CROW BUTTE RESOURCES, INC.

86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
(308) 665-2341 – FAX

February 2, 2000

Mr. Dwight Chamberlain, Director
Division of Nuclear Material Safety
Region IV
United States Nuclear Regulatory Commission
611 Ryan Plaza Drive
Suite 400
Arlington, Texas 76011

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

Dear Mr. Chamberlain:

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. This report covers the third and fourth quarters of 1999.

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

Sincerely,
CROW BUTTE RESOURCES, INC.

Michael L. Griffin
Manager of Environmental and Regulatory Affairs

Enclosures – As Stated

c: Mr. John Surmeier – USNRC, Office of Nuclear Material Safety and Safeguards

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CROW BUTTE RESOURCES, INC.

CROW BUTTE URANIUM PROJECT

RADIOLOGICAL EFFLUENT AND ENVIRONMENTAL MONITORING REPORT

for

THIRD AND FOURTH QUARTERS, 1999

USNRC Source Materials License SUA 1534

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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 1 through 6 during the third and fourth quarters of 1999. Biweekly excursion monitoring of the shallow aquifer and perimeter monitor wells for Mine Unit 7 was begun during the period. Copies of the Nebraska Department of Environmental Quality (NDEQ) Mining Monitoring Reports (MMR's) are included in Appendix A. These reports provide the minimum, maximum and mean monitoring data for each monitor well during both calendar quarters. Complete monitoring results are readily available on site for inspection.

On July 1, 1999, perimeter monitor well CM6-6 in Mine Unit 6 was placed on excursion status. CBR implemented corrective activities including termination of injection in selected wells adjacent to the monitor well. These actions resulted in CM6-6 being returned to normal status on September 23, 1999. CBR provided reports of the excursion in accordance with License Condition 12.2.

On September 20, 1999, injection well I-567 in Mine Unit 4 failed the five-year mechanical integrity test (MIT). An investigation indicated that a casing failure had occurred at the 40-foot level in the well. CBR installed monitoring wells adjacent to I-567 that indicated the failure had not caused a vertical excursion that affected the local aquifer. The results of the I-567 testing and investigation were submitted to NRC on October 12, 1999.

Biweekly excursion monitoring was also begun during the period for post-restoration perimeter monitor wells for Mine Unit 1 following NDEQ approval of restoration. These wells and the UCL values assigned to them were approved by NDEQ. NRC was notified of initiation of this sampling on December 28, 1999.

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 B. The reported radiological data are within the expected ranges for each well or stream.

2 OPERATIONAL

2.1 Production Data Summary

Mining operations continued through the third and fourth quarters of 1999. The average operating production flow rate was 4348 gpm for the third quarter and 4408 gpm for the fourth quarter. The annual average production flow for 1999 was 4397 gpm. Injection and production totals from the totalizers and the calculated bleed totals for the reporting period are included in Appendix C.

The main injection trunkline is equipped with a continuous pressure sensor. The pressure sensor is set to alarm below the 100-psi injection pressure limit contained in the NDEQ UIC Permit. The average and maximum injection pressures for each wellhouse are included in Appendix D in the Wellfield Injection Pressure table.

The chemical analysis summaries for both the injection and production streams are included in Appendix E. The daily chemical analyses were used to calculate a monthly average during the reporting period. The average monthly chemical analysis was calculated for calcium, sodium, chloride, sulfate, and total carbonate.

2.2 Wastewater Summary

The total volume of wastewater discharged to the ponds was 601,250 gallons during the third quarter and 441,420 gallons during the fourth quarter. An additional 621,195 gallons of water generated from well workovers, well development, and well maintenance activities were discharged to the ponds during the second half of 1999. 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 continuous basis and 13,255,874 gallons of wastewater was injected into the well during the second half of 1999. Operational and monitoring data for the DDW is reported to the NDEQ in the Monthly Monitoring Report (MMR). Copies of the MMRs for the third and fourth quarters of 1999 are included in Appendix F.

2.3 Effluent Release

License Condition No. 12.1 of SUA-1534 requires that CBR report the results of 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 x 10^{-4} Curies/m^3 radon release from leaching operations and are the basis for the radon release calculations for the second half of 1999.

During the third quarter production occurred at an average flow rate of 4348 gpm (16,457 lpm). During the fourth quarter production occurred at an average flow rate of 4408 gpm (16,684 lpm). Production was maintained continuously for 92 days for the third quarter with the exception of 3 hours of downtime. This represents a third quarter operating factor of 99.86%. Production was maintained continuously for 92 days for the fourth quarter with the exception of 7.5 hours of downtime. This represents a fourth quarter operating factor of 99.66%. The production flow for the third quarter would result in a calculated radon release of 1,105 Curies. The production flow for the fourth quarter would result in a calculated radon release of 1,120 Curies. Calculations for radon release from production operations are shown in Appendix G.

Additional wells were brought on line during the second half of 1999. Calculations for the start-up of 7.48 acres of a new wellfield are shown in Appendix G. The calculated radon released from start-up of 7.48 acres is 10 Curies.

The total radon emission due to leaching operations from the Crow Butte plant for the second half of 1999 was 2,235 Curies. When combined with the calculated release of 2,264 Curies for the first half of 1999, the total calculated radon release from leaching operations for 1999 is 4,499 Curies. This calculated annual release rate is comparable with the releases estimated in CBR's License Renewal Application.

Radon is also released from restoration activities. For restoration water that is treated by ion exchange only, the radon concentration is 0.697 µCi/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 is assumed that 100% of the remaining radon is released. For water treated by reverse osmosis the radon concentration is 0.470 µCi/l after adjusting for wellfield loss and ion exchange loss.

During the second half of 1999, a total of 58,252,400 gallons (220,485,334 l) of restoration water was produced from Mine Units 2 and 3. Based upon an estimated radon concentration of 0.697 µCi/l, the total amount of radon in the restoration solution was calculated to be 154 Curies as shown in Appendix G. The estimated release of radon through wellfield loss at 25% of this total was 39 Curies. The plant loss for ion exchange treatment of the restoration water is estimated at 10% of the remaining radon, or 12 Curies.

Of the total amount of restoration water produced in the second half of 1999, 23,067,223 gallons (87,309,439 l) of the water was treated by reverse osmosis. 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 µCi/l. The total estimated radon release from reverse osmosis treatment was 41 Curies. An additional 3.46

acres of wellfields were placed in restoration during the second half of 1999. Calculations for the start-up of 3.46 acres of a wellfield placed in restoration are shown in Appendix G. The calculated radon released from start-up of 3.46 acres is 4 Curies.

Based upon the calculations shown in Appendix G, the total estimated semiannual radon emission for the second half of 1999 from restoration activities was 96 Curies. This resulted in a total estimated radon release from the Crow Butte project during the second half of 1999 of 2,331 Curies.

2.4 Inspections

Plant operators conduct a daily visual inspection of the evaporation pond areas. Both R&D ponds and commercial ponds Nos. 1, 3, and 4 are inspected. The condition of the fences, pond embankments, and liners are all noted on the inspection form. The depth of water is recorded for all of the cells. Pond freeboard requirements were not exceeded during the second half of 1999.

The Quarterly Evaporation Pond Inspections were conducted for the third and fourth quarters. Copies of these reports are included in Appendix H.

The leak detection standpipes on each cell are checked on a weekly basis. If six inches or more of fluid is present in the leak detection standpipes of the R&D ponds, License Condition No. 11.4 requires that it be sampled and analyzed for conductivity, chloride, alkalinity, sodium and sulfate. The standpipes at the R & D ponds have never exceeded six inches.

License Condition No. 11.4 also requires that if six inches or more of water is present in the leak detection standpipes of the commercial ponds that the water be sampled on a weekly basis and analyzed for specific conductance. In the event that the specific conductance shows an increase above the action level, the water in the standpipe would be analyzed for chloride, alkalinity, sodium, and sulfate in an attempt to verify a leak. At no time during the second half of 1999 did the conductivity of the standpipes of the commercial ponds exceed the action level. The daily pond inspection forms are on file at the plant.

Daily walk-through inspections of all work and storage areas are conducted and the inspection reports are maintained on file at the plant. As required in License Condition 11.5, a weekly inspection by the RSO and the Plant Manager or their designees is conducted to observe general radiation control practices and to review required changes in procedures and equipment. Weekly inspection reports are also on file at the plant.

2.5 Restoration

Restoration activities continued in Mine Unit #2 and Mine Unit #3 during the second half of 1999. Mine Unit 1 is shut-in following completion of the stabilization period and subsequent approval of restoration by the NDEQ. Monthly Restoration Reports, detailing restoration activities and associated water sampling results for the period, are included in Appendix I.

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 J. All of the data for both quarters are within the expected ranges.

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 J.

3.3 Stream Sediments

Sediment samples are collected from two locations on Squaw Creek and two locations on English Creek on an annual basis. The sample locations are immediately upstream and downstream of the point where the creeks cross the site boundary. The results of stream sediment samples taken during the second half of 1999 fall within the expected ranges and are listed in Appendix J.

Appendix A

Mining Monitor Reports

Third and Fourth Quarter, 1999

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
MINING MONITORING REPORT

Month: July - September Year: 1999

Total volume or water level for reporting period: 564,511,268 gallons injected *
* from individual well injection meters – excluding restoration injection

Quality of Injected Fluid (discuss any significant change in the constituents or concentrations of the injected fluid):

	Chloride (ppm)	Sulfate (ppm)	Sodium (ppm)	Alkalinity** (as ppm $CaCO_3$)	pH (SU)
Minimum	517	955	1203	1335	7.2
Maximum	591	1110	1368	1810	7.9

** Alkalinity = Total Carbonate/1.2

Volume of injected fluid:

Month	Average Daily Injection Commercial (gpm)	Average Daily Injection Restoration (gpm)
July	4193	98
August	4266	112
September	4338	212

1. Have any operational problems occurred over the reporting period? Yes
2. Has any well maintenance (repairs, workovers, etc.) been performed during the period? yes
3. Has any significant change occurred in any of the monitored parameters that might indicate a leak or other failure of any well? no

If the answer to any of the above is yes, describe below.

Question 1: In the preceding Mining Monitoring Reports (MMR), it was reported that a casing leak was found in well I-196-5 during the routine Mechanical Integrity Test (MIT) of that well. Remediation of the area was accepted by NDEQ on August 19.

A casing failure was found in well I-567-13 during the routine Mechanical Integrity Test (MIT) of that well on September 20. Three wells have been installed in the immediate area to determine

whether the casing failure at approx. 40 feet has impacted groundwater. Sample results to date indicate no impact. Investigation of the area continues.

On July 2 an excursion of well CM6-6 was confirmed. The excursion was reported to NDEQ IAW the UIC Permit. Corrective actions were taken which consisted principally of overproduction in the immediate area of Mine Unit 6. These corrective actions were successful in returning the well to normal status with the sample obtained on September 23. Weekly sampling of the well will continue until October 14 IAW the UIC Permit. The analytical results of the sampling performed during the third quarter are attached. A final report of corrective actions was submitted on September 30.

Question 2:

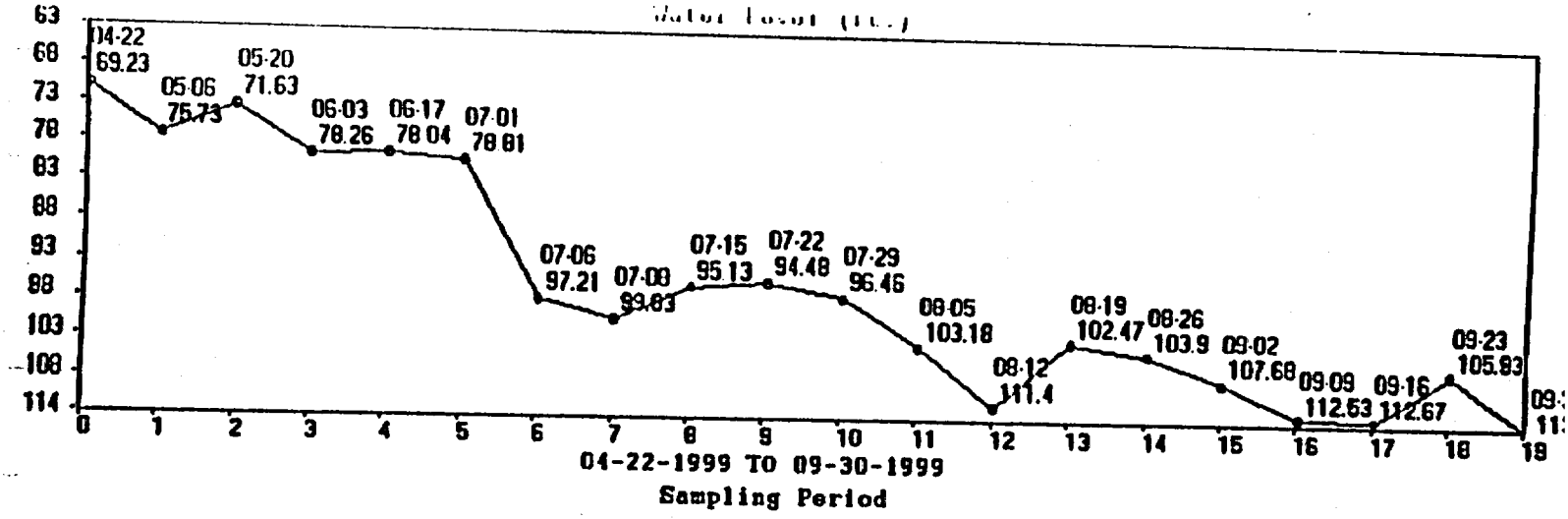
Rig Workovers: 1519, 1497, 415, 1454
Mining wells with casing repaired: None

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL THE ATTACHMENTS AND THAT, I BELIEVE THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. FURTHER, I CERTIFY AWARENESS THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF A FINE AND IMPRISONMENT.

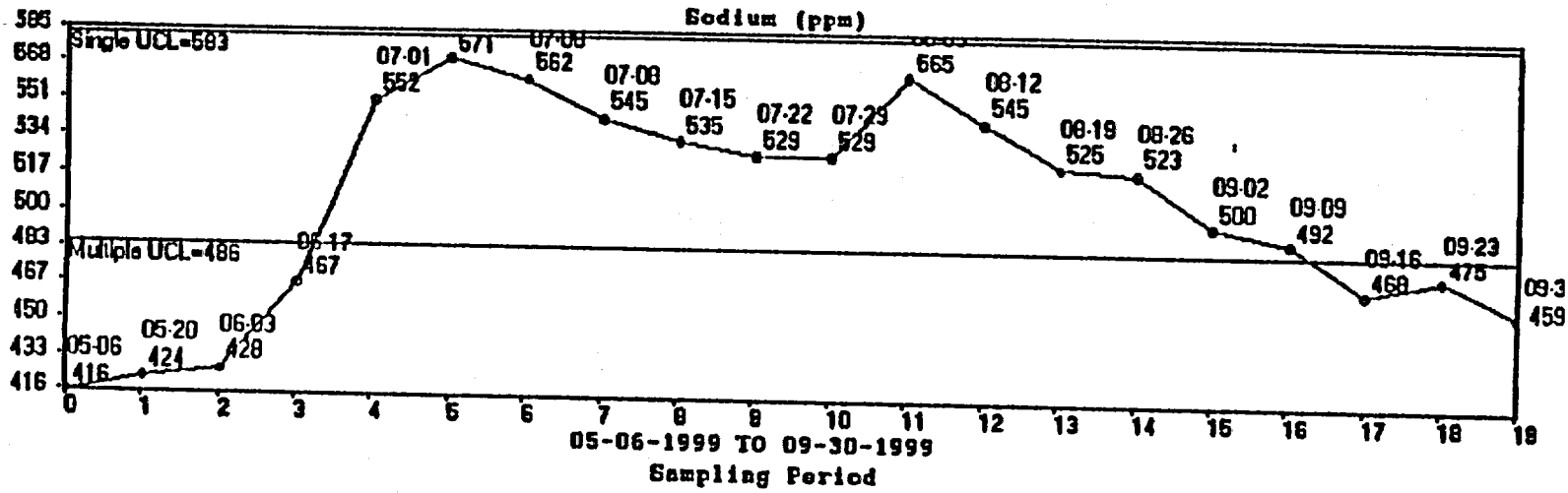
Charles R. Miller

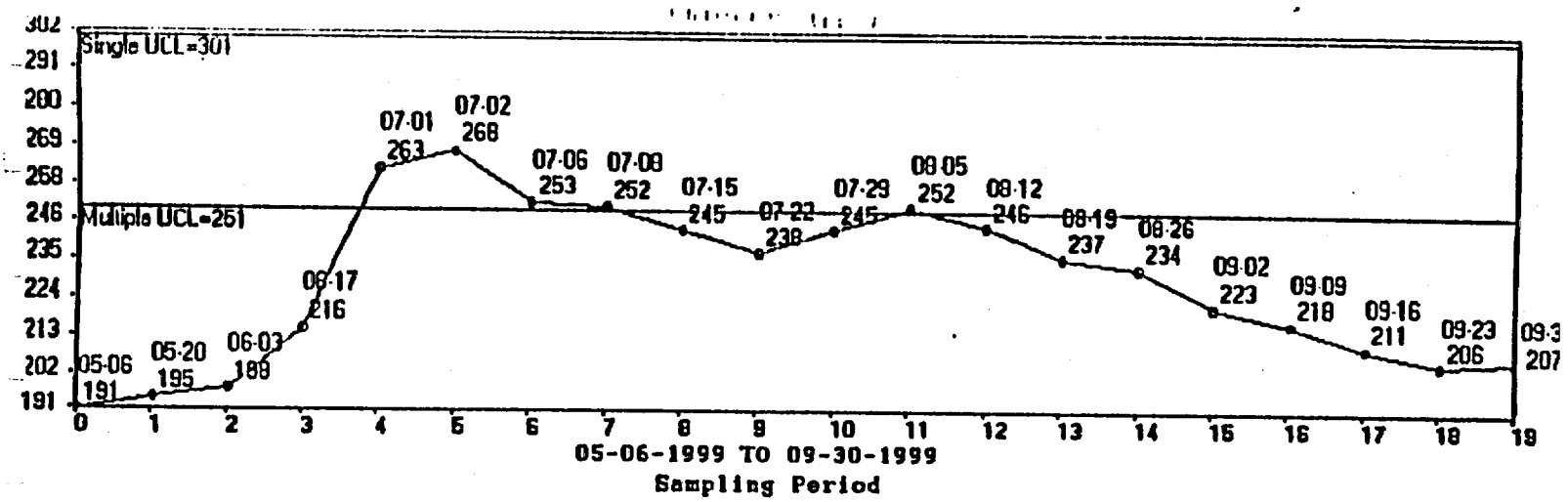
Signature/Date

Charles R. Miller, Plant Manager
Name/Title (printer)

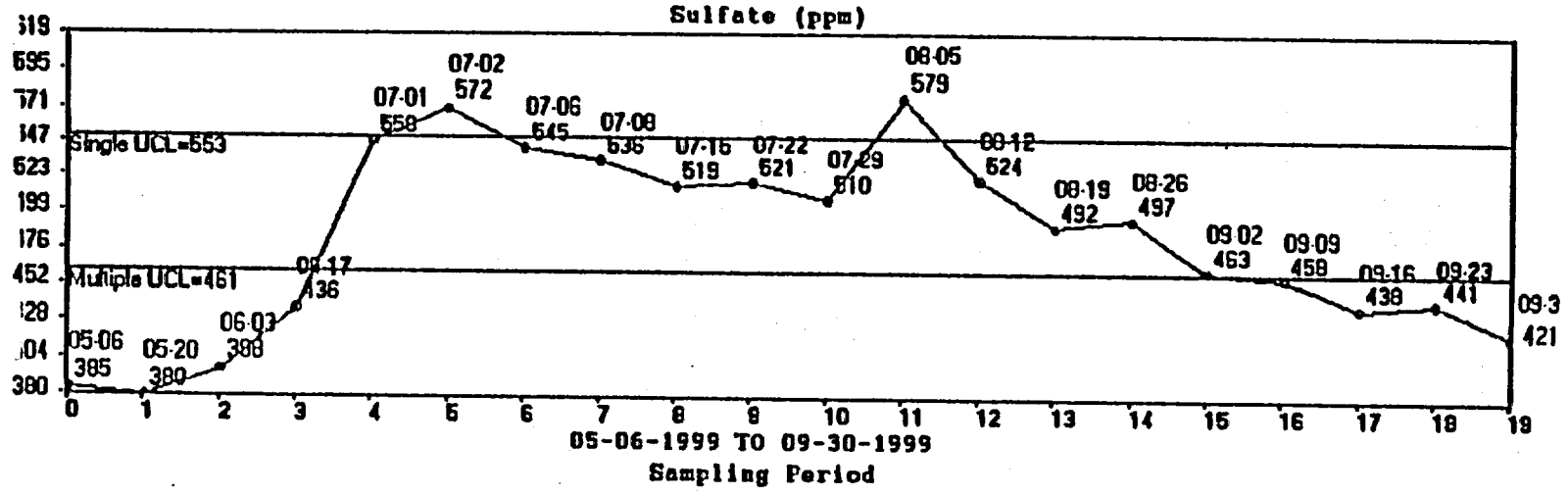

04-22 69.23
05-06 75.73
05-20 71.63
06-03 78.26
06-17 78.04
07-01 78.81
07-06 97.21
07-08 99.83
07-15 95.13
07-22 94.48
07-29 96.46
08-05 103.18
08-12 111.4
08-19 102.47
08-26 103.9
09-02 107.68
09-09 112.53
09-16 112.67
09-23 105.93
04-22-1999 TO 09-30-1999
Sampling Period

