monitoring results from the March 19, 1998 through

NMSSo1 Public

CROW BUTTE RESOURCES, INC.



Mr. Dan Gillen
April 23, 2001
Page 2 of 2

April 12, 2001. Based upon the new sulfate and chloride UCLs, SM6-13 is no longer on excursion status and has been 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.

A handwritten signature in black ink, appearing to read 'M. Griffin'. The signature is fluid and cursive, with the first and last letters of each word being capitalized and prominent.

Michael Griffin
Manager of Health, Safety and Environmental Affairs

Enclosures: As Stated

cc: Mr. Steve Collings - CBR, Denver

U.S. Nuclear Regulatory Commission
Mr. Mike Layton - ADDRESSEE ONLY
Fuel Cycle Licensing Branch
Mail Stop T-8A33
Washington, DC 20555

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 03-01-2001
Analysis Date: 03-02-2001

Analyst: LG/TF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-13	24	23*	6.9*	560*	245
Multiple	42	18	8	640	300
Single	50	21	10	768	360
SM6-21	20	14	5.7	480	220
Multiple	24	20	8	594	260
Single	29	24	10	713	312
SM6-22	19*	13	4.2	460	215
Multiple	23	18	5	562	258
Single	27	21	6	674	310
SM6-23	23	14	4.6	500	225
Multiple	30	17	5	576	262
Single	36	21	6	691	314
SM6-24	24	15*	6.1	480	210
Multiple	28	18	7	560	258
Single	33	21	9	672	310
SM6-25	22	13	5.3	480	208
Multiple	30	18	7	580	270
Single	36	22	8	696	324
SM6-26	25	12*	5.7*	460	210
Multiple	32	18	7	605	257
Single	39	22	9	726	308
SM6-27	25	12	5.3	470	220
Multiple	30	18	6	564	264
Single	36	21	7	677	317
SM6-28	27	21	4.6	520	230
Multiple	38	33	7	648	293
Single	46	39	9	778	351
SM7-24	114	67	10*	570	190
Multiple	137	74	30	674	216
Single	164	89	37	809	259
SM7-25	72	23	2.3	360	160
Multiple	100	26	44	538	168
Single	120	32	52	645	202
CM6-23	400	328	183	1920	320
Multiple	475	416	240	2436	382
Single	570	500	288	2923	458
CM6-24	401	320	181	1910	320
Multiple	474	410	239	2328	384
Single	569	492	287	2794	461
CM6-25	398	336	179	1930	310
Multiple	486	457	264	2460	361
Single	583	549	317	2952	433

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 03-02-2001
Analysis Date: 03-02-2001

Analyst: SM/LG

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-13	24	26*	9.1*	550	245
Multiple	42	18	8	640	300
Single	50	21	10	768	360
SM6-21					
Multiple	24	20	8	594	260
Single	29	24	10	713	312
SM6-22					
Multiple	23	18	5	562	258
Single	27	21	6	674	310
SM6-23					
Multiple	30	17	5	576	262
Single	36	21	6	691	314
SM6-24					
Multiple	28	18	7	560	258
Single	33	21	9	672	310
SM6-25					
Multiple	30	18	7	580	270
Single	36	22	8	696	324
SM6-26					
Multiple	32	18	7	605	257
Single	39	22	9	726	308
SM6-27					
Multiple	30	18	6	564	264
Single	36	21	7	677	317
SM6-28					
Multiple	38	33	7	648	293
Single	46	39	9	778	351
SM7-24					
Multiple	137	74	30	674	216
Single	164	89	37	809	259
SM7-25					
Multiple	100	26	44	538	168
Single	120	32	52	645	202
CM6-23					
Multiple	475	416	240	2436	382
Single	570	500	288	2923	458
CM6-24					
Multiple	474	410	239	2328	384
Single	569	492	287	2794	461
CM6-25					
Multiple	486	457	264	2460	361
Single	583	549	317	2952	433

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Crow Butte Project
Monitor Well Laboratory Report

Page Number 2/2

Sample Date: 03-08-2001
Analysis Date: 03-09-2001

Analyst:

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
CM6-8	408	363	179	1980	295
	Multiple 509	460	254	2436	371
	Single 611	552	305	2923	445
CM6-9	435	371	191	2100	310
	Multiple 485	450	238	2388	356
	Single 582	540	285	2866	428
CM6-10	407	358	183	1950	300
	Multiple 509	458	272	2460	358
	Single 611	550	327	2952	429
CM6-11	408	350	179	1940	305
	Multiple 496	464	247	2316	364
	Single 595	557	297	2779	436
CM6-20	406	352	193	1980	308
	Multiple 479	442	272	2412	371
	Single 575	530	327	2894	445
CM6-21	391	349	175	1920	295
	Multiple 480	421	250	2352	356
	Single 576	505	300	2822	428
CM6-22	398	344	181	1940	295
	Multiple 481	461	266	2388	373
	Single 577	553	320	2866	448
PR-8	322	276	110	1560	290
	Multiple 504	440	235	2388	403
	Single 605	528	282	2866	484
PR-15	312	277	118	1590	305
	Multiple 492	428	223	2327	370
	Single 590	514	268	2792	444
IJ-13	407	356	145	1970	360
	Multiple 492	442	232	2417	346
	Single 590	530	278	2900	415
SM6-13	22*	22*	8.4*	560	245
	Multiple 42	18	8	640	300
	Single 50	21	10	768	360

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 03-15-2001
Analysis Date: 03-16-2001

Analyst: IG/TF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-13	24*	21	6.9*	550	240
Multiple	42	18	8	640	300
Single	50	21	10	768	360
SM6-21	21	16*	5.7	480	215
Multiple	24	20	8	594	260
Single	29	24	10	713	312
SM6-22	19	13	4.2	470	205
Multiple	23	18	5	562	258
Single	27	21	6	674	310
SM6-23	24	14	4.6	500	230
Multiple	30	17	5	576	262
Single	36	21	6	691	314
SM6-24	24	16*	6.1	480	215
Multiple	28	18	7	560	258
Single	33	21	9	672	310
SM6-25	23	14*	5.3	480	210
Multiple	30	18	7	580	270
Single	36	22	8	696	324
SM6-26	25	16*	5.7	460	208
Multiple	32	18	7	605	257
Single	39	22	9	726	308
SM6-27	25	12	5.1	470	220
Multiple	30	18	6	564	264
Single	36	21	7	677	317
SM6-28	27	22	4.6	520	230
Multiple	38	33	7	648	293
Single	46	39	9	778	351
SM7-24	114	68	9.9	570	190
Multiple	137	74	30	674	216
Single	164	89	37	809	259
SM7-25	72	25*	2.3	370	160
Multiple	100	26	44	538	168
Single	120	32	52	645	202
CM6-23	398	320	183	1910	320
Multiple	475	416	240	2436	382
Single	570	500	288	2923	458
CM6-24	396	319	180	1900	315
Multiple	474	410	239	2328	384
Single	569	492	287	2794	461
CM6-25	399	331	179	1920	305
Multiple	486	457	264	2460	361
Single	583	549	317	2952	433

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Crow Butte Project
Monitor Well Laboratory Report

Page Number 2/2

Sample Date: 03-22-2001

Analyst: IG/TF

Analysis Date: 03-23-2001

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
CM6-8	403	359	181	1960	295
Multiple	509	460	254	2436	371
Single	611	552	305	2923	445
CM6-9	430	374	191	2100	310
Multiple	485	450	238	2388	356
Single	582	540	285	2866	428
CM6-10	408	360	182	1950	300
Multiple	509	458	272	2460	358
Single	611	550	327	2952	429
CM6-11	406	354	179	1940	310
Multiple	496	464	247	2316	364
Single	595	557	297	2779	436
CM6-20	405	347	193	1970	310
Multiple	479	442	272	2412	371
Single	575	530	327	2894	445
CM6-21	396	344	175	1910	295
Multiple	480	421	250	2352	356
Single	576	505	300	2822	428
CM6-22	398	340	181	1930	300
Multiple	481	461	266	2388	373
Single	577	553	320	2866	448
PR-8	307	237*	103*	1360*	268*
Multiple	504	440	235	2388	403
Single	605	528	282	2866	484
PR-15	316	277	118	1590	310
Multiple	492	428	223	2327	370
Single	590	514	268	2792	444
IJ-13	406	358	143	1940	360
Multiple	492	442	232	2417	346
Single	590	530	278	2900	415
SM6-13	21*	21	8.2*	550	240
Multiple	42	18	8	640	300
Single	50	21	10	768	360

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Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 03-29-2001
Analysis Date: 03-30-2001