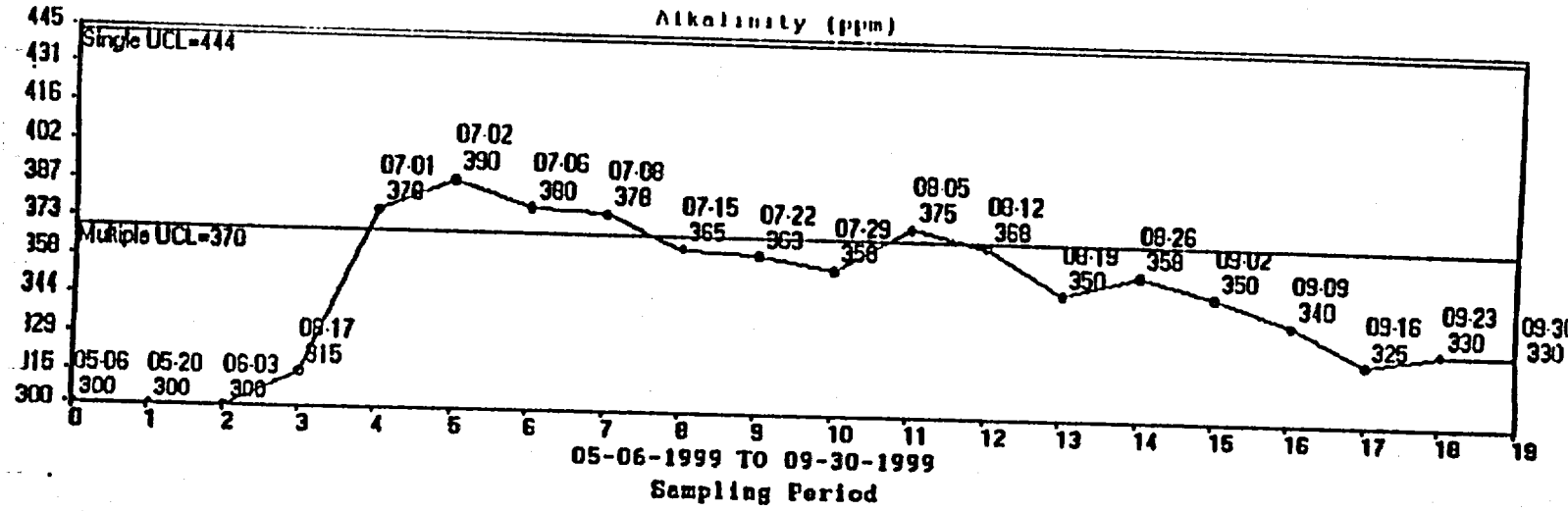
CM6-6


Sodium (ppm)
Single UCL=583
Multiple UCL=486
05-06 416
05-20 424
06-03 428
06-17 467
07-01 552
571
07-08 545
07-15 535
07-22 529
07-29 529
665
08-12 545
08-19 525
08-26 523
09-02 500
09-09 492
09-16 468
09-23 475
05-06-1999 TO 09-30-1999
Sampling Period

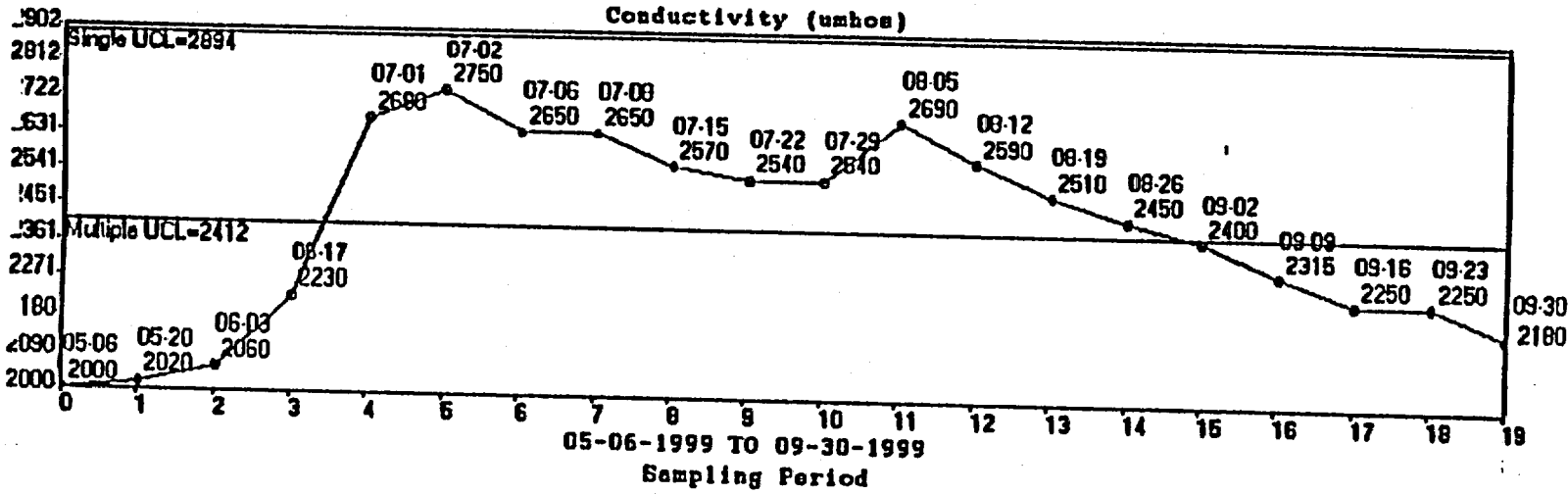


CH6-6
Sulfate (ppm)




Alkalinity (ppm)
Single UCL=444
Multiple UCL=370
05-06 300
05-20 300
06-03 300
06-17 315
07-01 378
07-02 390
07-06 380
07-08 378
07-15 365
07-22 363
07-29 358
08-05 375
08-12 368
08-19 350
08-26 358
09-02 350
09-09 340
09-16 325
09-23 330
09-30 330
05-06-1999 TO 09-30-1999
Sampling Period

CM6-6


Conductivity (umhos)
Single UCL=2894
Multiple UCL=2412
05-06 2000
05-20 2020
06-03 2060
06-17 2230
07-01 2680
07-02 2750
07-06 2650
07-08 2650
07-15 2570
07-22 2540
07-29 2640
08-05 2690
08-12 2590
08-19 2510
08-26 2450
09-02 2400
09-09 2315
09-16 2250
09-23 2250
09-30 2180
05-06-1999 TO 09-30-1999
Sampling Period

Crow Butte Project
Monitor Well Laboratory Report

Sample Date: 07-01-1999
Analysis Date: 07-02-1999
Analyst:

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	120	53	12	560	200
Multiple	140	63	26	703	246
Single	177	75	31	844	295
SM6-4	116	45	8.1	540	205
Multiple	140	55	14	670	250
Single	168	67	17	804	310
SM6-5	116	39	6.8	520	210
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	108	20	3.6*	490	225
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	114	15	6.0*	510	230
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	63*	26	7.7	490	215
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	117	47	8.1	550	200
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	20*	12*	4.0*	510	238
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	37*	6.5	6.0	490	225
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	423	378	191	1980	300
Multiple	486	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	552*	550*	263*	2680*	378*
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

Sample Date: 07-02-1999
Analysis Date: 07-02-1999

Analyst:

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					
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	571	572	268	2750	390
Single	486	461	251	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Cross Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 07-06-1999
Analysis Date: 07-06-1999

Analyst:

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3					
Multiple	140	63	26	703	246
Single	177	76	31	844	296
SM6-4					
Multiple	140	55	14	670	260
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					
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	46	14	592	233
CM6-5					
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6					
Multiple	562	545	253*	2650	380
Single	486	461	251	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2

Sample Date: 07-08-1999
Analysis Date: 07-08-1999

Analyst:

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					
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	545	536	252	2650	378
Single	486	461	251	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

Page Number 1/2 Sample Date: 07-15-1999 Analyst:
Analysis Date: 07-16-1999

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	121	52	13*	560	200
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4	116	45	8.1	540	213
Multiple	140	55	14	670	268
Single	168	67	17	804	310
SM6-5	115	40	7.7*	530	210
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	109	18*	3.6	490	215
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	115	15	6.4*	510	240
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	67*	26	8.1	490	200*
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	122	47	7.7	550	210
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	22*	13*	4.4*	510	235
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	36	7.3*	6.0	490	230
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	411	367	187	1940	290
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	535	519	245	2570	365
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

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Sample Date: 07-22-1999
Analysis Date: 07-22-1999

Analyst:

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					
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	529	521	238	2540	363
Single	486	461	251	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

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Monitor Well Laboratory Report

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Sample Date: 07-29-1999
Analysis Date: 07-30-1999

Analyst:

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	122	54	14*	560	205
Multiple	148	63	26	703	246
Single	177	75	31	844	296
SM6-4	118	46	8.3	540	206
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5	115	40	7.9	530	210
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	109	19*	4.0*	490	228*
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SM6-7	115	15	6.0*	510	230
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	67	27	7.7	490	205
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	121	48	8.1	550	220
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	24*	13	4.4	510	235
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	38*	7.2	5.6*	490	225
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11	59*	20	6.4*	350	138
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12	83*	47	6.0*	420	140
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13	82*	31	5.8*	410	160
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5	418	369	187	1940	295
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	529	510	245	2540	358
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Monitor Well Laboratory Report

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Sample Date: 08-05-1999
Analysis Date: 08-06-1999

Analyst:

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	76	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					
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	46	14	592	233
CM6-5					
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6					
Multiple	565*	579*	252	2690*	375
Single	486	461	261	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

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Sample Date: 08-12-1999
Analysis Date: 08-13-1999

Analyst:

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SM6-3	122	54	13*	560	200
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SM6-4	118	46	8.1	540	210
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SM6-5	117	40	7.7	530	215
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SM6-6	109	18*	3.6*	490	225
Multiple	130	21	7	593	278
Single	156	25	0	711	334
SM6-7	116	14*	6.0	510	235
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SM6-8	67	27	7.3*	490	205
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SM6-10	121	48	8.1	560	210
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SM6-12	23	13	4.4	510	240
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SM6-17	38	7	5.6	490	230
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SM7-11	58	19	4.4*	350	143
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SM7-12	85	47	4.8*	430	150*
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SM7-13	78	27*	3.8*	390	155
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CM6-5	413	374	183	1940	285
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CM6-6	545	524*	246	2590	368
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

Sample Date: 08-19-1999
Analysis Date: 08-20-1999
Analyst:

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					
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	525	492*	237	2510	350
	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: 08-26-1999
Analysis Date: 08-26-1999

Analyst:

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					
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	523	497	234	2450	358
	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: 09-02-1999 | Analysis Date: 09-03-1999 | Analyst: SH/LG

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					
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	500	463*	223	2400	350
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: 09-09-1999
Analysis Date: 09-10-1999

Analyst: SH/LG

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					
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	492	458	218	2315	340
Single	486	461	251	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

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Monitor Well Laboratory Report

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Sample Date: 09-16-1999
Analysis Date: 09-17-1999

Analyst: SH/LG

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					
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	468	438	211	2250	325
Single	486	461	251	2412	370
	583	553	301	2894	444

* - Denotes 5% change from previous sample.

Crow Butte Project
Monitor Well Laboratory Report

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Sample Date: 09-23-1999
Analysis Date: 09-24-1999

Analyst: SH/LG

Well Number	Sodium (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Conductivity (UMHOS)	Alkalinity (mg/L)
SH6-3	122	51	13	560	200
Multiple	148	63	26	703	246
Single	177	75	31	844	295
SH6-4	119	44	7.7	540	208
Multiple	140	55	14	670	258
Single	168	67	17	804	310
SH6-5	116	39	7.5	530	210
Multiple	134	53	8	642	262
Single	161	63	10	770	314
SH6-6	110	19	2.8*	490	226
Multiple	130	21	7	593	278
Single	156	25	8	711	334
SH6-7	116	15	5.6	500	235*
Multiple	136	18	27	649	286
Single	163	22	33	779	343
SH6-8	65	25*	6.4*	490	205
Multiple	87	33	20	642	259
Single	104	40	24	770	311
SH6-10	122	47	7.7	550	210
Multiple	146	60	18	698	264
Single	176	72	22	838	317
SH6-12	23*	12*	4.0	510	230
Multiple	30	16	6	613	290
Single	36	19	7	736	348
SH6-17	39	7.1	4.4*	480	230
Multiple	69	10	26	665	294
Single	83	12	31	798	353
SH7-11	58	19	2.4	340	143
Multiple	74	26	12	449	180
Single	89	32	15	539	216
SH7-12	86	43	2.8*	440	155
Multiple	101	50	14	516	186
Single	121	60	17	619	223
SH7-13	76	26*	2.0*	380	155
Multiple	96	37	12	493	194
Single	115	45	14	592	233
CH6-5	416	378	179	1950	285
Multiple	485	476	245	2436	347
Single	582	572	294	2923	416
CH6-6	475	441	206	2250	330
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: 09-30-1999
Analysis Date: 09-30-1999

Analyst: SH/LG

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					
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	459	421	207	2180	330
Multiple	486	461	251	2412	370
Single	583	553	301	2894	444

* - Denotes 5% change from previous sample.

CROW BUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD AND MATERIALS USED			TD'S	FINAL TD'S	DATE	INSPECTED BY:
2076	17	Bags Plug Gel	Soda Ash	27	61	8/24/98	Capped 7/6/99
2315	8	Bags Plug Gel	Soda Ash	30	63	4/26/99	Capped 7/6/99
2335	10	Bags Plug Gel	Soda Ash	28	62	5/17/99	Capped 7/6/99
2352	10	Bags Plug Gel	Soda Ash	29	66	7/2/99	Capped 7/6/99
2351	6	Bags Plug Gel	Soda Ash	29	65	5/27/99	Capped 7/6/99
2356	7	Bags Plug Gel	Soda Ash	30	76	6/17/99	Capped 7/6/99
2358	12	Bags Plug Gel	Soda Ash	28	65	7/6/99	Capped 7/9/99
2222	7	Bags Plug Gel	Soda Ash	31	71	11/16/98	Capped 7/16/99
2345	8	Bags Plug Gel	Soda Ash	27	67	5/24/99	Capped 7/16/99
2357	9	Bags Plug Gel	Soda Ash	28	65	6/18/99	Capped 7/16/99
2375	7	Bags Plug Gel	Soda Ash	30	63	7/14/99	Capped 7/16/99
2195	10	Bags Plug Gel	Soda Ash	29	61	10/29/98	Capped 7/28/99
2363	14	Bags Plug Gel	Soda Ash	29	61	12/16/98	Capped 7/28/99
2364	16	Bags Plug Gel	Soda Ash	27	78	1/5/99	Capped 7/28/99
2194	7	Bags Plug Gel	Soda Ash	29	63	10/30/98	Capped 8/13/99
2151	7	Bags Plug Gel	Soda Ash	29	78	8/24/98	Capped 8/13/99
2380	10	Bags Plug Gel	Soda Ash KO	27	87	8/4/99	Capped 8/13/99
2346	7	Bags Plug Gel	Soda Ash	29	69	7/29/99	Capped 8/13/99
1845	12	Bags Plug Gel	Soda Ash O	27	63	10-1-98	Capped 9/2/99
1651	8	Bags Plug Gel	Soda Ash	29	65	10-2-97	Capped 9/2/99
1847	11	Bags Plug Gel	Soda Ash O	28	71	10-14-98	Capped 9/2/99
1844	10	Bags Plug Gel	Soda Ash	27	62	2-10-98	Capped 9/2/99
1834	11	Bags Plug Gel	Soda Ash	27	64	2-6-98	Capped 9/2/99
1627	6	Bags Plug Gel	Soda Ash	31	61	9-24-97	Capped 9/2/99
1835	7	Bags Plug Gel	Soda Ash	29	70	2-5-98	Capped 9/2/99
1838	15	Bags Plug Gel	Soda Ash	27	66	2-9-98	Capped 9/2/99
1905	8	Bags Plug Gel	Soda Ash P	29	68	10-23-98	Capped 9/2/99
1856	10	Bags Plug Gel	Soda Ash P	28	64	10-22-98	Capped 9/2/99
1906	10	Bags Plug Gel	Soda Ash P	29	70	10-21-98	Capped 9/2/99
1830	12	Bags Plug Gel	Soda Ash	27	69	2-5-98	Capped 9/2/99
1696	10	Bags Plug Gel	Soda Ash P	28	66	10-20-98	Capped 9/2/99

CROW BUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD AND MATERIALS USED		TD VIS	FINAL VIS	DATE	INSPECTED BY:
1842	12 Bags Plug Gel	Soda Ash	27	62	2-13-98	Capped 9/2/99
1668	8 Bags Plug Gel	Soda Ash	30	65	10-14-97	Capped 9/2/99
1662	9 Bags Plug Gel	Soda Ash	29	62	11-11-97	Capped 9/2/99
1637	10 Bags Plug Gel	Soda Ash	28	61	9-29-97	Capped 9/2/99
1805	10 Bags Plug Gel	Soda Ash	28	73	1-29-98	Capped 9/2/99
1619	11 Bags Plug Gel	Soda Ash	28	63	9-16-97	Capped 9/2/99
1635	7 Bags Plug Gel	Soda Ash	29	62	10-3-97	Capped 9/2/99
1916	9 Bags Plug Gel	Soda Ash	28	61	9-1-99	Capped 9/2/99
1898	10 Bags Plug Gel	Soda Ash	27	68	9/23/98	Capped 9/8/99
1899	11 Bags Plug Gel	Soda Ash	27	72	9/22/98	Capped 9/8/99
1914	8 Bags Plug Gel	Soda Ash	29	63	9/7/99	Capped 9/13/99
1915	10 Bags Plug Gel	Soda Ash	28	70	9/2/99	Capped 9/13/99
1909	10 Bags Plug Gel	Soda Ash	28	65	10/15/98	Capped 9/15/99
1846	10 Bags Plug Gel	Soda Ash	27	63	10/13/98	Capped 9/15/99
1907	10 Bags Plug Gel	Soda Ash	28	61	10/19/98	Capped 9/23/99
1920	9 Bags Plug Gel	Soda Ash	28	64	9/16/99	Capped 9/23/99
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				

Well Number	SM7-1			SM7-2			SM7-3		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	51.0	52.2	55.4	52.9	53.3	54.1	52.0	52.4	52.8
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	97.0	104.0	109.0	85.0	89.4	91.0	96.0	97.2	101.0
Sulfate, ppm	40.0	43.2	46.0	30.0	31.6	34.0	38.0	39.4	43.0
Chloride, ppm	6.0	6.5	6.8	5.6	8.2	13.0	5.6	7.3	11.0
Conductivity, umhos	470	492	510	420	426	430	450	462	500
Total Alkalinity, ppm	180.0	185.0	190.0	130.0	153.0	160.0	170.0	174.0	175.0

Well Number	SM7-4			SM7-5			SM7-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	74.0	74.2	74.6	57.7	57.9	58.5	78.3	78.4	78.5
Barometric Pressure, in.	29.8	30.0	30.2	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	92.0	92.6	94.0	88.0	88.8	91.0	63.0	64.2	66.0
Sulfate, ppm	31.0	32.2	33.0	35.0	36.8	40.0	17.0	17.6	19.0
Chloride, ppm	6.8	9.6	11.0	3.0	4.6	6.8	5.0	7.5	11.0
Conductivity, umhos	430	446	450	430	440	450	360	366	370
Total Alkalinity, ppm	160.0	165.0	175.0	160.0	164.0	170.0	138.0	143.8	150.0

Well Number	SM7-7			SM7-8			SM7-9		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	71.3	71.5	71.9	46.9	47.3	48.6	45.9	46.2	47.2
Barometric Pressure, in.	29.9	30.0	30.1	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	92.0	93.0	94.0	98.0	99.2	101.0	90.0	91.4	95.0
Sulfate, ppm	36.0	37.2	38.0	47.0	51.2	56.0	33.0	34.0	35.0
Chloride, ppm	3.6	4.4	6.2	5.6	9.6	14.0	5.2	7.5	9.7
Conductivity, umhos	440	444	460	470	482	500	440	440	440
Total Alkalinity, ppm	155.0	165.6	178.0	155.0	160.6	168.0	160.0	165.0	170.0

Well Number	SM7-10			SM7-11			SM7-12		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	54.6	55.3	55.8	78.0	78.1	78.1	50.3	50.3	50.4
Barometric Pressure, in.	29.9	30.0	30.1	29.9	29.9	29.9	29.9	29.9	29.9
Sodium, ppm	90.0	92.2	95.0	58.0	58.4	59.0	83.0	85.0	86.0
Sulfate, ppm	38.0	38.6	40.0	19.0	19.4	20.0	43.0	45.4	47.0
Chloride, ppm	2.8	3.3	4.0	2.4	3.8	6.4	2.8	4.3	6.0
Conductivity, umhos	440	442	450	340	344	350	420	430	440
Total Alkalinity, ppm	160.0	167.0	170.0	138.0	142.4	145.0	140.0	152.0	160.0

Well Number	SM7-13			SM7-14			SM7-15		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	53.7	53.7	53.7	83.3	83.4	83.5	102.0	102.1	102.2
Barometric Pressure, in.	29.9	29.9	29.9	29.9	30.1	30.3	0.3	24.1	30.2
Sodium, ppm	74.0	77.6	82.0	59.0	60.8	63.0	50.0	50.8	52.0
Sulfate, ppm	26.0	27.6	31.0	17.0	17.0	17.0	20.0	21.0	23.0
Chloride, ppm	2.0	3.4	5.8	7.0	10.3	14.0	2.0	2.2	2.4
Conductivity, umhos	380	388	410	340	342	350	340	340	340
Total Alkalinity, ppm	150.0	156.0	160.0	120.0	132.6	140.0	130.0	138.0	140.0

Well Number	SM7-16			SM7-17			SM7-18		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	130.6	130.6	130.7	102.8	103.1	103.3	124.5	124.8	125.0
Barometric Pressure, in.	29.9	30.1	30.3	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	50.0	54.2	60.0	60.0	61.8	63.0	61.0	62.2	64.0
Sulfate, ppm	15.0	16.4	19.0	16.0	17.4	19.0	20.0	22.2	25.0
Chloride, ppm	2.4	2.8	3.2	2.8	3.2	3.6	1.6	1.9	2.2
Conductivity, umhos	320	324	330	370	370	370	340	354	370
Total Alkalinity, ppm	133.0	138.8	143.0	135.0	144.2	158.0	140.0	145.6	150.0

Well Number	SM7-19			SM7-20			SM7-21		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	100.4	100.6	101.1	110.9	111.1	111.7	122.8	123.1	123.6
Barometric Pressure, in.	29.8	30.0	30.2	29.9	30.1	30.2	29.9	30.1	30.2
Sodium, ppm	72.0	73.2	74.0	70.0	72.2	74.0	66.0	67.6	68.0
Sulfate, ppm	22.0	24.8	28.0	21.0	21.6	22.0	20.0	20.6	21.0
Chloride, ppm	5.6	6.1	6.8	2.8	3.3	4.4	2.6	2.8	3.2
Conductivity, umhos	360	370	380	360	364	380	350	350	350
Total Alkalinity, ppm	140.0	145.0	150.0	150.0	151.2	153.0	140.0	145.6	150.0

Well Number	SM7-22			SM7-23			SM7-24		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	91.7	92.0	92.2	104.1	104.8	105.3	106.8	107.1	107.4
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.9	30.0	30.2
Sodium, ppm	69.0	72.9	86.0	102.0	106.0	111.0	108.0	111.6	115.0
Sulfate, ppm	21.0	21.6	22.0	42.0	42.2	43.0	51.0	54.8	59.0
Chloride, ppm	15.0	24.0	54.0	15.0	19.8	29.0	13.0	16.0	19.0
Conductivity, umhos	390	421	520	510	522	550	520	536	550
Total Alkalinity, ppm	133.0	143.3	155.0	175.0	178.8	183.0	170.0	180.6	188.0

Well Number	SM7-25			SM6-1			SM6-2		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	101.0	101.2	101.4	49.4	50.6	52.1	41.6	42.0	42.4
Barometric Pressure, in.	29.9	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	75.0	77.2	80.0	121.0	122.2	127.0	120.0	123.3	126.0
Sulfate, ppm	20.0	22.6	26.0	51.0	52.3	53.0	50.0	50.9	52.0
Chloride, ppm	7.0	10.8	15.0	9.3	9.7	10.0	11.0	11.8	12.0
Conductivity, umhos	370	378	390	560	563	570	560	568	570
Total Alkalinity, ppm	138.0	145.2	150.0	200.0	205.7	210.0	200.0	205.3	210.0

Well Number	SM6-3			SM6-4			SM6-5		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	33.7	34.0	34.4	46.7	47.2	47.7	40.6	41.1	41.5
Barometric Pressure, in.	29.8	29.9	30.0	29.8	29.9	30.0	29.8	29.9	30.0
Sodium, ppm	119.0	121.6	123.0	116.0	117.8	120.0	114.0	115.9	117.0
Sulfate, ppm	51.0	52.3	54.0	44.0	45.0	46.0	39.0	39.4	40.0
Chloride, ppm	12.0	12.9	14.0	7.5	8.0	8.3	6.8	7.4	7.9
Conductivity, umhos	550	559	560	540	540	540	520	528	530
Total Alkalinity, ppm	190.0	197.8	205.0	205.0	207.9	213.0	210.0	210.6	215.0

Well Number	SM6-6			SM6-7			SM6-8		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	51.8	52.2	52.6	35.8	36.2	36.6	25.8	26.6	27.1
Barometric Pressure, in.	29.8	29.9	30.0	29.8	29.9	30.0	29.8	29.9	30.0
Sodium, ppm	106.0	109.0	112.0	113.0	115.2	117.0	63.0	66.4	68.0
Sulfate, ppm	18.0	18.9	20.0	14.0	14.9	16.0	25.0	26.4	27.0
Chloride, ppm	2.8	3.5	4.0	5.6	6.0	6.4	6.4	7.5	8.1
Conductivity, umhos	480	489	490	500	507	510	490	490	490
Total Alkalinity, ppm	215.0	225.3	230.0	223.0	233.4	240.0	200.0	205.9	215.0

Well Number	SM6-9			SM6-10			SM6-11		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	17.2	17.7	18.7	13.1	13.9	14.4	9.0	9.7	10.3
Barometric Pressure, in.	29.1	29.9	30.2	29.8	29.9	30.0	29.8	30.1	30.3
Sodium, ppm	73.0	74.8	76.0	117.0	121.1	123.0	18.0	19.1	21.0
Sulfate, ppm	13.0	14.1	15.0	47.0	47.2	48.0	13.0	14.2	15.0
Chloride, ppm	6.0	6.6	7.3	7.7	8.2	8.9	5.2	5.8	6.4
Conductivity, umhos	510	511	520	550	551	560	480	483	490
Total Alkalinity, ppm	225.0	228.3	235.0	200.0	208.3	220.0	200.0	207.9	220.0

Well Number	SM6-12			SM6-13			SM6-14		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	12.6	13.6	14.2	9.7	10.5	11.7	25.3	25.6	26.3
Barometric Pressure, in.	29.8	29.9	30.0	29.9	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	20.0	23.1	25.0	21.0	22.4	24.0	122.0	123.0	124.0
Sulfate, ppm	12.0	12.6	13.0	14.0	15.3	17.0	52.0	54.0	55.0
Chloride, ppm	3.6	4.1	4.6	4.8	5.3	5.6	13.0	13.6	14.0
Conductivity, umhos	510	510	510	530	532	540	570	570	570
Total Alkalinity, ppm	230.0	235.3	240.0	240.0	244.9	250.0	195.0	202.8	210.0

Well Number	SM6-15			SM6-16			SM6-17		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	30.1	30.5	30.9	36.9	37.4	37.9	16.5	17.1	17.8
Barometric Pressure, in.	29.8	29.9	30.1	29.8	29.9	30.1	29.8	29.9	30.0
Sodium, ppm	118.0	121.2	125.0	50.0	52.2	55.0	36.0	38.2	40.0
Sulfate, ppm	49.0	50.4	52.0	7.0	8.0	8.7	6.2	6.9	7.3
Chloride, ppm	12.0	12.9	14.0	3.2	3.8	4.0	4.4	5.5	6.0
Conductivity, umhos	560	560	560	450	451	460	480	487	490
Total Alkalinity, ppm	190.0	199.8	205.0	200.0	207.0	210.0	225.0	228.9	230.0

Well Number	SM6-18			SM6-19			SM6-20		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	21.2	21.7	22.1	34.5	35.2	35.8	14.8	18.4	19.3
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	30.0	30.2
Sodium, ppm	119.0	120.3	122.0	53.0	54.5	56.0	17.0	18.4	19.0
Sulfate, ppm	52.0	53.5	55.0	23.0	23.9	25.0	14.0	15.1	17.0
Chloride, ppm	12.0	12.9	15.0	4.8	5.9	6.9	5.6	7.1	8.1
Conductivity, umhos	560	563	570	480	484	490	490	498	520
Total Alkalinity, ppm	195.0	198.8	200.0	200.0	201.9	205.0	195.0	205.4	213.0

Well Number	SM6-21			SM6-22			SM6-23		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	2.2	3.0	3.6	0.1	0.5	1.1	0.8	1.6	2.2
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.9	30.0	30.2
Sodium, ppm	20.0	21.0	22.0	19.0	19.4	21.0	24.0	25.8	28.0
Sulfate, ppm	14.0	14.7	16.0	12.0	13.6	15.0	14.0	14.8	16.0
Chloride, ppm	6.2	6.8	7.3	4.2	4.5	4.8	4.4	4.7	5.0
Conductivity, umhos	480	490	500	460	461	470	500	506	510
Total Alkalinity, ppm	205.0	210.0	215.0	200.0	206.4	210.0	225.0	230.7	238.0

Well Number	SM6-24			SM6-25			SM6-26		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	8.9	10.2	11.3	4.0	4.9	5.6	1.1	2.0	2.7
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.9	30.0	30.2
Sodium, ppm	22.0	24.1	27.0	22.0	23.6	26.0	25.0	26.4	28.0
Sulfate, ppm	13.0	13.8	15.0	13.0	14.2	15.0	12.0	12.8	14.0
Chloride, ppm	4.4	4.9	5.2	6.0	6.2	6.4	5.2	5.5	5.8
Conductivity, umhos	460	464	470	470	479	480	460	460	460
Total Alkalinity, ppm	195.0	206.7	210.0	200.0	206.6	210.0	200.0	201.4	205.0

Well Number	SM6-27			SM6-28			SM5-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	0.3	1.1	1.8	10.9	12.0	12.8	23.1	23.5	24.4
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	25.0	26.3	28.0	27.0	28.4	30.0	134.0	136.2	140.0
Sulfate, ppm	12.0	13.2	15.0	21.0	22.2	29.0	55.0	56.7	58.0
Chloride, ppm	4.8	4.9	5.2	4.5	4.8	5.2	13.0	13.0	13.0
Conductivity, umhos	470	471	480	510	519	520	630	630	630
Total Alkalinity, ppm	200.0	205.3	215.0	220.0	230.0	237.0	225.0	231.0	235.0

Well Number	SM5-2			SM5-3			SM5-4		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	32.9	33.4	34.6	48.8	49.3	50.1	37.3	37.6	38.5
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	98.0	100.0	102.0	132.0	133.7	137.0	120.0	123.1	126.0
Sulfate, ppm	31.0	31.8	33.0	51.0	52.0	53.0	48.0	49.1	50.0
Chloride, ppm	5.6	6.1	6.8	15.0	16.2	17.0	14.0	14.9	16.0
Conductivity, umhos	460	467	470	610	610	610	560	562	570
Total Alkalinity, ppm	180.0	186.7	190.0	223.0	226.2	230.0	200.0	206.1	210.0

Well Number	SM5-5			SM5-6			SM5-7		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	51.1	51.4	52.3	54.0	54.2	54.7	40.6	40.9	41.9
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.1	29.9	30.2
Sodium, ppm	135.0	136.4	138.0	126.0	127.7	129.0	127.0	129.9	132.0
Sulfate, ppm	52.0	54.4	56.0	56.0	57.1	58.0	57.0	58.6	60.0
Chloride, ppm	13.0	14.1	15.0	13.0	14.4	15.0	10.0	10.9	12.0
Conductivity, umhos	620	621	630	590	590	590	590	590	590
Total Alkalinity, ppm	230.0	232.8	235.0	200.0	205.3	210.0	205.0	212.6	220.0

Well Number	SM5-8			SM5-9			SM5-10		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	42.4	42.8	43.9	39.6	40.1	41.3	28.6	29.8	31.3
Barometric Pressure, in.	29.1	29.9	30.2	29.1	29.9	30.2	29.1	29.9	30.2
Sodium, ppm	122.0	123.8	126.0	121.0	122.4	124.0	122.0	122.9	124.0
Sulfate, ppm	51.0	54.0	56.0	51.0	53.1	54.0	54.0	55.3	57.0
Chloride, ppm	11.0	11.7	12.0	11.0	11.3	12.0	9.7	10.0	10.0
Conductivity, umhos	570	570	570	560	560	560	560	568	570
Total Alkalinity, ppm	200.0	203.8	210.0	200.0	206.4	215.0	195.0	204.4	210.0

Well Number	SM5-11			SM5-12			SM5-13		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	28.4	28.9	30.8	60.5	61.0	62.7	47.5	48.0	48.5
Barometric Pressure, in.	29.1	29.9	30.2	29.1	29.9	30.2	29.8	30.0	30.2
Sodium, ppm	131.0	132.9	135.0	124.0	124.7	126.0	117.0	119.7	121.0
Sulfate, ppm	53.0	55.3	57.0	53.0	54.9	57.0	52.0	53.7	55.0
Chloride, ppm	14.0	15.6	16.0	9.6	10.4	11.0	12.0	12.4	13.0
Conductivity, umhos	610	610	610	570	570	570	540	557	560
Total Alkalinity, ppm	210.0	221.7	230.0	200.0	203.8	210.0	190.0	197.7	200.0

Well Number	SM5-14			SM5-15			SM5-16		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	22.9	23.4	24.4	31.5	31.8	32.1	4.4	4.9	5.4
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	103.0	105.4	108.0	120.0	123.1	125.0	98.0	99.8	102.0
Sulfate, ppm	47.0	48.0	49.0	50.0	50.7	52.0	36.0	36.4	38.0
Chloride, ppm	6.4	6.6	6.9	15.0	15.1	16.0	5.2	5.7	6.2
Conductivity, umhos	490	490	490	570	570	570	460	460	460
Total Alkalinity, ppm	170.0	175.2	180.0	199.0	204.7	210.0	170.0	178.3	185.0

Well Number	SM5-17			SM5-18			SM5-19		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	61.2	61.5	61.9	77.6	77.9	78.2	49.4	49.7	50.1
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.1	30.3
Sodium, ppm	88.0	89.2	91.0	92.0	93.3	96.0	103.0	105.0	107.0
Sulfate, ppm	35.0	35.3	36.0	37.0	37.4	38.0	47.0	47.9	49.0
Chloride, ppm	1.8	2.1	2.4	2.4	3.0	3.2	3.2	3.6	4.0
Conductivity, umhos	420	420	420	440	440	440	480	490	500
Total Alkalinity, ppm	150.0	161.1	170.0	160.0	169.4	175.0	175.0	184.1	190.0

Well Number	SM5-20			SM5-21			SM5-22		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	44.8	45.1	45.4	32.9	33.2	33.6	19.8	20.1	20.5
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	104.0	105.9	110.0	101.0	101.6	104.0	100.0	101.6	105.0
Sulfate, ppm	52.0	54.0	57.0	42.0	43.1	44.0	44.0	45.0	47.0
Chloride, ppm	4.6	5.2	5.6	5.2	5.6	6.0	3.2	3.8	4.0
Conductivity, umhos	490	499	500	470	474	480	470	470	470
Total Alkalinity, ppm	175.0	177.7	183.0	173.0	177.7	180.0	173.0	179.8	185.0

Well Number	SM5-23			SM5-24			SM5-25		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	29.1	29.4	29.8	22.2	22.5	22.9	41.4	41.7	42.0
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	100.0	100.6	103.0	92.0	93.8	96.0	97.0	98.9	101.0
Sulfate, ppm	43.0	43.9	45.0	39.0	40.2	41.0	46.0	47.8	49.0
Chloride, ppm	3.1	3.4	3.6	5.4	5.7	6.0	6.4	6.6	7.0
Conductivity, umhos	470	470	470	450	450	450	470	472	480
Total Alkalinity, ppm	165.0	178.1	180.0	163.0	166.9	170.0	165.0	172.2	175.0

Well Number	SM4-1			SM4-2			SM4-3		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	72.7	73.1	73.6	68.8	69.1	69.3	81.4	81.4	81.5
Barometric Pressure, in.	29.1	29.9	30.2	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	75.0	76.8	79.0	124.0	128.3	133.0	124.0	126.6	129.0
Sulfate, ppm	24.0	24.9	26.0	97.0	99.7	104.0	91.0	94.3	97.0
Chloride, ppm	3.6	4.3	4.8	15.0	16.2	18.0	13.0	13.1	14.0
Conductivity, umhos	380	381	390	600	623	630	610	611	620
Total Alkalinity, ppm	140.0	143.1	150.0	155.0	170.3	185.0	170.0	171.7	180.0

Well Number	SM4-4			SM4-5A			SM4-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	20.6	20.7	20.8	41.5	42.0	43.3	29.2	30.6	33.3
Barometric Pressure, in.	29.8	30.0	30.2	29.1	29.9	30.2	29.8	30.0	30.2
Sodium, ppm	129.0	131.0	133.0	118.0	119.3	120.0	144.0	147.6	151.0
Sulfate, ppm	77.0	78.9	80.0	51.0	52.9	54.0	46.0	47.4	48.0
Chloride, ppm	15.0	15.0	15.0	13.0	13.9	14.0	13.0	13.2	14.0
Conductivity, umhos	630	630	630	560	560	560	660	660	660
Total Alkalinity, ppm	200.0	201.8	210.0	190.0	200.0	205.0	255.0	265.0	270.0

Well Number	SM4-7			SM4-8			SM4-9		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	37.1	37.4	37.9	34.9	35.3	35.9	35.8	36.1	36.3
Barometric Pressure, in.	29.8	30.1	30.3	29.8	29.9	30.1	29.8	30.1	30.3
Sodium, ppm	117.0	117.9	119.0	158.0	160.9	163.0	155.0	157.0	159.0
Sulfate, ppm	50.0	51.3	53.0	48.0	50.0	52.0	50.0	51.1	52.0
Chloride, ppm	21.0	21.6	22.0	12.0	12.4	13.0	12.0	12.5	14.0
Conductivity, umhos	560	560	560	710	710	710	690	695	700
Total Alkalinity, ppm	180.0	186.0	190.0	290.0	292.2	295.0	275.0	282.4	285.0

Well Number	SM4-10A			SM4-11A			SM3-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	32.1	32.4	32.8	36.5	38.2	38.9	58.3	58.6	59.0
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.1	30.3	29.8	29.9	30.1
Sodium, ppm	161.0	163.2	165.0	161.0	162.3	164.0	143.0	145.2	147.0
Sulfate, ppm	52.0	53.0	54.0	54.0	54.5	56.0	98.0	99.2	101.0
Chloride, ppm	10.0	11.3	13.0	12.0	12.1	13.0	13.0	13.7	14.0
Conductivity, umhos	720	723	730	720	720	720	680	682	690
Total Alkalinity, ppm	295.0	299.4	305.0	285.0	291.9	300.0	205.0	208.9	210.0

Well Number	SM3-2			SM3-3			SM2-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	79.4	79.6	80.0	45.4	45.7	46.1	36.3	36.9	37.4
Barometric Pressure, in.	29.8	29.9	30.1	29.8	29.9	30.1	29.8	30.1	30.3
Sodium, ppm	95.0	97.1	100.0	97.0	99.2	101.0	116.0	117.4	120.0
Sulfate, ppm	38.0	38.8	40.0	40.0	40.2	41.0	48.0	48.3	49.0
Chloride, ppm	3.0	3.3	3.6	4.4	4.8	5.2	17.0	17.0	17.0
Conductivity, umhos	450	456	460	460	462	470	550	550	550
Total Alkalinity, ppm	165.0	177.3	183.0	160.0	173.7	183.0	170.0	186.0	195.0

Well Number	SM2-2			SM2-3			SM1-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	12.6	13.2	13.7	31.7	32.1	32.4	22.1	22.4	22.7
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	29.9	30.1
Sodium, ppm	98.0	99.0	100.0	118.0	119.5	122.0	97.0	100.3	103.0
Sulfate, ppm	44.0	44.3	45.0	51.0	52.1	53.0	31.0	31.9	33.0
Chloride, ppm	8.9	9.3	9.7	10.0	10.9	12.0	5.6	6.2	6.6
Conductivity, umhos	470	473	480	550	550	550	460	469	470
Total Alkalinity, ppm	170.0	175.0	195.0	188.0	198.0	205.0	170.0	179.8	185.0

Well Number	SM1-2			SM1-3			CM7-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	13.7	13.9	14.3	45.6	45.9	46.7	204.8	209.6	212.6
Barometric Pressure, in.	29.8	29.9	30.1	29.8	29.9	30.1	29.8	30.0	30.2
Sodium, ppm	124.0	127.2	132.0	98.0	99.7	102.0	382.0	389.6	393.0
Sulfate, ppm	61.0	62.0	63.0	40.0	40.7	41.0	329.0	340.4	370.0
Chloride, ppm	13.0	13.1	14.0	6.4	7.1	7.9	155.0	172.6	182.0
Conductivity, umhos	590	590	590	470	470	470	1840	1852	1870
Total Alkalinity, ppm	200.0	206.1	215.0	170.0	176.3	183.0	278.0	289.2	300.0

Well Number	CM7-2			CM7-3			CM7-4		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	192.5	213.1	228.0	195.6	197.0	199.4	199.8	201.6	204.4
Barometric Pressure, in.	29.9	30.0	30.1	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	387.0	394.8	408.0	398.0	413.6	423.0	384.0	389.0	396.0
Sulfate, ppm	325.0	328.6	336.0	314.0	320.0	328.0	312.0	313.2	315.0
Chloride, ppm	191.0	198.6	222.0	191.0	207.8	236.0	184.0	188.8	191.0
Conductivity, umhos	1890	1904	1960	1890	1940	2010	1850	1854	1860
Total Alkalinity, ppm	285.0	292.4	300.0	300.0	305.0	312.0	295.0	299.4	302.0

Well Number	CM7-5			CM7-6			CM7-7		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	188.0	200.6	210.5	107.5	161.6	199.0	192.0	197.8	202.4
Barometric Pressure, in.	29.9	30.0	30.1	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	391.0	400.6	407.0	405.0	408.2	412.0	392.0	396.2	402.0
Sulfate, ppm	319.0	321.0	325.0	316.0	319.8	324.0	336.0	343.2	359.0
Chloride, ppm	193.0	203.6	212.0	204.0	216.8	226.0	181.0	189.0	194.0
Conductivity, umhos	1900	1922	1940	1920	1962	1990	1900	1912	1930
Total Alkalinity, ppm	288.0	296.0	300.0	295.0	300.0	307.0	290.0	298.0	300.0

Well Number	CM7-8			CM7-9			CM7-10		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	198.1	202.9	207.2	251.9	255.3	259.4	243.6	247.0	250.4
Barometric Pressure, in.	29.9	30.0	30.1	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	401.0	403.6	406.0	399.0	411.6	434.0	408.0	415.6	425.0
Sulfate, ppm	329.0	336.6	343.0	323.0	329.8	336.0	348.0	358.0	367.0
Chloride, ppm	187.0	190.8	199.0	195.0	211.8	244.0	184.0	198.6	219.0
Conductivity, umhos	1890	1900	1910	1920	1962	2070	1940	1966	2010
Total Alkalinity, ppm	288.0	293.2	300.0	290.0	292.6	295.0	290.0	297.0	300.0

Well Number	CM7-11			CM7-12			CM7-13		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	210.9	214.3	217.2	196.7	204.5	220.9	178.4	183.4	186.7
Barometric Pressure, in.	29.9	30.0	30.1	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	406.0	420.4	444.0	408.0	420.2	442.0	407.0	409.0	412.0
Sulfate, ppm	358.0	360.4	364.0	357.0	362.6	369.0	363.0	371.2	380.0
Chloride, ppm	187.0	201.2	232.0	185.0	201.8	239.0	185.0	190.2	199.0
Conductivity, umhos	1960	1996	2100	1950	1992	2090	1960	1972	1990
Total Alkalinity, ppm	290.0	293.0	295.0	283.0	289.2	295.0	290.0	293.0	295.0

Well Number	CM7-14			CM7-15			CM7-16		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	164.9	168.7	172.6	178.8	183.4	188.4	187.1	191.4	198.2
Barometric Pressure, in.	29.9	30.0	30.1	29.9	30.0	30.1	29.9	30.0	30.1
Sodium, ppm	406.0	408.8	413.0	417.0	420.2	424.0	412.0	415.4	419.0
Sulfate, ppm	374.0	379.2	387.0	351.0	365.8	378.0	353.0	360.0	367.0
Chloride, ppm	181.0	188.6	199.0	183.0	190.0	197.0	183.0	186.0	189.0
Conductivity, umhos	1930	1950	1990	1950	1960	1970	1930	1944	1960
Total Alkalinity, ppm	268.0	278.6	285.0	290.0	295.0	300.0	290.0	296.0	300.0