Analyst: LG/TF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-13	22	21	6.9*	550	250
Multiple	42	18	8	640	300
Single	50	21	10	768	360
SM6-21	22	15*	5.7	490	210
Multiple	24	20	8	594	260
Single	29	24	10	713	312
SM6-22	20	12*	4.2	470	215
Multiple	23	18	5	562	258
Single	27	21	6	674	310
SM6-23	26*	14	4.6	510	230
Multiple	30	17	5	576	262
Single	36	21	6	691	314
SM6-24	25	15*	6.1	480	215
Multiple	28	18	7	560	258
Single	33	21	9	672	310
SM6-25	24	12*	5.3	480	215
Multiple	30	18	7	580	270
Single	36	22	8	696	324
SM6-26	26	11*	5.7	460	215
Multiple	32	18	7	605	257
Single	39	22	9	726	308
SM6-27	27*	11*	5.0	470	210
Multiple	30	18	6	564	264
Single	36	21	7	677	317
SM6-28	29*	21	4.6	520	230
Multiple	38	33	7	648	293
Single	46	39	9	778	351
SM7-24	115	70	9.9	570	190
Multiple	137	74	30	674	216
Single	164	89	37	809	259
SM7-25	72	20*	2.3	370	160
Multiple	100	26	44	538	168
Single	120	32	52	645	202
CM6-23	404	326	183	1910	315
Multiple	475	416	240	2436	382
Single	570	500	288	2923	458
CM6-24	404	321	179	1900	320
Multiple	474	410	239	2328	384
Single	569	492	287	2794	461
CM6-25	408	342	179	1930	300
Multiple	486	457	264	2460	361
Single	583	549	317	2952	433

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 2/2

Sample Date: 04-05-2001
Analysis Date: 04-06-2001

Analyst: LG/TF

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
CM6-8	410	362	181	1970	300
Multiple	509	460	254	2436	371
Single	611	552	305	2923	445
CM6-9	442	381	194	2100	318
Multiple	485	450	238	2388	356
Single	582	540	285	2866	428
CM6-10	409	355	183	1960	310
Multiple	509	458	272	2460	358
Single	611	550	327	2952	429
CM6-11	414	354	179	1930	315
Multiple	496	464	247	2316	364
Single	595	557	297	2779	436
CM6-20	418	349	193	1970	308
Multiple	479	442	272	2412	371
Single	575	530	327	2894	445
CM6-21	401	359	175	1910	300
Multiple	480	421	250	2352	356
Single	576	505	300	2822	428
CM6-22	403	354	181	1930	300
Multiple	481	461	266	2388	373
Single	577	553	320	2866	448
PR-8	317	268*	105	1500*	280
Multiple	504	440	235	2388	403
Single	605	528	282	2866	484
PR-15	321	277	118	1570	305
Multiple	492	428	223	2327	370
Single	590	514	268	2792	444
IJ-13	428*	368	145	2010	370
Multiple	492	442	232	2417	346
Single	590	530	278	2900	415
SM6-13	21	21	7.6*	540	245
Multiple	42	18	8	640	300
Single	50	21	10	768	360

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Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

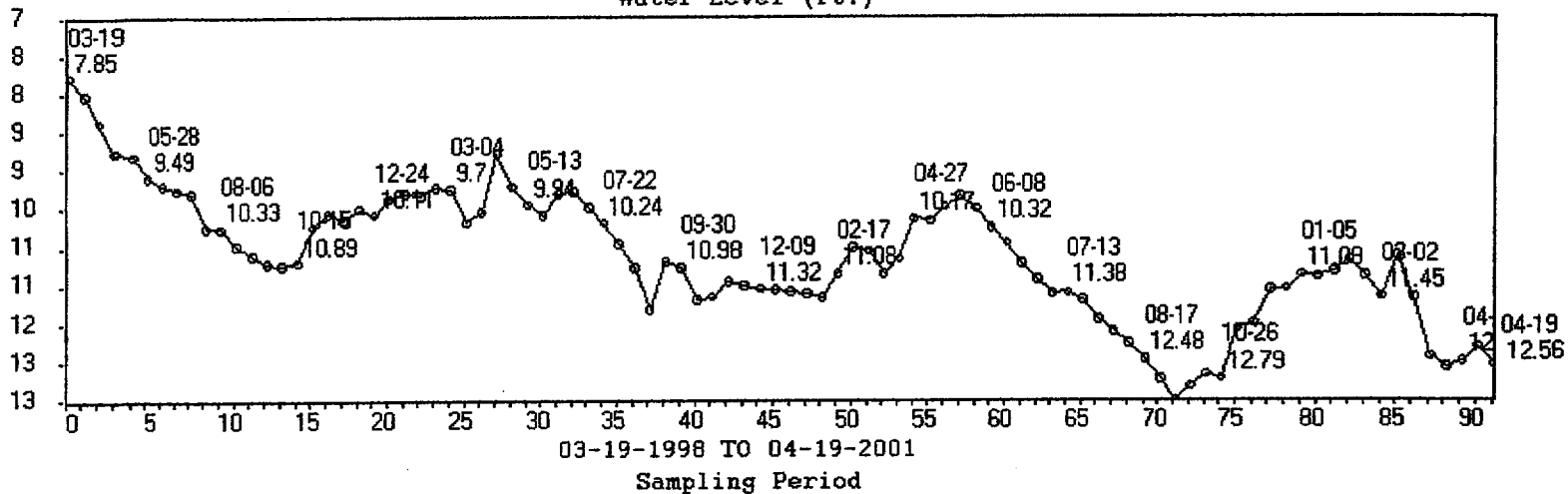
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Analysis Date: 04-13-2001