Well Number	CM6-1			CM6-2			CM6-3		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	83.9	93.8	107.6	86.7	97.2	110.7	76.1	89.3	102.9
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	402.0	407.1	413.0	402.0	404.2	407.0	404.0	407.1	410.0
Sulfate, ppm	360.0	376.6	389.0	378.0	392.7	404.0	360.0	365.8	374.0
Chloride, ppm	183.0	188.0	193.0	175.0	177.7	181.0	179.0	183.8	189.0
Conductivity, umhos	1930	1951	1990	1930	1939	1940	1930	1934	1940
Total Alkalinity, ppm	275.0	280.0	288.0	270.0	276.7	280.0	285.0	292.6	300.0

Well Number	CM6-4			CM6-5			CM6-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	91.1	108.7	129.3	80.6	98.0	116.8	78.0	99.5	113.5
Barometric Pressure, in.	29.8	30.0	30.2	29.8	29.9	30.0	29.8	29.9	30.3
Sodium, ppm	398.0	404.2	407.0	406.0	414.7	423.0	428.0	515.0	571.0
Sulfate, ppm	354.0	366.7	379.0	367.0	375.1	383.0	398.0	494.4	579.0
Chloride, ppm	179.0	186.8	189.0	179.0	186.1	195.0	198.0	234.0	268.0
Conductivity, umhos	1930	1939	1940	1940	1954	1990	2060	2461	2750
Total Alkalinity, ppm	285.0	288.3	295.0	285.0	291.2	300.0	300.0	352.9	390.0

Well Number	CM6-7			CM6-8			CM6-9		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	72.7	88.1	102.2	75.4	89.0	101.8	72.4	85.0	97.1
Barometric Pressure, in.	29.8	29.9	30.0	29.8	29.9	30.0	29.8	29.9	30.0
Sodium, ppm	408.0	412.1	418.0	410.0	417.6	422.0	407.0	413.3	419.0
Sulfate, ppm	379.0	388.7	400.0	364.0	374.2	384.0	360.0	368.9	374.0
Chloride, ppm	175.0	178.6	183.0	179.0	190.1	195.0	178.0	183.1	185.0
Conductivity, umhos	1950	1950	1950	1960	1972	1990	1930	1941	1950
Total Alkalinity, ppm	285.0	287.2	295.0	285.0	292.2	300.0	280.0	290.7	300.0

Well Number	CM6-10			CM6-11			CM6-12		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	66.4	76.4	85.9	50.1	59.8	68.1	82.3	92.5	103.2
Barometric Pressure, in.	29.8	29.9	30.0	29.8	29.9	30.0	29.8	30.1	30.3
Sodium, ppm	413.0	415.8	420.0	410.0	416.1	422.0	412.0	419.2	433.0
Sulfate, ppm	371.0	379.8	389.0	391.0	402.1	411.0	365.0	386.2	400.0
Chloride, ppm	179.0	183.6	188.0	179.0	181.9	185.0	183.0	186.6	189.0
Conductivity, umhos	1950	1961	1970	1970	1984	2000	1960	1994	2040
Total Alkalinity, ppm	285.0	288.7	295.0	270.0	277.9	288.0	293.0	298.4	300.0

Well Number	CM6-13			CM6-14			CM6-15		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	92.2	102.1	112.0	83.8	94.7	105.1	85.5	97.3	107.7
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	408.0	411.3	419.0	401.0	404.0	410.0	402.0	406.6	415.0
Sulfate, ppm	351.0	360.3	370.0	350.0	363.9	373.0	364.0	373.2	387.0
Chloride, ppm	183.0	187.7	191.0	179.0	183.7	189.0	177.0	183.9	191.0
Conductivity, umhos	1940	1948	1950	1930	1937	1950	1930	1940	1950
Total Alkalinity, ppm	290.0	297.3	302.0	290.0	293.4	300.0	283.0	291.1	300.0

Well Number	CM6-16A			CM6-17			CM6-18		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	83.3	95.7	106.4	79.2	90.7	102.5	75.4	88.5	100.8
Barometric Pressure, in.	29.8	30.1	30.3	29.1	29.9	30.2	29.1	29.9	30.2
Sodium, ppm	402.0	406.4	411.0	401.0	406.0	415.0	401.0	406.6	414.0
Sulfate, ppm	358.0	366.7	379.0	354.0	360.4	368.0	360.0	366.4	380.0
Chloride, ppm	181.0	185.8	193.0	179.0	182.8	186.0	177.0	181.0	185.0
Conductivity, umhos	1930	1940	1950	1930	1930	1930	1930	1932	1940
Total Alkalinity, ppm	290.0	294.7	300.0	285.0	291.2	300.0	290.0	292.8	295.0

Well Number	CM6-19			CM6-20			CM6-21		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	62.9	76.4	87.8	40.8	49.8	57.7	36.3	44.7	52.1
Barometric Pressure, in.	29.1	29.9	30.2	29.8	29.9	30.0	29.8	29.9	30.0
Sodium, ppm	404.0	412.1	418.0	410.0	416.9	425.0	399.0	402.4	406.0
Sulfate, ppm	371.0	385.6	407.0	343.0	351.8	360.0	353.0	359.6	370.0
Chloride, ppm	175.0	180.2	185.0	189.0	196.9	203.0	181.0	185.2	189.0
Conductivity, umhos	1950	1951	1960	1950	1966	1980	1910	1914	1920
Total Alkalinity, ppm	280.0	287.2	295.0	290.0	297.2	300.0	285.0	288.1	298.0

Well Number	CM6-22			CM6-23			CM6-24		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	33.3	41.1	48.3	32.0	39.5	45.6	31.8	38.3	43.8
Barometric Pressure, in.	29.8	29.9	30.0	29.9	30.0	30.2	29.9	30.0	30.2
Sodium, ppm	403.0	405.9	408.0	402.0	405.4	410.0	397.0	406.3	415.0
Sulfate, ppm	354.0	359.6	368.0	337.0	343.9	350.0	323.0	336.8	356.0
Chloride, ppm	183.0	186.3	189.0	185.0	190.4	195.0	181.0	186.1	195.0
Conductivity, umhos	1910	1919	1920	1900	1921	1930	1900	1911	1930
Total Alkalinity, ppm	285.0	288.9	290.0	295.0	302.8	310.0	293.0	305.8	314.0

Well Number	CM6-25			CM6-26			CM6-27		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	53.0	66.1	76.0	49.7	62.0	71.9	36.0	41.9	47.2
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.9	30.0	30.2
Sodium, ppm	397.0	402.3	412.0	398.0	402.4	408.0	395.0	406.7	416.0
Sulfate, ppm	348.0	358.2	375.0	346.0	357.6	367.0	323.0	332.2	342.0
Chloride, ppm	179.0	184.0	189.0	179.0	183.8	189.0	187.0	193.3	202.0
Conductivity, umhos	1920	1920	1920	1910	1917	1920	1910	1922	1950
Total Alkalinity, ppm	290.0	293.7	300.0	290.0	293.4	296.0	295.0	307.6	310.0

Well Number	CM6-28			CM6-29			CM6-30		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	43.2	49.1	53.9	51.8	63.0	72.5	47.4	54.2	60.4
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.9	30.0	30.2
Sodium, ppm	389.0	398.1	403.0	401.0	408.9	417.0	390.0	403.0	410.0
Sulfate, ppm	318.0	324.8	339.0	344.0	352.2	364.0	323.0	330.1	341.0
Chloride, ppm	177.0	179.9	181.0	182.0	189.6	193.0	181.0	189.2	200.0
Conductivity, umhos	1860	1862	1870	1930	1943	1960	1880	1898	1920
Total Alkalinity, ppm	300.0	305.3	310.0	288.0	296.4	305.0	295.0	304.8	310.0

Well Number	CM6-31			CM6-32			CM5-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	48.1	55.4	61.2	50.7	60.6	68.1	150.7	155.6	158.2
Barometric Pressure, in.	29.9	30.0	30.2	29.9	30.0	30.2	29.8	30.1	30.3
Sodium, ppm	397.0	405.3	413.0	406.0	410.1	414.0	414.0	427.3	448.0
Sulfate, ppm	322.0	333.1	342.0	336.0	347.6	359.0	360.0	371.6	382.0
Chloride, ppm	179.0	182.0	185.0	179.0	185.8	191.0	187.0	193.8	200.0
Conductivity, umhos	1890	1892	1900	1910	1914	1920	1950	2004	2060
Total Alkalinity, ppm	310.0	310.6	315.0	290.0	301.8	310.0	300.0	310.0	320.0

Well Number	CM5-2			CM5-3			CM5-4		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	152.1	156.5	159.5	171.5	175.4	177.6	156.1	160.1	163.5
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	405.0	425.3	457.0	395.0	400.3	404.0	398.0	403.5	405.0
Sulfate, ppm	352.0	371.3	392.0	330.0	337.8	342.0	329.0	334.3	342.0
Chloride, ppm	183.0	193.0	205.0	181.0	182.8	185.0	180.0	181.6	184.0
Conductivity, umhos	1930	2011	2140	1880	1889	1890	1890	1890	1890
Total Alkalinity, ppm	300.0	306.6	320.0	295.0	298.5	300.0	295.0	300.4	310.0

Well Number	CM5-5			CM5-6			CM5-7		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	141.0	144.5	148.3	139.3	142.4	145.8	135.0	138.2	142.7
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	404.0	406.6	410.0	399.0	403.4	410.0	397.0	403.4	408.0
Sulfate, ppm	333.0	338.9	349.0	328.0	341.2	352.0	345.0	353.8	361.0
Chloride, ppm	181.0	183.0	185.0	179.0	182.8	185.0	177.0	181.4	185.0
Conductivity, umhos	1890	1890	1890	1890	1892	1900	1900	1900	1900
Total Alkalinity, ppm	295.0	301.6	313.0	290.0	300.3	305.0	290.0	296.4	300.0

Well Number	CM5-8			CM5-9			CM5-10		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	137.6	146.2	150.8	127.9	133.7	139.5	118.7	125.6	131.3
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	426.0	436.0	451.0	402.0	406.3	413.0	402.0	404.4	407.0
Sulfate, ppm	366.0	380.9	392.0	343.0	354.8	364.0	344.0	356.7	366.0
Chloride, ppm	193.0	198.7	212.0	179.0	180.3	183.0	183.0	185.7	190.0
Conductivity, umhos	2020	2052	2110	1900	1912	1920	1910	1918	1940
Total Alkalinity, ppm	308.0	313.3	322.0	295.0	300.0	305.0	290.0	292.9	295.0

Well Number	CM5-11			CM5-12			CM5-13		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	107.0	114.0	120.7	93.6	101.0	109.8	85.3	97.6	108.6
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.1	30.3
Sodium, ppm	408.0	415.8	421.0	407.0	409.6	413.0	399.0	406.3	421.0
Sulfate, ppm	354.0	362.4	374.0	352.0	359.4	367.0	374.0	387.2	406.0
Chloride, ppm	189.0	194.8	205.0	181.0	186.6	191.0	179.0	188.9	205.0
Conductivity, umhos	1930	1968	2000	1920	1923	1930	1920	1956	2030
Total Alkalinity, ppm	280.0	290.1	295.0	285.0	291.3	297.0	270.0	279.3	290.0

Well Number	CM5-18			CM5-19			CM5-20		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	92.3	102.7	112.8	130.0	138.7	146.8	104.3	111.5	119.0
Barometric Pressure, in.	29.8	30.1	30.3	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	402.0	410.7	450.0	402.0	404.9	408.0	404.0	407.0	412.0
Sulfate, ppm	355.0	363.6	390.0	355.0	362.8	371.0	358.0	363.7	371.0
Chloride, ppm	181.0	188.3	217.0	183.0	185.3	187.0	182.0	184.1	187.0
Conductivity, umhos	1930	1953	2130	1930	1932	1940	1930	1936	1940
Total Alkalinity, ppm	290.0	295.7	302.0	286.0	295.8	305.0	290.0	298.0	307.0

Well Number	CM5-21			CM5-22			CM5-23		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	90.2	97.4	105.4	98.9	105.8	113.7	109.4	115.2	122.9
Barometric Pressure, in.	29.8	30.1	30.3	29.1	29.9	30.2	29.1	29.9	30.2
Sodium, ppm	400.0	403.7	409.0	405.0	411.0	415.0	400.0	407.9	413.0
Sulfate, ppm	360.0	367.9	375.0	349.0	361.1	367.0	358.0	364.2	373.0
Chloride, ppm	181.0	183.3	187.0	179.0	183.0	186.0	179.0	182.7	185.0
Conductivity, umhos	1930	1936	1940	1940	1940	1940	1930	1932	1940
Total Alkalinity, ppm	280.0	290.6	300.0	293.0	296.9	300.0	285.0	292.6	300.0

Well Number	CM5-24			CM5-25			CM5-26		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	120.0	123.8	133.1	123.4	129.3	140.6	160.4	165.7	178.9
Barometric Pressure, in.	29.1	29.9	30.2	29.1	29.9	30.2	29.1	29.9	30.2
Sodium, ppm	405.0	410.4	415.0	399.0	413.7	423.0	404.0	413.0	421.0
Sulfate, ppm	351.0	362.3	370.0	368.0	378.4	390.0	354.0	361.9	367.0
Chloride, ppm	181.0	185.4	189.0	175.0	177.3	182.0	183.0	185.8	189.0
Conductivity, umhos	1940	1940	1940	1940	1952	1960	1950	1951	1960
Total Alkalinity, ppm	280.0	294.2	300.0	280.0	289.2	295.0	288.0	294.6	300.0

Well Number	CM5-27			CM4-1			CM4-2		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	185.7	191.4	206.6	144.4	147.5	149.8	163.9	166.5	168.8
Barometric Pressure, in.	29.1	29.9	30.2	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	410.0	414.6	420.0	404.0	407.6	411.0	386.0	392.0	398.0
Sulfate, ppm	361.0	368.7	378.0	333.0	340.6	347.0	323.0	329.4	336.0
Chloride, ppm	182.0	183.9	186.0	183.0	186.3	189.0	181.0	182.4	185.0
Conductivity, umhos	1950	1958	1960	1890	1903	1910	1850	1859	1860
Total Alkalinity, ppm	290.0	293.7	295.0	300.0	303.8	310.0	290.0	298.5	305.0

Well Number	CM4-3			CM4-4			CM4-5		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	153.3	155.3	158.7	168.6	170.6	173.8	177.4	179.8	182.9
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	386.0	392.0	396.0	382.0	389.1	399.0	383.0	384.3	386.0
Sulfate, ppm	315.0	319.4	326.0	309.0	315.4	322.0	315.0	324.7	333.0
Chloride, ppm	179.0	184.2	187.0	181.0	184.9	189.0	179.0	182.9	186.0
Conductivity, umhos	1860	1863	1870	1850	1854	1860	1840	1846	1850
Total Alkalinity, ppm	298.0	301.4	305.0	295.0	300.6	307.0	285.0	291.1	298.0

Well Number	CM4-6			CM4-7			CM4-8		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	183.6	186.6	189.7	188.3	191.9	195.2	179.6	182.7	184.5
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	29.9	30.2
Sodium, ppm	384.0	387.9	390.0	382.0	387.4	398.0	383.0	386.8	389.0
Sulfate, ppm	322.0	326.2	338.0	318.0	323.7	336.0	311.0	315.8	320.0
Chloride, ppm	179.0	181.3	185.0	179.0	182.8	185.0	179.0	181.0	183.0
Conductivity, umhos	1850	1851	1860	1850	1851	1860	1830	1838	1840
Total Alkalinity, ppm	290.0	295.0	300.0	285.0	295.1	303.0	290.0	296.3	300.0

Well Number	CM4-9			CM4-10			CM4-11		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	175.2	178.7	180.5	178.6	182.2	184.2	186.2	189.4	191.3
Barometric Pressure, in.	29.8	29.9	30.2	29.8	29.9	30.2	29.8	29.9	30.1
Sodium, ppm	389.0	390.5	392.0	399.0	400.5	402.0	397.0	399.5	402.0
Sulfate, ppm	316.0	322.3	331.0	321.0	326.3	339.0	325.0	334.0	342.0
Chloride, ppm	183.0	186.8	189.0	185.0	186.5	189.0	182.0	183.3	185.0
Conductivity, umhos	1850	1858	1860	1880	1883	1890	1880	1880	1880
Total Alkalinity, ppm	290.0	297.0	303.0	295.0	303.8	315.0	295.0	298.3	300.0

Well Number	CM4-12			CM4-13			CM4-14		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	201.8	205.4	206.8	175.2	179.0	180.8	179.3	183.2	185.0
Barometric Pressure, in.	29.8	29.9	30.1	29.8	29.9	30.1	29.8	29.9	30.1
Sodium, ppm	398.0	400.8	404.0	399.0	401.8	405.0	403.0	406.3	411.0
Sulfate, ppm	329.0	335.0	340.0	331.0	338.5	345.0	359.0	363.0	367.0
Chloride, ppm	181.0	183.5	185.0	181.0	183.5	185.0	185.0	186.5	189.0
Conductivity, umhos	1880	1880	1880	1890	1890	1890	1920	1930	1940
Total Alkalinity, ppm	290.0	297.5	300.0	290.0	297.5	300.0	283.0	287.0	290.0

Well Number	CM4-15			CM4-16			CM4-17		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	209.3	212.7	214.3	223.0	226.2	227.8	228.6	231.7	233.4
Barometric Pressure, in.	29.8	29.9	30.1	29.8	29.9	30.1	29.8	29.9	30.1
Sodium, ppm	405.0	407.8	412.0	403.0	407.5	412.0	400.0	404.5	410.0
Sulfate, ppm	350.0	356.3	364.0	348.0	353.3	361.0	354.0	361.5	373.0
Chloride, ppm	185.0	186.0	187.0	185.0	186.5	187.0	185.0	186.8	189.0
Conductivity, umhos	1910	1915	1920	1920	1923	1930	1930	1938	1940
Total Alkalinity, ppm	290.0	295.0	300.0	285.0	290.0	295.0	290.0	292.5	295.0

Well Number	CM4-18			CM3-5			CM3-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	219.4	222.4	224.1	193.1	198.8	215.7	195.0	201.8	216.9
Barometric Pressure, in.	29.8	29.9	30.1	29.1	29.9	30.2	29.8	29.9	30.1
Sodium, ppm	411.0	415.8	420.0	405.0	414.0	420.0	410.0	412.8	418.0
Sulfate, ppm	354.0	361.0	368.0	357.0	368.0	381.0	348.0	364.8	380.0
Chloride, ppm	183.0	187.5	191.0	185.0	186.7	189.0	183.0	189.0	193.0
Conductivity, umhos	1940	1943	1950	1950	1954	1960	1940	1947	1950
Total Alkalinity, ppm	290.0	293.8	300.0	290.0	295.6	300.0	290.0	293.9	300.0

Well Number	CM3-7			CM2-5			CM2-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	208.1	211.1	212.7	143.3	146.5	149.0	144.5	148.2	150.6
Barometric Pressure, in.	29.8	29.9	30.1	29.8	30.1	30.3	29.8	30.1	30.3
Sodium, ppm	414.0	416.0	418.0	398.0	402.0	406.0	397.0	399.8	403.0
Sulfate, ppm	358.0	365.0	371.0	329.0	336.0	341.0	329.0	335.4	349.0
Chloride, ppm	185.0	186.5	188.0	181.0	183.3	185.0	180.0	184.4	187.0
Conductivity, umhos	1950	1950	1950	1890	1890	1890	1890	1890	1890
Total Alkalinity, ppm	288.0	292.8	298.0	290.0	299.1	310.0	295.0	298.5	300.0

Well Number	CM2-7		
	MIN	MEAN	MAX
Water Level, ft.	127.3	131.6	134.1
Barometric Pressure, in.	29.8	30.1	30.3
Sodium, ppm	412.0	416.4	422.0
Sulfate, ppm	345.0	355.9	369.0
Chloride, ppm	185.0	189.0	193.0
Conductivity, umhos	1950	1968	1990
Total Alkalinity, ppm	305.0	310.6	315.0

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
MINING MONITORING REPORT

Month: October – December Year: 1999

Total volume or water level for reporting period: 566,685,743 gallons injected *
* from individual well injection meters – excluding restoration injection

Quality of Injected Fluid (discuss any significant change in the constituents or concentrations of the injected fluid):

	Chloride (ppm)	Sulfate (ppm)	Sodium (ppm)	Alkalinity** (as ppm $CaCO_3$)	pH (SU)
Minimum	520	964	1218	1169	7.3
Maximum	608	1080	1371	1488	8.6

** Alkalinity = Total Carbonate/1.2

Volume of injected fluid:

Month	Average Daily Injection Commercial (gpm)	Average Daily Injection Restoration (gpm)
October	4147	278
November	4342	201
December	4389	119

1. Have any operational problems occurred over the reporting period? No
2. Has any well maintenance (repairs, workovers, etc.) been performed during the period? yes
3. Has any significant change occurred in any of the monitored parameters that might indicate a leak or other failure of any well? no

If the answer to any of the above is yes, describe below.

Question 2:

Rig Workovers: None
Mining wells with casing repaired: I-567

I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL THE ATTACHMENTS AND THAT, I BELIEVE THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE. FURTHER, I CERTIFY AWARENESS THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF A FINE AND IMPRISONMENT.

1/14/00

Signature/Date

Charles R. Miller, Plant Manager

Name/Title (printed)

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
MINING MONITORING REPORT
Fourth Quarter, 1999- page 1

Submitted by:
Crow Butte Resources, Inc.
P.O. Box 169
Crawford, NE 69339

Permit No. NE0122611

Submitted To:
NDEQ - F/C
P.O. Box 98922
Lincoln, NE 68509

Report Date: 01-13-2000

Well Number	SM7-1			SM7-2			SM7-3		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	51.7	52.0	52.2	51.6	52.4	53.7	52.5	52.6	53.2
Barometric Pressure, in.	29.7	30.1	30.4	29.7	30.1	30.4	29.7	30.1	30.4
Sodium, ppm	105.0	107.1	110.0	89.0	90.4	92.0	93.0	96.1	99.0
Sulfate, ppm	43.0	44.6	46.0	30.0	31.1	33.0	38.0	38.4	40.0
Chloride, ppm	5.9	6.4	7.0	4.5	5.5	6.3	5.2	5.7	6.4
Conductivity, umhos	490	501	510	420	424	430	450	456	470
Total Alkalinity, ppm	180.0	187.1	190.0	155.0	162.9	170.0	160.0	171.4	180.0

Well Number	SM7-4			SM7-5			SM7-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	74.4	74.6	74.7	58.3	58.4	58.5	78.8	78.8	78.9
Barometric Pressure, in.	29.7	30.1	30.4	29.9	30.1	30.3	29.9	30.1	30.3
Sodium, ppm	88.0	89.7	92.0	85.0	86.9	89.0	53.0	56.4	62.0
Sulfate, ppm	31.0	31.4	32.0	34.0	35.3	36.0	16.0	17.4	20.0
Chloride, ppm	6.3	6.7	7.6	2.6	3.0	3.5	3.7	4.2	5.0
Conductivity, umhos	430	430	430	430	430	430	360	369	370
Total Alkalinity, ppm	165.0	169.3	175.0	165.0	169.7	175.0	150.0	152.1	155.0

Well Number	SM7-7			SM7-8			SM7-9		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	71.8	71.9	71.9	46.8	47.2	47.5	45.8	46.2	46.4
Barometric Pressure, in.	29.9	30.1	30.3	29.1	29.8	30.2	29.1	29.8	30.2
Sodium, ppm	90.0	92.4	95.0	94.0	98.4	100.0	86.0	89.0	90.0
Sulfate, ppm	38.0	38.3	39.0	53.0	54.9	60.0	33.0	34.3	37.0
Chloride, ppm	3.3	3.6	3.8	5.2	5.5	5.9	4.8	5.0	5.2
Conductivity, umhos	440	440	440	480	490	500	440	440	440
Total Alkalinity, ppm	160.0	170.0	175.0	163.0	168.3	170.0	160.0	165.7	175.0

Well Number	SM7-10			SM7-11			SM7-12		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	54.8	55.2	55.4	78.2	78.4	78.5	50.0	50.5	50.9
Barometric Pressure, in.	29.1	29.8	30.2	29.5	29.8	30.0	29.5	29.8	30.0
Sodium, ppm	86.0	89.3	90.0	54.0	55.3	56.0	85.0	86.4	90.0
Sulfate, ppm	37.0	37.6	38.0	18.0	19.1	20.0	41.0	42.4	43.0
Chloride, ppm	3.0	3.1	3.5	2.1	2.5	3.0	2.8	3.1	3.5
Conductivity, umhos	440	440	440	340	341	350	440	440	440
Total Alkalinity, ppm	155.0	165.7	170.0	135.0	139.7	145.0	160.0	162.9	165.0

Well Number	SM7-13			SM7-14			SM7-15		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	53.7	54.1	54.2	83.5	83.7	83.8	101.5	102.2	102.6
Barometric Pressure, in.	29.8	29.8	30.0	28.8	29.8	30.1	28.8	29.8	30.1
Sodium, ppm	72.0	73.7	76.0	57.0	58.7	60.0	49.0	50.2	51.0
Sulfate, ppm	24.0	25.3	26.0	16.0	17.2	18.0	17.0	19.5	21.0
Chloride, ppm	2.1	2.3	2.6	4.5	5.3	5.9	1.5	2.1	2.4
Conductivity, umhos	380	380	380	330	333	340	330	338	340
Total Alkalinity, ppm	148.0	156.6	160.0	135.0	139.2	140.0	135.0	139.2	145.0

Well Number	SM7-16			SM7-17			SM7-18		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	130.6	130.9	131.2	103.1	103.3	103.6	125.2	125.4	125.5
Barometric Pressure, in.	28.8	29.8	30.1	29.7	29.9	30.1	29.7	29.9	30.1
Sodium, ppm	48.0	49.0	51.0	59.0	60.3	61.0	56.0	57.8	59.0
Sulfate, ppm	14.0	14.8	17.0	16.0	17.3	19.0	19.0	20.0	21.0
Chloride, ppm	1.4	1.7	2.1	3.1	3.6	4.5	1.4	1.8	2.2
Conductivity, umhos	320	322	330	370	373	380	340	340	340
Total Alkalinity, ppm	135.0	138.3	145.0	145.0	154.2	160.0	140.0	145.0	150.0

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Well Number	SM7-19			SM7-20			SM7-21		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	100.4	100.7	101.0	111.5	111.5	111.7	122.9	123.1	123.7
Barometric Pressure, in.	29.7	29.9	30.1	29.8	30.0	30.1	29.8	30.0	30.1
Sodium, ppm	68.0	69.0	70.0	67.0	70.2	72.0	64.0	65.8	67.0
Sulfate, ppm	22.0	22.5	24.0	20.0	20.3	21.0	20.0	20.8	22.0
Chloride, ppm	3.0	4.2	4.9	2.4	2.7	3.0	2.4	2.8	3.1
Conductivity, umhos	350	358	360	350	355	360	350	350	350
Total Alkalinity, ppm	135.0	142.5	150.0	140.0	145.8	150.0	140.0	144.2	150.0

Well Number	SM7-22			SM7-23			SM7-24		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	91.8	92.0	92.5	104.8	105.0	105.5	107.6	108.0	108.2
Barometric Pressure, in.	29.8	30.0	30.1	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	67.0	69.3	72.0	100.0	103.2	107.0	111.0	113.3	116.0
Sulfate, ppm	20.0	20.5	21.0	42.0	44.0	47.0	60.0	62.7	65.0
Chloride, ppm	9.3	11.6	14.0	14.0	15.1	16.0	11.0	12.0	13.0
Conductivity, umhos	370	377	390	500	505	510	540	550	560
Total Alkalinity, ppm	140.0	143.3	150.0	160.0	171.7	175.0	180.0	182.5	185.0

Well Number	SM7-25			SM6-1			SM6-2		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	101.1	101.3	101.7	51.9	52.0	52.0	43.0	43.2	43.3
Barometric Pressure, in.	29.8	30.0	30.2	29.9	30.1	30.3	29.9	30.1	30.3
Sodium, ppm	74.0	75.7	77.0	118.0	121.3	123.0	120.0	123.1	126.0
Sulfate, ppm	19.0	20.5	22.0	51.0	52.1	53.0	50.0	50.6	52.0
Chloride, ppm	5.6	5.9	6.6	9.0	9.5	10.0	12.0	12.6	13.0
Conductivity, umhos	370	370	370	560	560	560	560	567	570
Total Alkalinity, ppm	140.0	151.7	165.0	200.0	207.6	215.0	205.0	208.3	213.0

Well Number	SM6-3			SM6-4			SM6-5		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	34.4	34.7	35.0	47.5	47.8	48.0	41.4	41.8	42.0
Barometric Pressure, in.	29.5	29.8	30.0	29.5	29.8	30.0	29.5	29.8	30.0
Sodium, ppm	118.0	119.6	122.0	116.0	117.6	119.0	114.0	115.1	117.0
Sulfate, ppm	50.0	51.4	53.0	44.0	45.1	46.0	38.0	40.0	42.0
Chloride, ppm	13.0	13.7	14.0	8.0	8.5	9.0	7.3	7.8	8.2
Conductivity, umhos	550	559	560	540	541	550	520	530	540
Total Alkalinity, ppm	198.0	201.6	205.0	200.0	207.9	215.0	200.0	209.7	220.0

Well Number	SM6-6			SM6-7			SM6-8		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	52.5	52.8	53.1	36.5	36.7	36.9	26.9	27.0	27.2
Barometric Pressure, in.	29.5	29.8	30.0	29.5	29.8	30.0	29.5	29.8	30.0
Sodium, ppm	107.0	108.3	110.0	112.0	114.3	116.0	62.0	66.0	74.0
Sulfate, ppm	18.0	18.9	21.0	14.0	15.3	17.0	23.0	25.6	27.0
Chloride, ppm	3.1	3.4	3.7	4.5	5.7	6.7	5.9	7.2	8.0
Conductivity, umhos	480	484	490	500	506	510	490	491	500
Total Alkalinity, ppm	220.0	223.3	230.0	225.0	233.3	240.0	190.0	200.0	205.0

Well Number	SM6-9			SM6-10			SM6-11		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	18.1	18.4	18.7	14.1	14.3	14.5	9.8	10.1	10.5
Barometric Pressure, in.	29.8	30.0	30.1	29.5	29.8	30.0	28.8	29.8	30.1
Sodium, ppm	71.0	72.5	74.0	118.0	119.7	123.0	18.0	19.7	21.0
Sulfate, ppm	13.0	14.2	16.0	46.0	47.0	48.0	14.0	14.5	15.0
Chloride, ppm	5.6	5.9	6.2	7.3	8.0	8.7	5.2	5.7	5.9
Conductivity, umhos	510	510	510	550	551	560	470	477	480
Total Alkalinity, ppm	225.0	230.5	235.0	205.0	212.9	215.0	205.0	207.5	210.0

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Well Number	SM6-12			SM6-13			SM6-14		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	13.8	13.9	14.1	11.2	11.3	11.5	26.2	26.5	26.8
Barometric Pressure, in.	29.5	29.8	30.0	29.8	30.0	30.2	29.7	29.9	30.1
Sodium, ppm	22.0	23.4	25.0	21.0	22.2	23.0	121.0	122.0	124.0
Sulfate, ppm	12.0	13.0	14.0	13.0	14.2	16.0	53.0	54.3	56.0
Chloride, ppm	3.8	4.4	4.9	4.8	5.3	5.6	13.0	13.5	14.0
Conductivity, umhos	510	510	510	520	528	540	560	567	570
Total Alkalinity, ppm	220.0	230.0	235.0	235.0	240.0	245.0	200.0	200.8	205.0

Well Number	SM6-15			SM6-16			SM6-17		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	30.8	31.2	31.5	38.0	38.3	38.6	17.8	18.0	18.4
Barometric Pressure, in.	29.1	29.8	30.2	29.1	29.8	30.2	29.5	29.8	30.0
Sodium, ppm	116.0	119.1	121.0	51.0	52.7	54.0	37.0	37.3	38.0
Sulfate, ppm	50.0	50.1	51.0	7.8	8.4	9.0	5.5	6.6	7.9
Chloride, ppm	13.0	13.7	14.0	3.5	4.0	4.4	4.7	5.1	5.6
Conductivity, umhos	550	559	560	450	453	460	480	487	490
Total Alkalinity, ppm	200.0	201.4	205.0	200.0	205.0	210.0	225.0	229.0	230.0

Well Number	SM6-18			SM6-19			SM6-20		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	22.1	22.5	22.6	35.4	35.7	35.9	19.3	19.4	19.5
Barometric Pressure, in.	29.7	30.1	30.4	29.7	30.1	30.4	29.9	30.1	30.3
Sodium, ppm	119.0	121.3	123.0	52.0	53.3	55.0	17.0	18.7	21.0
Sulfate, ppm	51.0	52.7	54.0	22.0	23.4	25.0	14.0	14.9	16.0
Chloride, ppm	14.0	15.4	18.0	4.8	5.6	6.3	5.9	6.3	6.7
Conductivity, umhos	570	570	570	480	480	480	480	484	490
Total Alkalinity, ppm	195.0	199.3	200.0	198.0	204.7	210.0	205.0	208.0	213.0

Well Number	SM6-21			SM6-22			SM6-23		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	2.7	3.0	3.6	0.2	0.5	1.1	1.4	1.9	2.2
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	19.0	20.2	21.0	18.0	19.5	21.0	24.0	25.0	26.0
Sulfate, ppm	13.0	14.5	15.0	12.0	13.2	14.0	13.0	14.0	15.0
Chloride, ppm	6.3	6.8	7.3	4.2	4.5	4.8	4.5	5.1	5.6
Conductivity, umhos	480	482	490	460	460	460	500	500	500
Total Alkalinity, ppm	210.0	211.7	220.0	205.0	208.0	215.0	225.0	229.2	235.0

Well Number	SM6-24			SM6-25			SM6-26		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	10.2	10.6	11.4	5.1	5.2	5.5	2.3	2.5	2.6
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	23.0	23.5	24.0	22.0	23.0	24.0	25.0	25.7	26.0
Sulfate, ppm	13.0	14.2	15.0	13.0	13.8	15.0	11.0	11.8	13.0
Chloride, ppm	4.9	5.4	5.6	6.3	6.3	6.6	5.6	6.1	6.3
Conductivity, umhos	470	470	470	470	475	480	460	460	460
Total Alkalinity, ppm	200.0	210.8	215.0	200.0	207.5	220.0	195.0	200.8	205.0

Well Number	SM6-27			SM6-28			SM5-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	0.3	0.6	1.1	11.9	12.5	13.5	23.8	24.1	24.5
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.7	29.9	30.1
Sodium, ppm	24.0	25.0	26.0	26.0	27.2	28.0	134.0	135.7	137.0
Sulfate, ppm	12.0	13.2	14.0	20.0	21.3	24.0	55.0	56.2	58.0
Chloride, ppm	4.9	5.3	5.6	4.5	5.0	5.2	13.0	13.2	14.0
Conductivity, umhos	470	470	470	510	517	520	620	628	630
Total Alkalinity, ppm	200.0	208.5	213.0	225.0	230.2	235.0	225.0	233.0	240.0

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Well Number	SM5-2			SM5-3			SM5-4		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	33.1	33.7	34.5	49.5	49.9	50.2	38.2	38.4	38.6
Barometric Pressure, in.	29.7	29.9	30.1	29.7	29.9	30.1	29.7	29.9	30.1
Sodium, ppm	98.0	99.0	101.0	131.0	132.2	133.0	121.0	122.2	123.0
Sulfate, ppm	31.0	31.7	33.0	51.0	51.8	53.0	47.0	48.2	49.0
Chloride, ppm	5.9	6.7	7.1	16.0	16.2	17.0	15.0	15.7	16.0
Conductivity, umhos	460	465	470	610	610	610	560	567	570
Total Alkalinity, ppm	185.0	188.8	190.0	220.0	225.8	235.0	200.0	203.3	205.0

Well Number	SM5-5			SM5-6			SM5-7		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	52.1	52.2	52.3	54.5	54.9	55.2	41.2	41.5	42.0
Barometric Pressure, in.	29.7	29.9	30.1	29.7	29.9	30.1	29.8	30.0	30.1
Sodium, ppm	135.0	136.0	138.0	126.0	127.0	128.0	129.0	129.7	131.0
Sulfate, ppm	53.0	54.5	57.0	56.0	57.2	59.0	56.0	57.3	59.0
Chloride, ppm	13.0	14.3	16.0	15.0	15.0	15.0	10.0	10.5	11.0
Conductivity, umhos	620	622	630	590	590	590	590	590	590
Total Alkalinity, ppm	230.0	232.2	235.0	195.0	204.2	210.0	210.0	215.0	220.0

Well Number	SM5-8			SM5-9			SM5-10		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	43.2	43.5	43.8	40.6	40.8	41.3	30.4	30.8	31.3
Barometric Pressure, in.	29.8	30.0	30.1	29.8	30.0	30.1	29.8	30.0	30.1
Sodium, ppm	121.0	123.0	126.0	119.0	121.2	123.0	120.0	121.8	123.0
Sulfate, ppm	52.0	53.2	54.0	51.0	52.2	54.0	54.0	55.3	56.0
Chloride, ppm	11.0	11.7	12.0	11.0	11.5	12.0	10.0	10.3	11.0
Conductivity, umhos	570	570	570	560	560	560	560	565	570
Total Alkalinity, ppm	200.0	205.5	210.0	200.0	205.0	210.0	200.0	206.3	215.0

Well Number	SM5-11			SM5-12			SM5-13		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	29.6	30.0	30.7	61.8	62.3	62.7	49.2	49.2	49.3
Barometric Pressure, in.	29.8	30.0	30.1	29.8	30.0	30.1	29.9	30.1	30.3
Sodium, ppm	128.0	131.5	133.0	122.0	124.0	125.0	118.0	120.3	122.0
Sulfate, ppm	54.0	54.8	56.0	54.0	54.8	56.0	52.0	53.3	54.0
Chloride, ppm	15.0	15.7	17.0	10.0	10.8	11.0	13.0	13.7	14.0
Conductivity, umhos	600	608	610	570	570	570	560	560	560
Total Alkalinity, ppm	210.0	217.5	220.0	200.0	204.3	210.0	195.0	201.1	205.0

Well Number	SM5-14			SM5-15			SM5-16		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	24.4	24.5	24.6	32.4	32.7	32.8	5.8	5.9	6.0
Barometric Pressure, in.	29.9	30.1	30.3	29.9	30.1	30.3	29.9	30.1	30.3
Sodium, ppm	105.0	105.7	107.0	122.0	123.6	125.0	97.0	99.7	102.0
Sulfate, ppm	47.0	47.9	49.0	49.0	50.9	53.0	36.0	36.3	37.0
Chloride, ppm	7.0	7.1	7.4	15.0	15.1	16.0	5.7	5.9	5.9
Conductivity, umhos	490	490	490	570	570	570	460	460	460
Total Alkalinity, ppm	170.0	174.7	180.0	200.0	205.0	210.0	178.0	181.1	185.0

Well Number	SM5-17			SM5-18			SM5-19		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	62.2	62.2	62.3	78.7	78.8	78.9	50.1	50.4	50.6
Barometric Pressure, in.	29.9	30.1	30.3	29.9	30.1	30.3	29.7	30.1	30.4
Sodium, ppm	88.0	89.4	91.0	92.0	93.7	95.0	103.0	105.7	108.0
Sulfate, ppm	35.0	35.6	37.0	36.0	37.3	38.0	47.0	48.3	50.0
Chloride, ppm	1.7	2.1	2.4	2.8	3.1	3.7	3.5	3.8	4.1
Conductivity, umhos	420	420	420	440	440	440	490	491	500
Total Alkalinity, ppm	165.0	170.7	180.0	160.0	169.3	175.0	180.0	183.6	190.0

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Well Number	SM5-20			SM5-21			SM5-22		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	45.3	45.6	45.8	33.3	33.5	33.8	20.2	20.7	20.9
Barometric Pressure, in.	28.8	29.8	30.1	28.8	29.8	30.1	28.8	29.8	30.1
Sodium, ppm	105.0	106.3	108.0	101.0	101.7	103.0	100.0	101.5	102.0
Sulfate, ppm	52.0	53.3	56.0	42.0	42.7	43.0	43.0	43.3	44.0
Chloride, ppm	5.2	5.6	5.9	5.2	5.6	5.9	3.1	3.4	3.7
Conductivity, umhos	490	500	510	470	472	480	470	470	470
Total Alkalinity, ppm	170.0	179.2	185.0	173.0	177.7	180.0	175.0	180.8	185.0

Well Number	SM5-23			SM5-24			SM5-25		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	29.5	29.8	30.1	22.9	22.9	23.0	42.1	42.1	42.2
Barometric Pressure, in.	28.8	29.8	30.1	28.8	29.8	30.1	28.8	29.8	30.1
Sodium, ppm	100.0	100.8	103.0	92.0	93.3	97.0	97.0	98.5	100.0
Sulfate, ppm	42.0	43.0	44.0	39.0	39.2	40.0	45.0	46.3	47.0
Chloride, ppm	3.1	3.4	3.7	5.6	5.8	5.9	6.3	6.6	7.0
Conductivity, umhos	470	470	470	450	450	450	470	470	470
Total Alkalinity, ppm	170.0	176.7	185.0	158.0	167.2	175.0	163.0	169.7	175.0

Well Number	SM4-1			SM4-2			SM4-3		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	73.3	73.3	73.4	69.4	69.7	70.1	81.5	81.6	81.6
Barometric Pressure, in.	29.8	30.0	30.1	28.8	29.8	30.1	28.8	29.8	30.1
Sodium, ppm	74.0	77.0	79.0	130.0	130.8	132.0	125.0	126.8	128.0
Sulfate, ppm	23.0	24.5	26.0	97.0	99.2	102.0	92.0	94.5	97.0
Chloride, ppm	3.7	3.9	4.3	15.0	15.5	16.0	13.0	13.2	14.0
Conductivity, umhos	380	380	380	630	630	630	610	615	620
Total Alkalinity, ppm	145.0	150.0	160.0	165.0	175.8	185.0	170.0	171.3	175.0

Well Number	SM4-4			SM4-5A			SM4-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	21.0	21.1	21.2	42.1	42.5	43.1	30.1	30.7	31.2
Barometric Pressure, in.	29.7	29.9	30.1	29.8	30.0	30.1	29.7	29.9	30.1
Sodium, ppm	129.0	131.2	134.0	117.0	118.7	121.0	145.0	146.7	148.0
Sulfate, ppm	76.0	78.2	80.0	51.0	52.2	53.0	46.0	47.8	49.0
Chloride, ppm	15.0	15.3	16.0	14.0	14.5	15.0	13.0	13.8	14.0
Conductivity, umhos	630	630	630	560	560	560	660	660	660
Total Alkalinity, ppm	195.0	198.3	205.0	195.0	198.3	200.0	263.0	265.5	270.0

Well Number	SM4-7			SM4-8			SM4-9		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	37.9	38.1	38.2	35.4	35.8	36.5	36.4	36.7	36.9
Barometric Pressure, in.	29.7	30.1	30.4	29.1	29.8	30.2	29.7	30.1	30.4
Sodium, ppm	117.0	118.4	120.0	156.0	160.0	163.0	154.0	156.4	159.0
Sulfate, ppm	50.0	51.0	52.0	49.0	49.9	50.0	49.0	50.6	52.0
Chloride, ppm	21.0	21.4	22.0	12.0	12.6	13.0	12.0	12.6	13.0
Conductivity, umhos	550	557	560	710	710	710	670	684	690
Total Alkalinity, ppm	180.0	183.6	190.0	285.0	290.0	295.0	275.0	281.1	285.0

Well Number	SM4-10A			SM4-11A			SM3-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	33.3	33.5	34.1	38.5	39.2	39.6	58.5	59.1	59.2
Barometric Pressure, in.	29.9	30.1	30.3	29.7	30.1	30.4	29.1	29.8	30.2
Sodium, ppm	162.0	164.0	165.0	161.0	162.7	164.0	141.0	143.4	146.0
Sulfate, ppm	52.0	53.6	56.0	53.0	54.0	55.0	97.0	99.0	101.0
Chloride, ppm	11.0	11.0	11.0	12.0	12.6	13.0	14.0	14.1	15.0
Conductivity, umhos	720	727	730	720	720	720	680	683	690
Total Alkalinity, ppm	293.0	300.4	305.0	295.0	295.7	300.0	205.0	207.9	210.0