Analyst: IG/TF

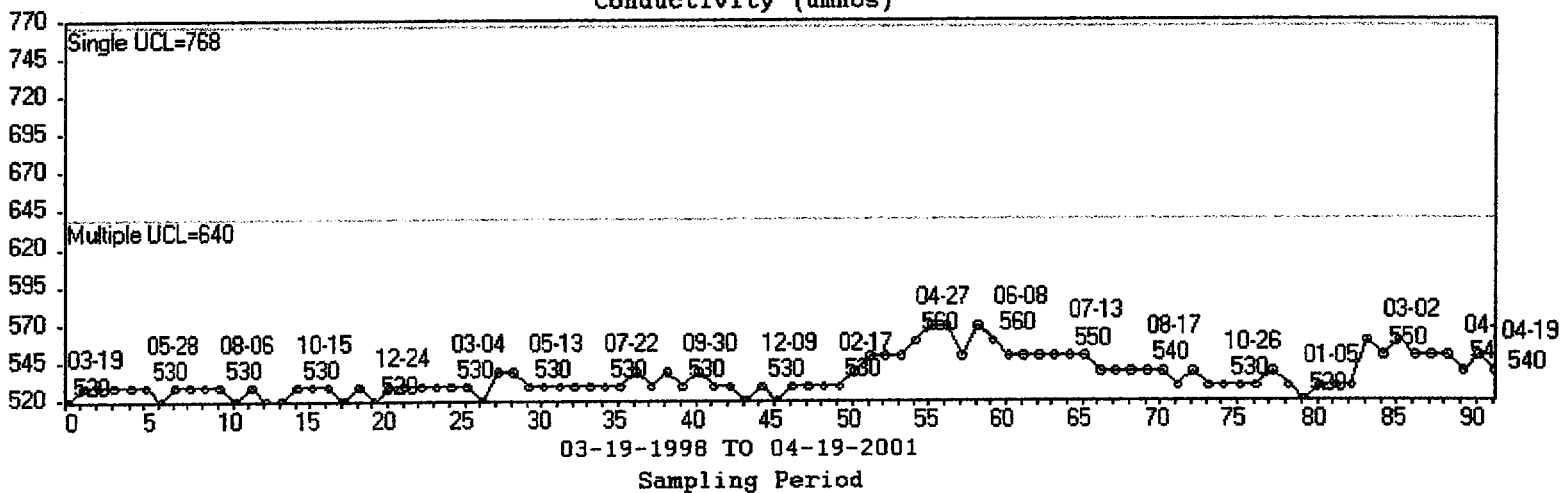
Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-13	21	22	6.9*	550	250
Multiple	42	18	8	640	300
Single	50	21	10	768	360
SM6-21	22	16*	5.7	490	210
Multiple	24	20	8	594	260
Single	29	24	10	713	312
SM6-22	20	13*	4.2	460	220
Multiple	23	18	5	562	258
Single	27	21	6	674	310
SM6-23	26	16*	4.8	520	235
Multiple	30	17	5	576	262
Single	36	21	6	691	314
SM6-24	25	16*	6.1	470	218
Multiple	28	18	7	560	258
Single	33	21	9	672	310
SM6-25	24	13*	5.3	480	215
Multiple	30	18	7	580	270
Single	36	22	8	696	324
SM6-26	25	11	5.7	460	210
Multiple	32	18	7	605	257
Single	39	22	9	726	308
SM6-27	26	12*	5.0	470	220
Multiple	30	18	6	564	264
Single	36	21	7	677	317
SM6-28	29	28*	4.6	540	235
Multiple	38	33	7	648	293
Single	46	39	9	778	351
SM7-24	114	71	9.9	570	185
Multiple	137	74	30	674	216
Single	164	89	37	809	259
SM7-25	73	20	2.3	360	160
Multiple	100	26	44	538	168
Single	120	32	52	645	202
CM6-23	411	326	183	1920	315
Multiple	475	416	240	2436	382
Single	570	500	288	2923	458
CM6-24	412	322	179	1910	310
Multiple	474	410	239	2328	384
Single	569	492	287	2794	461
CM6-25	410	331	179	1930	313
Multiple	486	457	264	2460	361
Single	583	549	317	2952	433