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Well Number	SM3-2			SM3-3			SM2-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	79.5	80.0	80.2	46.0	46.1	46.3	36.9	37.6	37.9
Barometric Pressure, in.	29.1	29.8	30.2	29.1	29.8	30.2	29.7	30.1	30.4
Sodium, ppm	95.0	96.4	99.0	96.0	98.3	100.0	117.0	117.7	119.0
Sulfate, ppm	36.0	36.7	39.0	39.0	39.9	41.0	46.0	47.1	48.0
Chloride, ppm	3.1	3.6	4.1	5.2	5.2	5.5	17.0	17.0	17.0
Conductivity, umhos	450	457	460	460	463	470	550	550	550
Total Alkalinity, ppm	170.0	176.4	180.0	175.0	175.7	180.0	190.0	190.0	190.0

Well Number	SM2-2			SM2-3			SM1-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	13.1	13.7	14.1	32.8	33.1	33.2	22.2	22.7	23.0
Barometric Pressure, in.	29.7	30.1	30.4	29.7	30.1	30.4	29.1	29.8	30.2
Sodium, ppm	97.0	98.9	100.0	118.0	120.6	122.0	98.0	100.1	101.0
Sulfate, ppm	43.0	44.3	45.0	50.0	52.1	54.0	32.0	32.6	34.0
Chloride, ppm	9.0	9.4	10.0	11.0	11.9	13.0	5.9	6.2	6.7
Conductivity, umhos	470	473	480	550	550	550	470	470	470
Total Alkalinity, ppm	160.0	168.6	175.0	198.0	200.4	205.0	180.0	183.6	190.0

Well Number	SM1-2			SM1-3			PR-8		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	14.3	14.6	14.9	46.0	46.3	46.6	142.9	142.9	142.9
Barometric Pressure, in.	29.1	29.8	30.2	29.1	29.8	30.2	29.8	29.8	29.8
Sodium, ppm	124.0	126.4	128.0	97.0	98.9	100.0	387.0	387.0	387.0
Sulfate, ppm	60.0	61.3	62.0	40.0	40.9	42.0	342.0	342.0	342.0
Chloride, ppm	13.0	13.0	13.0	7.0	7.3	7.8	145.0	145.0	145.0
Conductivity, umhos	590	590	590	470	470	470	1830	1830	1830
Total Alkalinity, ppm	200.0	201.4	205.0	170.0	174.0	180.0	330.0	330.0	330.0

Well Number	PR-15			IJ-13			CM7-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	130.7	130.7	130.7	164.4	164.4	164.4	204.0	206.0	210.4
Barometric Pressure, in.	29.8	29.8	29.8	29.8	29.8	29.8	29.7	30.1	30.4
Sodium, ppm	273.0	273.0	273.0	408.0	408.0	408.0	382.0	387.7	395.0
Sulfate, ppm	216.0	216.0	216.0	357.0	357.0	357.0	320.0	331.9	362.0
Chloride, ppm	111.0	111.0	111.0	4.8	25.0	165.0	162.0	176.9	186.0
Conductivity, umhos	1340	1340	1340	1960	1960	1960	1850	1854	1860
Total Alkalinity, ppm	270.0	270.0	270.0	360.0	360.0	360.0	290.0	297.9	305.0

Well Number	CM7-2			CM7-3			CM7-4		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	220.6	224.3	227.3	189.0	194.7	197.8	191.4	198.8	202.3
Barometric Pressure, in.	29.9	30.1	30.3	29.9	30.1	30.3	29.9	30.1	30.3
Sodium, ppm	376.0	383.7	391.0	397.0	402.6	406.0	380.0	385.0	391.0
Sulfate, ppm	319.0	323.4	330.0	317.0	321.4	327.0	308.0	315.0	323.0
Chloride, ppm	182.0	192.7	199.0	191.0	201.6	214.0	184.0	188.6	196.0
Conductivity, umhos	1860	1873	1880	1880	1913	1940	1840	1849	1860
Total Alkalinity, ppm	285.0	290.0	295.0	288.0	296.6	305.0	290.0	293.3	300.0

Well Number	CM7-5			CM7-6			CM7-7		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	196.4	204.5	208.1	185.1	191.8	197.0	193.9	197.5	200.4
Barometric Pressure, in.	29.9	30.1	30.3	29.9	30.1	30.3	29.1	29.8	30.2
Sodium, ppm	393.0	397.3	406.0	392.0	399.3	409.0	388.0	397.0	403.0
Sulfate, ppm	311.0	317.9	327.0	316.0	321.9	327.0	335.0	348.9	360.0
Chloride, ppm	198.0	206.4	220.0	205.0	211.7	221.0	186.0	190.4	193.0
Conductivity, umhos	1880	1911	1940	1920	1939	1960	1900	1916	1930
Total Alkalinity, ppm	285.0	291.4	300.0	288.0	294.7	300.0	290.0	294.0	300.0

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Well Number	CM7-8			CM7-9			CM7-10		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	200.9	202.9	205.4	253.1	255.4	257.6	244.7	247.0	248.9
Barometric Pressure, in.	29.1	29.8	30.2	29.1	29.8	30.2	29.1	29.8	30.2
Sodium, ppm	393.0	397.3	406.0	391.0	397.9	405.0	400.0	405.6	409.0
Sulfate, ppm	332.0	335.0	339.0	316.0	324.3	330.0	351.0	358.6	368.0
Chloride, ppm	186.0	188.7	191.0	193.0	196.6	202.0	189.0	192.4	195.0
Conductivity, umhos	1880	1889	1900	1880	1901	1930	1940	1944	1950
Total Alkalinity, ppm	290.0	292.6	295.0	290.0	292.6	295.0	285.0	290.0	295.0

Well Number	CM7-11			CM7-12			CM7-13		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	211.8	214.6	216.9	197.7	200.9	204.3	180.0	183.7	188.7
Barometric Pressure, in.	29.1	29.8	30.2	29.1	29.8	30.2	29.1	29.8	30.2
Sodium, ppm	398.0	400.9	404.0	400.0	404.1	406.0	402.0	405.0	408.0
Sulfate, ppm	356.0	360.6	364.0	352.0	358.7	369.0	361.0	364.6	371.0
Chloride, ppm	187.0	191.1	194.0	187.0	190.1	193.0	187.0	190.0	195.0
Conductivity, umhos	1930	1940	1950	1940	1947	1950	1960	1963	1970
Total Alkalinity, ppm	280.0	287.1	290.0	285.0	293.3	300.0	283.0	289.9	295.0

Well Number	CM7-14			CM7-15			CM7-16		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	165.9	169.8	176.9	177.6	182.5	191.9	184.7	189.9	203.6
Barometric Pressure, in.	29.1	29.8	30.2	29.1	29.8	30.2	29.1	29.8	30.2
Sodium, ppm	396.0	399.7	404.0	410.0	413.0	419.0	405.0	408.3	415.0
Sulfate, ppm	363.0	372.1	381.0	360.0	362.6	368.0	344.0	349.1	357.0
Chloride, ppm	184.0	187.3	191.0	186.0	190.0	193.0	182.0	186.3	191.0
Conductivity, umhos	1920	1939	1960	1930	1960	1970	1940	1941	1950
Total Alkalinity, ppm	283.0	289.0	295.0	290.0	296.1	300.0	290.0	294.3	300.0

Well Number	CM6-1			CM6-2			CM6-3		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	103.4	107.8	113.9	106.6	110.5	116.3	98.6	102.8	108.1
Barometric Pressure, in.	29.7	29.9	30.1	29.7	29.9	30.1	29.7	29.9	30.1
Sodium, ppm	407.0	409.7	415.0	401.0	404.8	408.0	402.0	405.8	409.0
Sulfate, ppm	370.0	379.3	393.0	376.0	383.5	387.0	355.0	361.3	368.0
Chloride, ppm	191.0	195.3	198.0	178.0	181.3	183.0	182.0	185.3	188.0
Conductivity, umhos	1950	1963	1980	1930	1937	1940	1920	1928	1930
Total Alkalinity, ppm	270.0	274.7	280.0	280.0	280.0	280.0	285.0	290.0	295.0

Well Number	CM6-4			CM6-5			CM6-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	123.1	127.3	130.1	106.4	114.3	122.8	102.3	110.2	117.6
Barometric Pressure, in.	29.9	30.1	30.3	29.5	29.8	30.0	29.5	29.8	30.0
Sodium, ppm	389.0	399.7	409.0	400.0	404.1	409.0	422.0	435.1	455.0
Sulfate, ppm	354.0	364.0	376.0	372.0	380.4	387.0	380.0	398.2	420.0
Chloride, ppm	182.0	184.3	186.0	179.0	182.7	184.0	191.0	197.7	204.0
Conductivity, umhos	1930	1934	1950	1920	1930	1940	2010	2070	2150
Total Alkalinity, ppm	285.0	291.9	300.0	280.0	282.9	285.0	298.0	306.2	320.0

Well Number	CM6-7			CM6-8			CM6-9		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	92.9	99.7	105.9	94.1	100.3	105.0	90.1	95.8	99.8
Barometric Pressure, in.	29.5	29.8	30.0	29.5	29.8	30.0	29.5	29.8	30.0
Sodium, ppm	402.0	406.3	409.0	402.0	408.0	415.0	407.0	426.0	442.0
Sulfate, ppm	373.0	382.0	394.0	372.0	374.4	380.0	364.0	375.6	391.0
Chloride, ppm	179.0	181.3	184.0	186.0	188.6	196.0	184.0	194.9	204.0
Conductivity, umhos	1940	1947	1960	1950	1960	1970	1940	2017	2090
Total Alkalinity, ppm	280.0	287.1	290.0	280.0	286.9	293.0	290.0	297.9	310.0

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Well Number	CM6-10			CM6-11			CM6-12		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	78.1	82.7	86.9	61.7	65.3	70.1	103.5	108.0	110.6
Barometric Pressure, in.	29.5	29.8	30.0	29.5	29.8	30.0	28.8	29.8	30.1
Sodium, ppm	404.0	412.0	418.0	406.0	410.4	416.0	408.0	416.3	423.0
Sulfate, ppm	370.0	378.9	389.0	345.0	357.1	390.0	366.0	376.7	386.0
Chloride, ppm	179.0	183.9	186.0	179.0	187.0	193.0	184.0	187.2	191.0
Conductivity, umhos	1950	1957	1970	1940	1946	1970	1970	1982	1990
Total Alkalinity, ppm	280.0	284.3	290.0	283.0	291.6	300.0	290.0	295.8	300.0

Well Number	CM6-13			CM6-14			CM6-15		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	111.7	116.0	119.2	103.9	108.3	111.9	105.6	110.4	114.0
Barometric Pressure, in.	28.8	29.8	30.1	28.8	29.8	30.1	28.8	29.8	30.1
Sodium, ppm	406.0	411.5	414.0	398.0	403.5	407.0	401.0	405.5	410.0
Sulfate, ppm	347.0	354.5	359.0	353.0	360.2	366.0	362.0	367.3	375.0
Chloride, ppm	186.0	187.7	189.0	182.0	184.0	186.0	179.0	181.8	184.0
Conductivity, umhos	1940	1943	1950	1920	1930	1940	1930	1932	1940
Total Alkalinity, ppm	295.0	299.3	303.0	288.0	290.7	293.0	285.0	288.3	295.0

Well Number	CM6-16A			CM6-17			CM6-18		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	103.8	108.5	112.2	97.1	101.2	104.6	84.9	96.8	101.7
Barometric Pressure, in.	28.8	29.8	30.1	29.8	30.0	30.1	29.8	30.0	30.1
Sodium, ppm	401.0	405.8	409.0	400.0	402.2	405.0	400.0	402.2	406.0
Sulfate, ppm	351.0	363.3	374.0	355.0	359.5	366.0	351.0	363.7	376.0
Chloride, ppm	184.0	185.8	189.0	182.0	185.2	189.0	181.0	184.8	189.0
Conductivity, umhos	1930	1940	1950	1930	1930	1930	1930	1932	1940
Total Alkalinity, ppm	280.0	287.5	290.0	285.0	291.3	295.0	285.0	290.8	300.0

Well Number	CM6-19			CM6-20			CM6-21		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	81.4	85.9	88.7	51.6	55.7	58.9	48.0	51.2	53.5
Barometric Pressure, in.	29.8	30.0	30.1	29.5	29.8	30.0	29.5	29.8	30.0
Sodium, ppm	404.0	408.5	412.0	413.0	416.4	421.0	398.0	402.7	407.0
Sulfate, ppm	361.0	365.8	374.0	343.0	349.4	355.0	346.0	352.9	360.0
Chloride, ppm	181.0	185.3	188.0	191.0	196.0	203.0	182.0	187.3	191.0
Conductivity, umhos	1940	1953	1970	1950	1964	1980	1910	1916	1920
Total Alkalinity, ppm	280.0	288.0	295.0	290.0	296.4	300.0	290.0	290.7	295.0

Well Number	CM6-22			CM6-23			CM6-24		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	45.6	48.5	51.5	43.4	46.2	48.9	42.3	44.2	45.8
Barometric Pressure, in.	29.5	29.8	30.0	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	400.0	403.3	406.0	401.0	406.7	413.0	400.0	404.8	410.0
Sulfate, ppm	344.0	349.9	356.0	333.0	340.0	350.0	328.0	333.5	341.0
Chloride, ppm	186.0	188.3	191.0	187.0	190.7	195.0	184.0	186.3	188.0
Conductivity, umhos	1910	1917	1920	1910	1915	1920	1890	1898	1900
Total Alkalinity, ppm	280.0	285.7	290.0	305.0	306.7	310.0	295.0	305.0	310.0

Well Number	CM6-25			CM6-26			CM6-27		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	69.0	73.9	76.5	66.0	70.2	72.2	46.0	47.2	48.8
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	398.0	403.3	407.0	398.0	401.7	407.0	397.0	401.2	405.0
Sulfate, ppm	349.0	357.2	366.0	345.0	352.7	357.0	324.0	329.5	339.0
Chloride, ppm	182.0	184.3	186.0	182.0	185.6	191.0	188.0	191.3	194.0
Conductivity, umhos	1920	1920	1920	1910	1915	1920	1890	1898	1910
Total Alkalinity, ppm	290.0	295.5	300.0	290.0	294.8	299.0	305.0	307.5	310.0

Well Number	CM6-28			CM6-29			CM6-30		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	53.1	54.7	56.0	66.0	70.0	72.6	57.8	60.2	61.7
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.8	30.0	30.2
Sodium, ppm	389.0	397.5	401.0	403.0	405.3	408.0	391.0	396.5	400.0
Sulfate, ppm	314.0	322.0	330.0	332.0	345.3	357.0	317.0	325.5	335.0
Chloride, ppm	180.0	182.3	186.0	185.0	189.0	193.0	184.0	186.3	188.0
Conductivity, umhos	1840	1855	1860	1920	1928	1930	1870	1877	1880
Total Alkalinity, ppm	300.0	306.7	310.0	290.0	295.5	300.0	300.0	300.8	305.0

Well Number	CM6-31			CM6-32			CM5-1		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	59.5	62.2	63.9	65.5	68.3	70.6	152.3	156.6	159.6
Barometric Pressure, in.	29.8	30.0	30.2	29.8	30.0	30.2	29.7	30.1	30.4
Sodium, ppm	399.0	402.3	407.0	404.0	408.7	412.0	412.0	421.9	430.0
Sulfate, ppm	326.0	331.3	339.0	333.0	339.8	349.0	356.0	364.6	374.0
Chloride, ppm	180.0	183.4	186.0	180.0	184.6	188.0	188.0	192.6	196.0
Conductivity, umhos	1880	1892	1900	1910	1913	1920	1940	1981	2010
Total Alkalinity, ppm	300.0	308.0	310.0	300.0	305.8	310.0	295.0	305.0	315.0

Well Number	CM5-2			CM5-3			CM5-4		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	154.7	158.8	162.5	173.6	177.0	179.3	158.8	162.3	164.1
Barometric Pressure, in.	29.7	30.1	30.4	29.7	30.1	30.4	29.7	30.1	30.4
Sodium, ppm	399.0	419.3	459.0	393.0	395.7	401.0	400.0	402.1	407.0
Sulfate, ppm	353.0	368.9	401.0	328.0	340.0	353.0	327.0	333.9	338.0
Chloride, ppm	182.0	193.0	215.0	182.0	183.7	186.0	182.0	184.9	188.0
Conductivity, umhos	1910	1990	2170	1880	1880	1880	1880	1886	1890
Total Alkalinity, ppm	295.0	303.3	320.0	290.0	296.9	300.0	295.0	298.6	305.0

Well Number	CM5-5			CM5-6			CM5-7		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	144.2	147.3	149.3	142.9	146.2	152.2	140.1	141.7	145.3
Barometric Pressure, in.	29.7	30.1	30.4	29.7	29.9	30.1	29.7	29.9	30.1
Sodium, ppm	400.0	404.6	410.0	397.0	401.0	405.0	397.0	400.8	405.0
Sulfate, ppm	332.0	337.9	345.0	334.0	339.8	347.0	340.0	351.8	358.0
Chloride, ppm	180.0	182.7	186.0	181.0	184.2	186.0	182.0	182.8	184.0
Conductivity, umhos	1890	1893	1900	1870	1882	1890	1890	1897	1900
Total Alkalinity, ppm	295.0	300.0	305.0	290.0	295.0	305.0	293.0	296.8	300.0

Well Number	CM5-8			CM5-9			CM5-10		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	147.9	152.6	160.0	135.5	140.1	150.4	127.9	132.8	142.4
Barometric Pressure, in.	29.7	29.9	30.1	29.7	29.9	30.1	29.7	29.9	30.1
Sodium, ppm	442.0	449.3	458.0	403.0	406.3	412.0	409.0	411.2	412.0
Sulfate, ppm	391.0	398.7	411.0	346.0	349.7	353.0	350.0	359.2	366.0
Chloride, ppm	202.0	207.8	212.0	182.0	183.5	187.0	186.0	191.2	196.0
Conductivity, umhos	2100	2120	2130	1910	1918	1920	1920	1955	1990
Total Alkalinity, ppm	320.0	322.5	325.0	290.0	295.8	300.0	290.0	295.0	300.0

Well Number	CM5-11			CM5-12			CM5-13		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	116.8	122.8	134.1	106.5	111.2	121.4	109.6	113.7	117.4
Barometric Pressure, in.	29.7	29.9	30.1	29.7	29.9	30.1	28.8	29.8	30.1
Sodium, ppm	411.0	415.7	423.0	404.0	407.7	413.0	412.0	418.3	427.0
Sulfate, ppm	352.0	361.2	377.0	345.0	357.3	390.0	377.0	384.2	391.0
Chloride, ppm	189.0	192.3	196.0	184.0	187.3	189.0	191.0	200.2	209.0
Conductivity, umhos	1930	1950	1960	1910	1918	1920	1970	2013	2070
Total Alkalinity, ppm	290.0	295.8	300.0	283.0	286.3	290.0	280.0	285.5	290.0

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Well Number	CM5-18			CM5-19			CM5-20		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	114.6	118.9	122.8	147.5	152.1	157.4	120.0	123.9	129.4
Barometric Pressure, in.	28.8	29.8	30.1	28.8	29.8	30.1	28.8	29.8	30.1
Sodium, ppm	400.0	404.2	410.0	400.0	407.0	411.0	401.0	407.0	411.0
Sulfate, ppm	345.0	355.3	365.0	349.0	359.7	369.0	351.0	357.5	363.0
Chloride, ppm	184.0	186.7	191.0	182.0	185.5	188.0	182.0	185.3	189.0
Conductivity, umhos	1920	1922	1930	1930	1937	1940	1930	1933	1940
Total Alkalinity, ppm	290.0	290.0	290.0	295.0	298.0	300.0	290.0	290.8	295.0

Well Number	CM5-21			CM5-22			CM5-23		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	106.4	110.4	114.5	111.1	114.5	117.9	118.5	121.5	125.4
Barometric Pressure, in.	28.8	29.8	30.1	29.8	30.0	30.1	29.8	30.0	30.1
Sodium, ppm	403.0	407.7	414.0	400.0	407.8	417.0	399.0	403.3	406.0
Sulfate, ppm	348.0	362.3	370.0	357.0	363.7	378.0	352.0	363.3	374.0
Chloride, ppm	180.0	185.7	188.0	181.0	185.3	189.0	182.0	186.2	189.0
Conductivity, umhos	1920	1937	1940	1940	1943	1950	1930	1933	1940
Total Alkalinity, ppm	285.0	291.3	295.0	293.0	298.2	303.0	285.0	288.3	290.0

Well Number	CM5-24			CM5-25			CM5-26		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	124.6	127.9	131.4	128.0	131.9	134.9	165.6	169.6	171.6
Barometric Pressure, in.	29.8	30.0	30.1	29.8	30.0	30.1	29.8	30.0	30.1
Sodium, ppm	403.0	406.0	408.0	403.0	407.8	413.0	408.0	410.0	411.0
Sulfate, ppm	353.0	357.8	369.0	363.0	372.0	378.0	357.0	364.5	378.0
Chloride, ppm	184.0	186.7	189.0	181.0	185.0	189.0	182.0	185.2	189.0
Conductivity, umhos	1920	1940	1950	1950	1955	1960	1940	1948	1950
Total Alkalinity, ppm	285.0	292.7	298.0	295.0	296.7	300.0	280.0	289.7	295.0

Well Number	CM5-27			CM4-1			CM4-2		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	190.5	193.5	196.9	142.8	145.2	148.5	162.5	164.4	167.2
Barometric Pressure, in.	29.8	30.0	30.1	29.7	30.1	30.4	29.7	30.1	30.4
Sodium, ppm	413.0	415.0	417.0	393.0	398.7	405.0	385.0	387.4	391.0
Sulfate, ppm	359.0	367.0	376.0	327.0	330.9	338.0	316.0	327.9	336.0
Chloride, ppm	184.0	186.5	188.0	182.0	184.0	186.0	184.0	184.7	186.0
Conductivity, umhos	1950	1962	1970	1870	1880	1890	1860	1860	1860
Total Alkalinity, ppm	295.0	298.8	305.0	300.0	303.6	315.0	293.0	297.3	300.0

Well Number	CM4-3			CM4-4			CM4-5		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	150.7	153.3	155.7	166.2	168.7	171.1	175.7	178.0	180.0
Barometric Pressure, in.	29.9	30.1	30.3	29.9	30.1	30.3	29.9	30.1	30.3
Sodium, ppm	389.0	393.4	398.0	389.0	391.6	393.0	378.0	380.7	385.0
Sulfate, ppm	311.0	322.0	330.0	304.0	314.1	321.0	312.0	324.6	331.0
Chloride, ppm	186.0	187.9	191.0	184.0	186.3	188.0	180.0	181.9	184.0
Conductivity, umhos	1860	1864	1870	1850	1851	1860	1840	1841	1850
Total Alkalinity, ppm	290.0	297.9	305.0	295.0	301.9	310.0	290.0	290.7	295.0

Well Number	CM4-6			CM4-7			CM3-5		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	181.6	184.8	187.1	185.7	189.8	192.5	194.8	198.5	202.6
Barometric Pressure, in.	29.9	30.1	30.3	29.9	30.1	30.3	29.8	30.0	30.1
Sodium, ppm	380.0	384.7	390.0	377.0	382.9	387.0	408.0	414.8	420.0
Sulfate, ppm	321.0	326.7	335.0	313.0	321.1	328.0	361.0	369.7	379.0
Chloride, ppm	181.0	182.7	186.0	180.0	183.3	186.0	186.0	189.7	193.0
Conductivity, umhos	1840	1851	1860	1850	1851	1860	1960	1963	1970
Total Alkalinity, ppm	290.0	295.4	300.0	295.0	295.7	300.0	290.0	295.8	300.0

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Well Number	CM3-6			CM2-5			CM2-6		
	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX
Water Level, ft.	194.6	201.0	218.7	141.9	145.0	147.9	143.9	147.3	150.7
Barometric Pressure, in.	29.1	29.8	30.2	29.7	30.1	30.4	29.7	30.1	30.4
Sodium, ppm	402.0	406.1	411.0	403.0	404.6	407.0	392.0	396.6	402.0
Sulfate, ppm	356.0	365.1	375.0	325.0	336.6	352.0	324.0	334.1	343.0
Chloride, ppm	189.0	190.7	193.0	182.0	186.4	192.0	184.0	186.7	189.0
Conductivity, umhos	1940	1947	1950	1900	1909	1920	1880	1887	1890
Total Alkalinity, ppm	290.0	293.6	305.0	300.0	306.4	315.0	290.0	295.4	300.0

Well Number	CM2-7		
	MIN	MEAN	MAX
Water Level, ft.	128.0	132.1	135.1
Barometric Pressure, in.	29.7	30.1	30.4
Sodium, ppm	411.0	427.1	455.0
Sulfate, ppm	350.0	374.1	407.0
Chloride, ppm	188.0	197.6	212.0
Conductivity, umhos	1950	2039	2170
Total Alkalinity, ppm	305.0	319.0	348.0

CROW BUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD AND MATERIALS USED		TD FTS	FINAL FTS	DATE	INSPECTED BY:
R-459	8 Bags Plug Gel	Soda Ash	28	68	12/3/99	
R-460	12 Bags Plug Gel	Soda Ash	28	63	12/3/99	
R-461	12 Bags Plug Gel	Soda Ash	28	61	12/6/99	D.C.
R-462	11 Bags Plug Gel	Soda Ash	27	83	12/7/99	
R-463	12 Bags Plug Gel	Soda Ash	27	61	12/6/99	D.C.
R-464	10 Bags Plug Gel	Soda Ash	27	63	12/9/99	D.C.
R-465	14 Bags Plug Gel	Soda Ash	28	61	12/9/99	D.C.
R-466	10 Bags Plug Gel	Soda Ash	28	60	12/8/99	
R-467	10 Bags Plug Gel	Soda Ash	28	60	12/8/99	D.C.
R-468	9 Bags Plug Gel	Soda Ash	29	61	12/7/99	
R-469	12 Bags Plug Gel	Soda Ash	27	63	12/15/99	D.C.
R-470	9 Bags Plug Gel	Soda Ash	27	65	12/9/99	D.C.
R-471	10 Bags Plug Gel	Soda Ash	28	68	12/9/99	D.C.
R-472	6 Bags Plug Gel	Soda Ash	29	60	12/13/99	D.C.
R-473	9 Bags Plug Gel	Soda Ash	28	65	12/10/99	D.C.
R-474	10 Bags Plug Gel	Soda Ash	29	75	12/9/99	
R-475	6 Bags Plug Gel	Soda Ash	30	62	12/13/99	
R-476	6 Bags Plug Gel	Soda Ash	30	68	12/14/99	D.C.
R-477	10 Bags Plug Gel	Soda Ash	30	61	12/14/99	
R-478	8 Bags Plug Gel	Soda Ash	30	62	12/14/99	
R-479	9 Bags Plug Gel	Soda Ash	27	100+	12/16/99	D.C.
R-480	10 Bags Plug Gel	Soda Ash	27	62	12/16/99	D.C.
R-481	6 Bags Plug Gel	Soda Ash	27	68	12/15/99	D.C.
R-482	11 Bags Plug Gel	Soda Ash	27	63	12/17/99	D.C.
R-483	9 Bags Plug Gel	Soda Ash	29	65	12/17/99	
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				
	Bags Plug Gel	Soda Ash				

CROW BUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD AND MATERIALS USED			TD FTS	FINAL FTS	DATE	INSPECTED BY:
R-428	6	Bags Plug Gel	Soda Ash	27	61	11/12/99	D.C.
R-429	7	Bags Plug Gel	Soda Ash	28	70	11/18/99	D.C.
R-430	8	Bags Plug Gel	Soda Ash	27	67	11/18/99	
R-431	8	Bags Plug Gel	Soda Ash	27	88	11/19/99	D.C.
R-432	7	Bags Plug Gel	Soda Ash	29	67	11/19/99	D.C.
R-433	10	Bags Plug Gel	Soda Ash	27	63	11/19/99	
R-434	10	Bags Plug Gel	Soda Ash	27	62	11/22/99	D.C.
R-435	6	Bags Plug Gel	Soda Ash	29	66	11/23/99	D.C.
R-436	8	Bags Plug Gel	Soda Ash	28	70	11/23/99	D.C.
R-437	7	Bags Plug Gel	Soda Ash	28	64	11/23/99	
R-438	6	Bags Plug Gel	Soda Ash	29	68	11/24/99	D.C
R-439	6	Bags Plug Gel	Soda Ash	28	62	11/24/99	
R-440	11	Bags Plug Gel	Soda Ash	27	61	12/1/99	D.C.
R-441	10	Bags Plug Gel	Soda Ash	27	61	11/30/99	D.C.
R-442	11	Bags Plug Gel	Soda Ash	27	72	11/29/99	D.C
R-443	7	Bags Plug Gel	Soda Ash	28	64	11/29/99	D.C.
R-444	10	Bags Plug Gel	Soda Ash	27	63	11/30/99	D.C.
R-445	8	Bags Plug Gel	Soda Ash	27	67	12/2/99	
R-446	9	Bags Plug Gel	Soda Ash	27	71	12/2/99	
R-447	9	Bags Plug Gel	Soda Ash	27	72	12/1/99	D.C.
R-448	7	Bags Plug Gel	Soda Ash	28	65	11/30/99	
R-449	8	Bags Plug Gel	Soda Ash	28	66	12/2/99	D.C.
R-450	8	Bags Plug Gel	Soda Ash	27	67	12/4/99	D.C.
R-451	8	Bags Plug Gel	Soda Ash	27	63	12/1/99	
R-452	7	Bags Plug Gel	Soda Ash	30	60	12/1/99	D.C.
R-453	12	Bags Plug Gel	Soda Ash	28	65	12/2/99	D.C.
R-454	12	Bags Plug Gel	Soda Ash	28	62	12/2/99	D.C.
R-455	12	Bags Plug Gel	Soda Ash	27	61	12/3/99	D.C.
R-456	8	Bags Plug Gel	Soda Ash	27	61	12/2/99	D.C.
R-457	8	Bags Plug Gel	Soda Ash	27	65	12/6/99	D.C.
R-458	8	Bags Plug Gel	Soda Ash	27	63	12/6/99	

CROW BUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD AND MATERIALS USED		TD VIS	FINAL VIS	DATE	INSPECTED BY:
R-397	12 Bags Plug Gel	Soda Ash	27	66	10/29/99	
R-398	11 Bags Plug Gel	Soda Ash	27	64	10/29/99	D.C.
R-399	11 Bags Plug Gel	Soda Ash	27	67	11/2/99	
R-400	12 Bags Plug Gel	Soda Ash	27	66	11/3/99	
R-401	9 Bags Plug Gel	Soda Ash	29	67	11/5/99	D.C
R-402	10 Bags Plug Gel	Soda Ash	27	65	11/5/99	
R-403	10 Bags Plug Gel	Soda Ash	27	61	11/4/99	
R-404	10 Bags Plug Gel	Soda Ash	27	65	11/4/99	
R-405	10 Bags Plug Gel	Soda Ash	27	63	11/4/99	
R-406	9 Bags Plug Gel	Soda Ash	27	66	11/5/99	
R-407	9 Bags Plug Gel	Soda Ash	27	63	11/8/99	
R-408	8 Bags Plug Gel	Soda Ash	27	68	11/8/99	
R-409	9 Bags Plug Gel	Soda Ash	27	62	11/9/99	D.C.
R-410	13 Bags Plug Gel	Soda Ash	27	71	11/9/99	D.C.
R-411	9 Bags Plug Gel	Soda Ash	27	61	11/8/99	D.C.
R-412	10 Bags Plug Gel	Soda Ash	27	73	11/9/99	D.C.
R-413	10 Bags Plug Gel	Soda Ash	27	61	11/10/99	
R-414	10 Bags Plug Gel	Soda Ash	27	63	11/10/99	D.C.
R-415	7 Bags Plug Gel	Soda Ash	27	62	11/10/99	D.C.
R-416	7 Bags Plug Gel	Soda Ash	27	70	11/11/99	
R-417	9 Bags Plug Gel	Soda Ash	27	63	11/11/99	
R-418	9 Bags Plug Gel	Soda Ash	27	100+	11/15/99	D.C.
R-419	7 Bags Plug Gel	Soda Ash	27	67	11/15/99	
R-420	6 Bags Plug Gel	Soda Ash	27	63	11/12/99	
R-421	8 Bags Plug Gel	Soda Ash	27	72	11/12/99	D.C.
R-422	11 Bags Plug Gel	Soda Ash	27	65	11/22/99	
R-423	12 Bags Plug Gel	Soda Ash	27	60	11/22/99	D.C.
R-424	9 Bags Plug Gel	Soda Ash	27	81	11/15/99	D.C.
R-425	7 Bags Plug Gel	Soda Ash	27	62	11/16/99	
R-426	6 Bags Plug Gel	Soda Ash	28	66	11/16/99	D.C.
R-427	4 Bags Plug Gel	Soda Ash	28	60	11/18/99	D.C.

CROW BUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD AND MATERIALS USED			TD FTS	FINAL FTS	DATE	INSPECTED BY:
R-366	10	Bags Plug Gel	Soda Ash	27	67	10/22/99	D.C.
R-367	11	Bags Plug Gel	Soda Ash	27	62	11/1/99	
R-368	12	Bags Plug Gel	Soda Ash	27	64	11/1/99	
R-369	11	Bags Plug Gel	Soda Ash	27	68	10/21/99	D.C.
R-370	10	Bags Plug Gel	Soda Ash	28	74	10/21/99	
R-371	12	Bags Plug Gel	Soda Ash	27	65	10/25/99	D.C.
R-372	11	Bags Plug Gel	Soda Ash	27	61	11/2/99	
R-373	11	Bags Plug Gel	Soda Ash	27	63	11/2/99	
R-374	10	Bags Plug Gel	Soda Ash	27	62	11/3/99	
R-375	11	Bags Plug Gel	Soda Ash	27	69	11/3/99	
R-376	11	Bags Plug Gel	Soda Ash	27	67	10/22/99	D.C.
R-377	10	Bags Plug Gel	Soda Ash	27	94	10/21/99	D.C.
R-378	9	Bags Plug Gel	Soda Ash	28	65	12/8/99	D.C.
R-379	10	Bags Plug Gel	Soda Ash	27	63	12/7/99	
R-380	10	Bags Plug Gel	Soda Ash	27	64	12/7/99	D.C.
R-381	9	Bags Plug Gel	Soda Ash	28	62	12/10/99	
R-382	7	Bags Plug Gel	Soda Ash	27	66	12/10/99	D.C.
R-383	9	Bags Plug Gel	Soda Ash	27	63	12/8/99	
R-384	9	Bags Plug Gel	Soda Ash	27	67	12/9/99	D.C.
R-385	8	Bags Plug Gel	Soda Ash	28	77	12/13/99	D.C.
R-386	9	Bags Plug Gel	Soda Ash	28	63	12/10/99	
R-387	9	Bags Plug Gel	Soda Ash	27	68	12/8/99	D.C.
R-388	10	Bags Plug Gel	Soda Ash	27	63	10/26/99	D.C.
R-389	11	Bags Plug Gel	Soda Ash	27	61	10/27/99	D.C.
R-390	10	Bags Plug Gel	Soda Ash	27	64	10/25/99	
R-391	10	Bags Plug Gel	Soda Ash	27	77	10/26/99	D.C.
R-392	12	Bags Plug Gel	Soda Ash	27	63	10/27/99	
R-393	12	Bags Plug Gel	Soda Ash	27	70	10/28/99	D.C.
R-394	13	Bags Plug Gel	Soda Ash	27	62	10/28/99	D.C.
R-395	11	Bags Plug Gel	Soda Ash	27	61	10/27/99	D.C.
R-396	13	Bags Plug Gel	Soda Ash	27	61	10/29/99	D.C.

CROWBUTTE RESOURCES, INC.
PLUGGING PROCEDURE

HOLE NUMBER	METHOD INSTALLED RESULTS			DEPTH	FEET	DATE	INSPECTED BY
1900	10	Bags Plug Gel	Soda Ash	27	63	9-24-98	Capped 10/13/99
2207	5	Bags Plug Gel	Soda Ash	28	69	10-28-98	Capped 12/24/99
2290	9	Bags Plug Gel	Soda Ash	29	62	4-16-99	Capped 12/24/99
2085	7	Bags Plug Gel	Soda Ash	27	66	9-10-98	Capped 12/24/99
2404	8	Bags Plug Gel	Soda Ash	28	67	12-8-99	Capped 12/24/99
2082	11	Bags Plug Gel	Soda Ash	29	61	8-3-98	Capped 12/24/99
2295	8	Bags Plug Gel	Soda Ash	30	67	4-21-99	Capped 12/24/99
2419	10	Bags Plug Gel	Soda Ash	27	61	12-15-99	Capped 12/24/99
2084	8	Bags Plug Gel	Soda Ash	28	71	9-9-98	Capped 12/24/99
2293	8	Bags Plug Gel	Soda Ash	30	76	4-12-99	Capped 12/27/99
2022	6	Bags Plug Gel	Soda Ash	33	75	6-17-98	Capped 12/27/99
1967	10	Bags Plug Gel	Soda Ash	30	65	5-21-98	Capped 12/27/99
2292	9	Bags Plug Gel	Soda Ash	30	63	4-7-99	Capped 12/27/99
1969	12	Bags Plug Gel	Soda Ash	27	63	5-26-98	Capped 12/27/99
1997	9	Bags Plug Gel	Soda Ash	30	64	6-16-98	Capped 12/27/99
2023	11	Bags Plug Gel	Soda Ash	28	68	6-15-98	Capped 12/27/99
2287	6	Bags Plug Gel	Soda Ash	31	67	4-15-99	Capped 12/27/99
2294	8	Bags Plug Gel	Soda Ash	30	69	4-22-99	Capped 12/27/99
2024	10	Bags Plug Gel	Soda Ash	29	63	6-22-98	Capped 12/27/99
2025	9	Bags Plug Gel	Soda Ash	29	64	7-6-98	Capped 12/27/99
2069	5	Bags Plug Gel	Soda Ash	36	100+	7-22-98	Capped 12/27/99
2070	4	Bags Plug Gel	Soda Ash	33	100+	7-23-98	Capped 12/27/99
2016	13	Bags Plug Gel	Soda Ash	29	63	7-13-98	Capped 12/27/99
1968	10	Bags Plug Gel	Soda Ash	29	68	5-22-98	Capped 12/27/99
1970	10	Bags Plug Gel	Soda Ash	28	77	5-27-98	Capped 12/27/99
2288	6	Bags Plug Gel	Soda Ash	29	74	4-12-99	Capped 12/27/99
2165	13	Bags Plug Gel	Soda Ash	28	64	9-3-98	Capped 12/27/99
2162	14	Bags Plug Gel	Soda Ash	27	66	9-9-98	Capped 12/27/99
		Bags Plug Gel	Soda Ash				
		Bags Plug Gel	Soda Ash				
		Bags Plug Gel	Soda Ash				

Appendix B

Private Well and Surface Water Radiological Monitoring Results

Third and Fourth Quarter, 1999

LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Sample ID:	Well #19	Well #27	Well #28	Well #63A	Well #26
Laboratory ID:	32732-001	32732-002	32732-003	32732-004	32732-005
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	08-27-99	08-27-99	08-27-99	08-27-99	08-27-99
Date Received:	09-03-99	09-03-99	09-03-99	09-03-99	09-03-99
Report Date:	September 29, 1999	September 29, 1999	September 29, 1999	September 29, 1999	September 29, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.0079	0.0094	0.0075	0.012	0.0087
Uranium, µCi/mL	5.35E-09	6.36E-09	5.08E-09	7.99E-09	5.89E-09
Radium-226, pCi/L	0.9	<0.2	0.9	<0.2	<0.2
Radium Precision ±	0.3	-	0.3	-	-

LABORATORY ANALYSIS R

Sample ID:	Well #41A	Well #63	Well #41	Well #8	Well #11
Laboratory ID:	32732-006	32732-007	32732-008	32732-009	32732-010
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	08-27-99	08-27-99	08-27-99	08-27-99	08-27-99
Date Received:	09-03-99	09-03-99	09-03-99	09-03-99	09-03-99
Report Date:	September 29, 1999	September 29, 1999	September 29, 1999	September 29, 1999	September 29, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.0074	0.011	0.0075	0.016	0.0087
Uranium, µCi/mL	5.01E-09	7.24E-09	5.08E-09	1.07E-08	5.89E-09
Radium-226, pCi/L	0.8	<0.2	<0.2	<0.2	<0.2
Radium Precision ±	0.3	-	-	-	-

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LABORATORY ANALYSIS R

Sample ID:	Well #24	Stream S-1	Well #25	Well #17	Well #57
Laboratory ID:	32732-011	32732-012	32732-013	32732-014	32732-015
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	08-27-99	08-27-99	08-27-99	08-27-99	08-27-99
Date Received:	09-03-99	09-03-99	09-03-99	09-03-99	09-03-99
Report Date:	September 29, 1999	September 29, 1999	September 29, 1999	September 29, 1999	September 29, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.0049	0.0036	0.0057	0.0042	0.0096
Uranium, µCi/mL	3.32E-09	2.44E-09	3.86E-09	2.84E-09	6.50E-09
Radium-226, pCi/L	<0.2	<0.2	<0.2	<0.2	<0.2
Radium Precision ±	-	-	-	-	-

LABORATORY ANALYSIS R

Sample ID:	Well #129	Well #125	Drinking Water
Laboratory ID:	32732-016	32732-017	32732-018
Sample Matrix:	Water	Water	Water
Sample Date:	08-27-99	09-02-99	09-02-99
Date Received:	09-03-99	09-03-99	09-03-99
Report Date:	September 29, 1999	September 29, 1999	September 29, 1999

Radiometric	Results	Results	Results	Units	Reporting Limit
Uranium, mg/L	0.0086	0.0061	0.0076	mg/L	0.0003
Uranium, µCi/mL	5.82E-09	4.13E-09	5.15E-09	uCi/mL	2.03E-10
Radium-226, pCi/L	<0.2	<0.2	<0.2	pCi/L	0.2
Radium Precision ±	-	-	-		

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Log In No. 99-32732

LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Sample ID:	Sample #1E-Well #11	Sample #2E-Well #24	Sample #3E-Stream S-1	Sample #4E-Stream S-2	Sample #5E-Well #19
Laboratory ID:	34555-001	34555-002	34555-003	34555-004	34555-005
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	11-12-99	11-12-99	11-12-99	11-12-99	11-12-99
Date Received:	11-19-99	11-19-99	11-19-99	11-19-99	11-19-99
Report Date:	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.0086	0.0048	0.0043	0.0042	0.0058
Uranium, µCi/mL	5.82E-09	3.25E-09	2.91E-09	2.84E-09	3.93E-09
Radium-226, pCi/L	<0.2	<0.2	<0.2	<0.2	<0.2
Radium Precision ±	-	-	-	-	-

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LABORATORY ANALYSIS R

Sample ID:	Sample #22E-Well #12	Sample #23E-Well #28	Sample #24E-Drinking Water
Laboratory ID:	34553-002	34553-003	34553-004
Sample Matrix:	Water	Water	Water
Sample Date:	11-12-99	11-12-99	11-16-99
Date Received:	11-19-99	11-19-99	11-19-99
Report Date:	December 14, 1999	December 14, 1999	December 14, 1999

Radiometric	Results	Results	Results	Units	Reporting Limit
Uranium, mg/L	0.0042	0.0071	0.0084	mg/L	0.0003
Uranium, µCi/mL	2.84E-09	4.81E-09	5.69E-09	µCi/mL	2.03E-10
Radium-226, pCi/L	0.5	0.4	<0.2	pCi/L	0.2
Radium Precision ±	0.3	0.2	-		

LABORATORY ANALYSIS R

Sample ID:	Sample 17E-Well #17	Sample 18E-Well #8	Sample 19E-Well #57	Sample 20E-Well #129	Sample #21E-Well #125
Laboratory ID:	34555-016	34555-017	34555-018	34555-019	34553-001
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	11-12-99	11-12-99	11-12-99	11-12-99	11-12-99
Date Received:	11-19-99	11-19-99	11-19-99	11-19-99	11-19-99
Report Date:	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.0043	0.015	0.0096	0.0089	0.0069
Uranium, µCi/mL	2.91E-09	1.03E-08	6.50E-09	6.03E-09	4.67E-09
Radium-226, pCi/L	<0.2	<0.2	0.6	<0.2	0.3
Radium Precision ±	-	-	0.3	-	0.2