* - Denotes 5% change from previous sample.

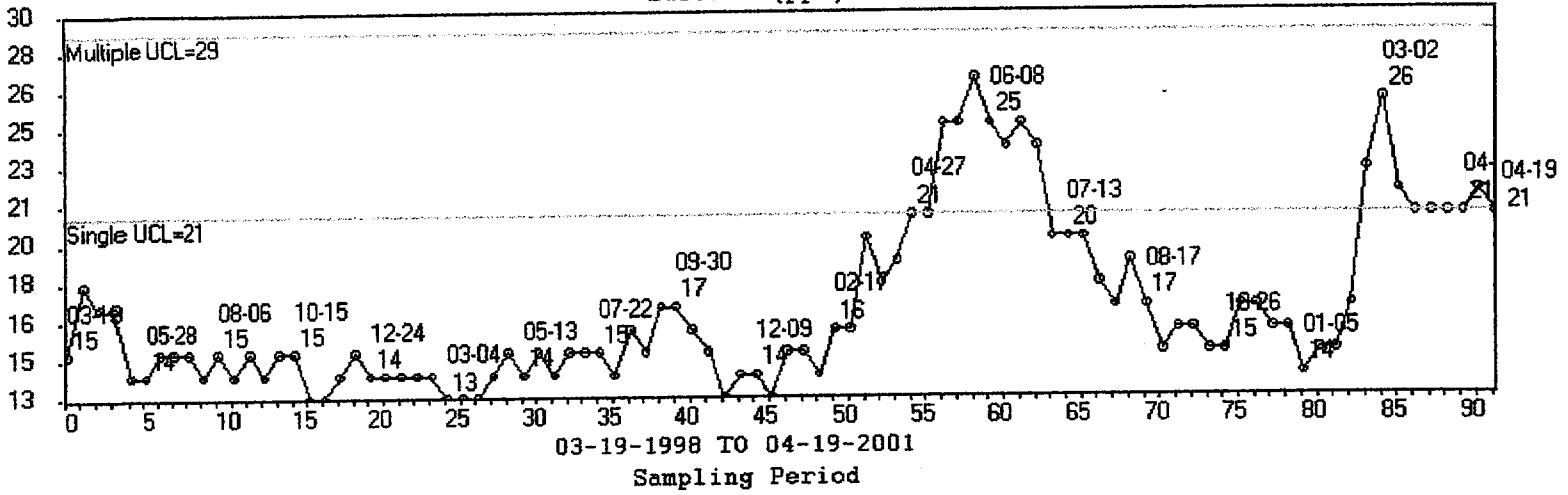
SM6-13
Water Level (ft.)



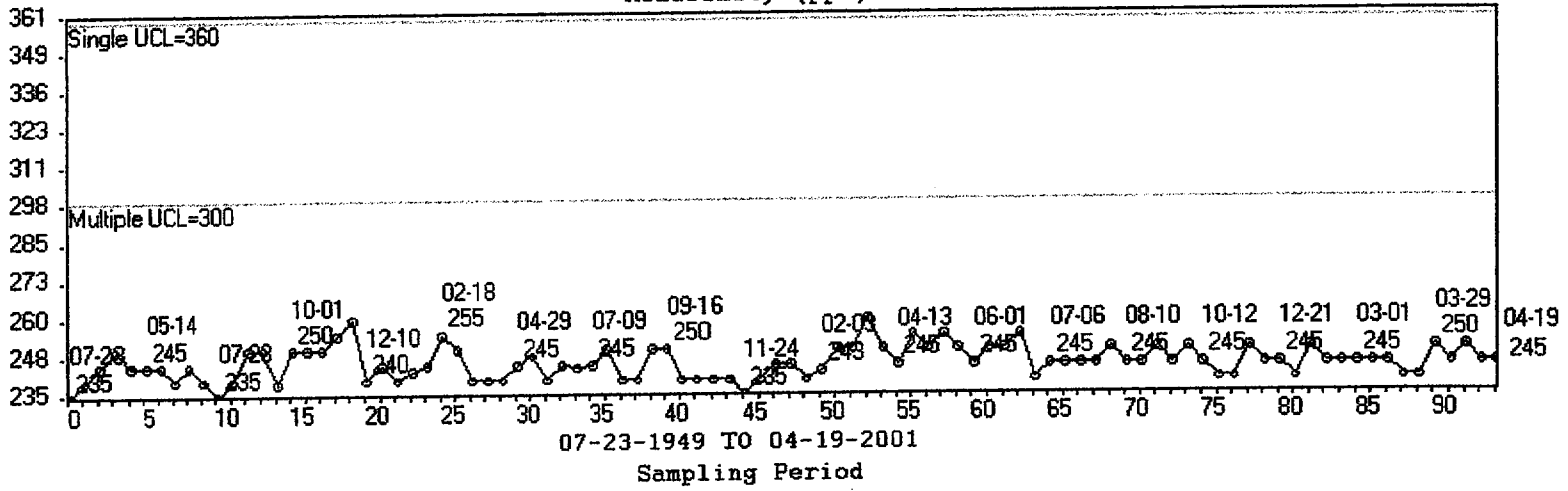
SM6-13
Conductivity (umhos)



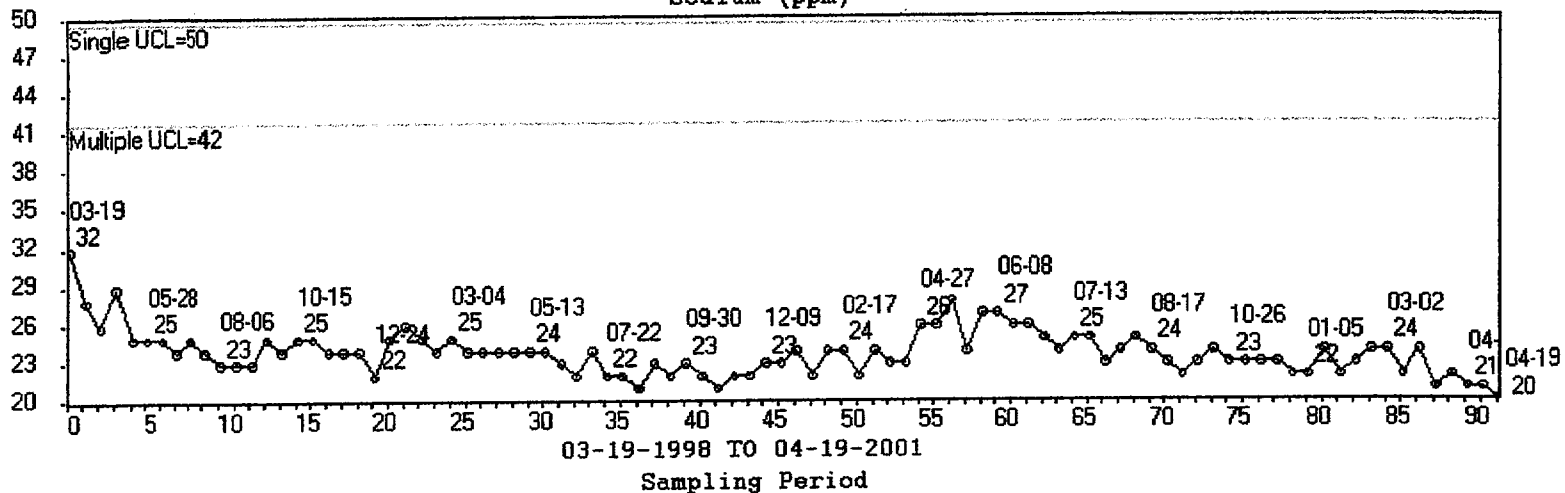
SM6-13
Sulfate (ppm)



SM6-13
Alkalinity (ppm)



SM6-13
Sodium (ppm)



SM6-13
Chloride (ppm)