LABORATORY ANALYSIS R

Sample ID:	Sample 11E-Stream E-4	Sample 12E-Well #63	Sample 13E-Well #41	Sample 14E-Well #16	Sample 16E-Well #25
Laboratory ID:	34555-011	34555-012	34555-013	34555-014	34555-015
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	11-12-99	11-12-99	11-12-99	11-12-99	11-12-99
Date Received:	11-19-99	11-19-99	11-19-99	11-19-99	11-19-99
Report Date:	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.043	0.013	0.0069	0.0068	0.0057
Uranium, µCi/mL	2.90E-08	8.73E-09	4.67E-09	4.60E-09	3.86E-09
Radium-226, pCi/L	<0.2	<0.2	<0.2	<0.2	<0.2
Radium Precision ±	-	-	-	-	-

LABORATORY ANALYSIS R

Sample ID:	Sample #6E-Well #27	Sample #7E-Well #63A	Sample #8E-Stream S-5	Sample #9E-Well #57A	Sample #10E-Stream E1 & E2 Composite
Laboratory ID:	34555-006	34555-007	34555-008	34555-009	34555-010
Sample Matrix:	Water	Water	Water	Water	Water
Sample Date:	11-12-99	11-12-99	11-12-99	11-12-99	11-12-99
Date Received:	11-19-99	11-19-99	11-19-99	11-19-99	11-19-99
Report Date:	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999	December 14, 1999

Radiometric	Results	Results	Results	Results	Results
Uranium, mg/L	0.0083	0.014	0.0047	0.0097	0.018
Uranium, µCi/mL	5.62E-09	9.14E-09	3.18E-09	6.57E-09	1.21E-08
Radium-226, pCi/L	<0.2	<0.2	<0.2	0.6	0.2
Radium Precision ±	-	-	-	0.2	-

Appendix C

Plant Production and Waste Totals

Third and Fourth Quarter, 1999

Appendix C
Crow Butte Resources

WELLFIELD TOTALIZER/BLEED DATA
THIRD AND FOURTH QUARTERS, 1999

MONTH	PLANT POND WASTE	TOTAL DPW WASTE	TOTAL PLANT DPW WASTE	RO-DPW WASTE	PLANT POTABLE	PLNT PROD TO RO-FEED	PROD GALS	INJ GALS	PLANT BLEED %	ON-LINE FLOW
July	198060	2326596	876426	1450170	286274	1316406	189370997	187176715	1.1%	4242
August	264860	2467611	1027369	1440242	285217	1319504	192797497	190449321	1.2%	4323
September	138310	2377719	1228226	1149493	299237	1056783	193561141	186885232	1.1%	4480
October	122020	2294741	1021884	1272857	281327	1183370	191943421	185124734	1.1%	4300
November	207200	2128677	1012009	1116668	199572	1155889	190977852	185615231	1.1%	4421
December	85200	1660530	1122775	537755	317976	445273	201032149	195945778	0.7%	4503
3rd Qtr Sum\Avg	601250	7171926	3132021	4039905	870728	3692693	575729635	564511268	1.1%	4348
4th Qtr Sum\Avg	414420	6083948	3156668	2927280	798875	2784532	583953422	566685743	1.0%	4408
2nd Half Sum\Avg	1015670	13255874	6288689	6967185	1669603	6477225	1159683057	1131197011	1.0%	4378

PLANT BLEED %=(PLANT POND WASTE+TOTAL DPW WASTE-'RO-DPW' WASTE-PLANT POTABLE+PLNT PROD TO RO FEED)/PRODUCTION

RESTORATION TOTALIZER DATA
THIRD AND FOURTH QUARTERS, 1999

MONTH	MU1 PROD GALS	MU2 PROD GALS	MU3 PROD GALS	RO BRINE GALS	RO PERM GALS	PLNT PROD TO RO-FEED	REST. RO GALS TREATED
July	5002	4882826	1989576	1450170	4424816	1316406	4558580
August	0	5075569	2625877	1440242	4469509	1319504	4590247
September	0	3979761	5966166	1149493	3539504	1056783	3632214
October	0	4983716	9189997	1272857	4354652	1183370	4444139
November	0	4514804	7171949	1116668	3973788	1155889	3934567
December	0	2049026	5818131	537755	1814994	445273	1907476
Sum	5002	25485702	32761696	6967185	22577263	6477225	23067223

TOTAL GALLONS-INJECTION
SECOND AND THIRD QUARTERS, 1999

July	187176715	October	185124734
August	190449321	November	185615231
September	186885232	December	195945778

WELLFIELD BLEED CALCULATIONS
SECOND AND THIRD QUARTERS, 1999

MONTH	PLANT WASTE	REST WASTE	TOTAL POTABLE	PLANT PRODUCTION	REST. PRODUCTION	REST. INJECTION	WELLFIELD BLEED %
July	1074506	1450170	286274	189370997	6877404	4382266	1.1%
August	129229	1440242	285217	192797497	7701446	4993269	0.6%
September	1366536	1149493	299237	193561141	9945927	9113172	1.1%
October	1143904	1272857	281327	191943421	14173713	12391319	1.0%
November	1219209	1116668	199572	190977852	11686753	8596194	1.1%
December	1207975	537755	317976	201032149	7867157	5316942	0.7%
Sum/Avg.	6141359	6967185	1669603	1159683057	58252400	44793162	0.9%

Note: All totals are in gallons. Wellfield bleed is calculated as Plant Waste plus Restoration Waste munus Total Potable divided by Plant Production plus Restoration Production.

Appendix D

Wellfield Injection Pressures

Third and Fourth Quarter, 1999

Appendix D
Crow Butte Resources
Wellfield Injection Pressures
Third and Fourth Quarter, 1999

WELLFIELD INJECTION PRESSURE
Third Quarter 1999

	WF HOUSE #1		WF HOUSE #2		WF HOUSE #3		WF HOUSE #4		WF HOUSE #5	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	0	0	0	0	37	54	42	62	29	47
August	1	15	2	22	52	70	57	77	45	67
September	0	0	0	0	48	69	51	70	38	80
AVERAGE	0	15	1	22	46	70	50	77	37	80

	WF HOUSE #6		WF HOUSE #7		WF HOUSE #8		WF HOUSE #9		WF HOUSE #10	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	88	94	0	0	0	0	88	92	78	82
August	32	92	7	45	6	47	88	95	77	81
September	42	48	21	27	35	41	82	90	72	98
AVERAGE	54	94	9	45	14	47	86	95	76	98

	WF HOUSE #11		WF HOUSE #12		WF HOUSE #13		WF HOUSE #14		WF HOUSE #15	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	77	80	0	0	84	88	82	85	75	78
August	76	87	0	0	84	89	86	88	79	82
September	70	75	3	82	79	90	82	91	76	82
AVERAGE	75	87	1	82	82	90	83	91	76	82

	WF HOUSE #16		WF HOUSE #17		WF HOUSE #18		WF HOUSE #19		WF HOUSE #20	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	91	95	66	70	82	86	89	93	74	78
August	94	98	70	78	86	90	92	96	79	82
September	91	98	68	75	83	90	90	95	76	83
AVERAGE	92	98	68	78	84	90	90	96	76	83

	WF HOUSE #21		WF HOUSE #22		WF HOUSE #23		WF HOUSE #24		WF HOUSE #25	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
July	91	95	84	89	85	90	93	95	0	0
August	96	100	94	100	92	97	91	94	0	0
September	93	100	91	100	91	99	90	95	0	0
AVERAGE	93	100	90	100	89	99	91	95	0	0

	WF HOUSE #28	
	AVERAGE	MAXIMUM
July	77	80
August	76	90
September	70	80
AVERAGE	73	90

WELLFIELD INJECTION PRESSURE
Fourth Quarter 1999

	WF HOUSE #1		WF HOUSE #2		WF HOUSE #3		WF HOUSE #4		WF HOUSE #5	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	0	0	1	7	49	66	53	72	41	58
November	0	6	1	16	40	75	44	82	35	71
December	0	0	0	0	30	82	30	86	22	74
AVERAGE	0	6	0	16	40	82	42	86	32	74

	WF HOUSE #6		WF HOUSE #7		WF HOUSE #8		WF HOUSE #9		WF HOUSE #10	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	51	56	30	35	40	49	84	90	73	78
November	31	56	18	34	26	49	84	88	72	86
December	12	37	2	15	9	34	84	89	72	78
AVERAGE	31	56	17	35	25	49	84	90	72	86

	WF HOUSE #11		WF HOUSE #12		WF HOUSE #13		WF HOUSE #14		WF HOUSE #15	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	72	77	0	0	80	82	85	88	79	82
November	70	74	0	0	80	84	85	88	78	84
December	70	90	0	0	79	83	85	91	80	86
AVERAGE	71	90	0	0	80	84	85	91	79	86

	WF HOUSE #16		WF HOUSE #17		WF HOUSE #18		WF HOUSE #19		WF HOUSE #20	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	95	97	72	76	86	90	94	96	79	84
November	94	98	70	78	85	90	92	96	78	84
December	95	98	72	76	88	92	94	98	81	85
AVERAGE	95	98	71	78	86	92	93	98	80	85

	WF HOUSE #21		WF HOUSE #22		WF HOUSE #23		WF HOUSE #24		WF HOUSE #25	
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
October	96	99	93	99	96	99	91	97	0	0
November	94	99	95	98	94	98	91	95	0	0
December	94	100	92	98	96	100	92	96	0	0
AVERAGE	95	100	93	99	95	100	91	97	0	0

	WF HOUSE #28			WF HOUSE #30	
	AVERAGE	MAXIMUM		AVERAGE	MAXIMUM
October	71	75	October	0	0
November	70	77	November	65	67
December	68	90	December	66	70
AVERAGE	70	0	AVERAGE	64	70

Appendix E

Production and Injection Chemistry

Third and Fourth Quarter, 1999

Appendix E
Crow Butte Resources
Production and Injection Chemistry
Third and Fourth Quarter, 1999

AVERAGE CHEMICAL ANALYSIS, MONTHLY Fourth Quarter 1999					
WELLFIELD PRODUCTION	Ca ppm	Na ppm	Cl ppm	SO4 ppm	CO_3^- ppm(Ct)*
October	102.5	1231.0	539.6	1041.4	1467.8
November	104.7	1269.2	545.8	1036.2	1538.5
December	101.4	1251.9	543.8	1047.6	1495.2
WELLFIELD INJECTION	Ca ppm	Na ppm	Cl ppm	SO4 ppm	CO_3^- ppm(Ct)*
October	100.7	1316.5	568.3	1031.6	1626.8
November	103.4	1335.3	577.2	1027.1	1687.5
December	100.4	1322.2	569.7	1038.6	1637.0

MAXIMUM & MINIMUM ASSAYS INJECTED Fourth Quarter 1999					
WELLFIELD INJECTION	pH s.u.	Na ppm	Cl ppm	SO4 ppm	CO_3^- ppm(Ct)*
MINIMUM	7.3	1218.0	520.0	964.0	1403.0
MAXIMUM	8.6	1371.0	608.0	1080.0	1785.0

AVERAGE CHEMICAL ANALYSIS, MONTHLY Third Quarter 1999					
WELLFIELD PRODUCTION	Ca ppm	Na ppm	Cl ppm	SO4 ppm	CO_3^- ppm(Ct)*
July	106.8	1248.5	538.3	1068.9	1473.7
August	101.9	1219.3	523.7	1039.8	1447.7
September	101.2	1222.5	522.5	1035.9	1440.7
WELLFIELD INJECTION	Ca ppm	Na ppm	Cl ppm	SO4 ppm	CO_3^- ppm(Ct)*
July	105.6	1331.7	561.8	1066.4	1673.4
August	101.1	1297.7	544.2	1039.2	1626.5
September	99.7	1275.8	548.4	1025.8	1536.3

MAXIMUM & MINIMUM ASSAYS INJECTED Third Quarter 1999					
WELLFIELD INJECTION	pH s.u.	Na ppm	Cl ppm	SO4 ppm	CO_3^- ppm(Ct)*
MINIMUM	7.2	1203.0	517.0	955.0	1335.0
MAXIMUM	7.9	1368.0	591.0	1110.0	1815.0

* ALK = Ct / 1.2

Appendix F

Monthly Deep Disposal Well Reports

Third and Fourth Quarter, 1999

CROW BUTTE RESOURCES, INC.
1670 BROADWAY, SUITE 3450 **(303) 830-3549**
DENVER, COLORADO 80202 **(303) 830-3544 FAX**

August 24, 1999

Nebraska Department of Environmental Quality
Ground Water Section
Suite 400, The Atrium
1200 "N" Street
P.O. Box 98922
Lincoln, Nebraska 68509-8922
Attn: Mr. David Miesbach

Re: July 1999 Monthly Monitoring Report for Crow Butte Mine Class 1 Non Hazardous Waste Injection Well, Permit Number NE0206369

Dear Mr. Miesbach:

Attached is the monthly monitoring report (MMR) data for the Class 1 Injection Well (Deep Disposal Well (DDW)) located at the Crow Butte Mine near Crawford, Nebraska. The MMR is submitted in accordance with Part II, B. of permit number NE0206369.

Table 1 lists the operating statistics from the DDW continuous recording devices for the month. All permit parameters were in compliance for the month.

Table 2 lists the operating statistics based on the daily inspection readings. The daily readings are taken by the process plant operators three times a day and a copy of the actual recording sheet is shown on Table 3. A summary of the weekly grab sample assay results is given on Table 4.

Please contact me if you need additional information pertaining to the DDW monthly monitoring report.

Sincerely,

Steven D. Magnuson
Vice President

Attachments

cc: Dave Carlson, NDEQ

Table 1

Crow Butte Project
Deepwell Operational Monitoring
Continuous Data Record Statistics
July 1999

	Min.	Average	Max.
Injection Pressure	0.0	79.8	231.0
Flowrate (GPM)	0.0	52.5	87.0
Annulus Pressure (psi)	414.0	429.7	456.8
pH		7.6	
Gallons/Day (Gals.)		75051	
Total Gals. In Month			2326596

Table 2

Crow Butte Project
Deepwell Operational Monitoring
Daily Manual Inspection Statistics
July 1999

	Min.	Average	Max.
Injection Pressure	0.0	54.0	205.0
Flowrate (GPM)	0.0	51.5	76.0
Annulus Pressure (psi)	423.0	433.0	440.0
Total Gals. In Month			2326596

TABLE 4

CROW BUTTE PROJECT
DEEP WELL DATA ANALYSIS
JULY 1999

LABORATORY	ELEMENT	JULY1,1999	JULY8,1999	ULY15,1999	ULY22,99	ULY29,99	NTHLY AVG.	LIMIT
CROW BUTTE LAB	Na mg/l	5,166	6,341	9,286	4,704	4,210	6,374	40,000
CROW BUTTE LAB	SO4 mg/l	2,289	2,032	2,450	1,947	2,053	2,180	10,000
CROW BUTTE LAB	Cl mg/l	5,399	7,493	11,562	4,673	3,706	7,282	40,000
ENERGY LAB	As mg/l						<0.10	1
ENERGY LAB	Ba mg/l						<0.10	20
ENERGY LAB	Se mg/l						<0.10	2
CROW BUTTE LAB	V mg/l	31.0	26.0	42.0	15.0	7.8	28.5	50
CROW BUTTE LAB	U-nat mg/l	2.5	8.0	9.0	3.4	1.4	5.7	25
ENERGY LAB	Ra 226 pCI/l						1,310	5,000
CROW BUTTE LAB	Alkalinity m	2,150	1,675	1,700	1,988	2,225	1,878	4,100
CROW BUTTE LAB	Ph STD UNI	8.3	8.2	8.2	8.4	8.4	8.2	5.0-8.5
CROW BUTTE LAB	Temp (F)	71	73	72	72	75	72	NONE

Report Approved By:
Energy Lab - CRM for ELI
Crow Butte Lab - SM
Plant Superintendent - CRM

CROW BUTTE RESOURCES, INC.
1670 BROADWAY, SUITE 3450
DENVER, COLORADO 80202

(303) 830-3549
(303) 830-3544 FAX

September 20, 1999

Nebraska Department of Environmental Quality
Ground Water Section
Suite 400, The Atrium
1200 "N" Street
P.O. Box 98922
Lincoln, Nebraska 68509-8922
Attn: Mr. David Miesbach

Re: August 1999 Monthly Monitoring Report for Crow Butte Mine Class 1 Non Hazardous Waste Injection Well, Permit Number NE0206369

Dear Mr. Miesbach:

Attached is the monthly monitoring report (MMR) data for the Class 1 Injection Well (Deep Disposal Well (DDW)) located at the Crow Butte Mine near Crawford, Nebraska. The MMR is submitted in accordance with Part II, B. of permit number NE0206369.

Table 1 lists the operating statistics from the DDW continuous recording devices for the month. All permit parameters were in compliance for the month.

Table 2 lists the operating statistics based on the daily inspection readings. The daily readings are taken by the process plant operators three times a day and a copy of the actual recording sheet is shown on Table 3. A summary of the weekly grab sample assay results is given on Table 4.

Please contact me if you need additional information pertaining to the DDW monthly monitoring report.

Sincerely,

Steven D. Magnuson
Vice President

Attachments

cc: Dave Carlson, NDEQ

Table 1

Crow Butte Project
Deepwell Operational Monitoring
Continuous Data Record Statistics
August 1999

	Min.	Average	Max.
Injection Pressure	0.0	100.8	244.3
Flowrate (GPM)	0.0	56.6	79.0
Annulus Pressure (psi)	400.0	417.0	440.0
pH		7.7	
Gallons/Day (Gals.)		79600	
Total Gals. in Month			2467611

Table 2

Crow Butte Project
Deepwell Operational Monitoring
Daily Manual Inspection Statistics
August 1999

	Min.	Average	Max.
Injection Pressure	0.0	81.1	220.0
Flowrate (GPM)	23.0	55.8	74.0
Annulus Pressure (psi)	410.0	421.7	433.0
Total Gals. in Month			2467611

TABLE 3

Crow Butte Project
Deep Well Injection Data Record

MONTH AUG.
YEAR 1999

	MORNING SHIFT							DAY SHIFT							EVENING SHIFT						
Date	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead U Press	Temp F	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead U Press	Temp F	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead U Press	Temp F
1	0110	AH	74	4758	420	160	74°	0724	vm	41	12204	430	0	72°	[illegible]	[illegible]	70	41557	430	0	[illegible]
2	0120	AH	70	3466	420	160	72°	0716	vm	23	25710	425	0	72°	[illegible]	[illegible]	49	47428	420	60	[illegible]
3	0127	AH	28	2980	420	0	72°	0849	PC	45	17321	420	80	72°	1530	PC	71	29476	420	220	72
4	0120	AH	70	4919	425	165	74°	0721	PC	21	23356	420	0	72°	1540	PC	46	42162	[illegible]	[illegible]	[illegible]
5	0112	AH	35	2676	420	0	78°	0743	PC	23	17307	420	0	72°	1521	vm	68	42264	[illegible]	175	[illegible]
6	0107	AH	31	2791	420	0	72°	0937	PS	53	24609	425	0	72	1511	vm	76	41771	425	205	[illegible]
7	0730	AC	71	79137	420	0	72°	1144	SH	68	74173	415	15	74°	1521	vm	71	60071	425	140	[illegible]
8	2349	TS	66	70267	430	210	72°	0730	AC	62	94654	420	60	72°	1524	vm	71	67302	425	21	[illegible]
9	0724	AE	71	90944	430	205	74°	0720	PC	68	92734	420	0	[illegible]	1527	vm	57	67665	[illegible]	[illegible]	[illegible]
10	2349	AE	71	94871	430	180	72°	0754	SH	60	97255	425	115	73°	1511	vm	71	70704	[illegible]	0	[illegible]
11	2349	AE	63	98259	431	180	72°	0940	SH	69	73204	425	175	72	1516	vm	69	61302	425	40	[illegible]
12	0716	AE	70	88111	420	210	72°	0851	SH	70	37945	415	170	74°	1529	PC	41	[illegible]	425	0	[illegible]
13	1340	PC	47	86857	415	45	72°	0815	SH	45	22673	420	40	72	1533	PC	16	41771	420	410	[illegible]
14	1325	vm	69	75015	425	140	74°	0930	PS.	50	56494	430	32	73	1600	PC	77	51498	420	60	[illegible]
15	2336	vm	48	76672	425	50	73°	0930	PS.	44	31899	425	0	74°	1610	PC	40	47820	420	0	[illegible]
16	2321	vm	35	67112	426	0	72°	0915	SH	41	24887	425	0	72°	1530	PC	35	44980	420	0	[illegible]
17	2334	vm	48	72940	420	50	72°	0732	AC	48	20960	425	60	72°	1540	PC	47	43378	420	0	[illegible]
18	2332	vm	70	64527	426	170	74°	0730	AC	34	27204	425	0	72°	1535	PC	42	41500	420	0	[illegible]
19	2325	vm	46	66726	425	0	73°	0916	PC	50	19870	410	45	72°	1740	SH	70	58948	420	140	[illegible]
20	2332	vm	52	61598	422	170	74°	0735	AE	53	25170	420	50	72°	1720	SH	60	59443	425	110	[illegible]
21	0730	PC	69	85678	425	110	74°	0745	AE	53	96139	430	70	74°	1635	SH	72	63004	425	180	[illegible]
22	0740	PC	56	81749	420	0	72°	0745	AE	34	31650	420	0	74°	1810	SH	50	9483	420	0	72
23	0800	PC	93	90017	420	50	72°								1520	SH	66	62099	420	130	72
24	0800	PC	66	84745	420	130	72°	0724	vm	67	19906	415	172	72°	1502	SH	70	63001	420	160	[illegible]
25	0730	PC	77	395	420	160	74°	0730	vm	54	23072	420	40	72°	1740	SH	66	65328	420	150	[illegible]
26	0730	PC	68	331	420	150	74°	0724	vm	69	29713	416	190	72°	1524	SH	62	68871	420	60	[illegible]
27	0730	PC	67	91594	420	100	74°	0716	vm	54	21409	420	70	73°	1510	SH	57	54894	420	40	[illegible]
28	0115	AH	63	94383	425	110	76°	0731	vm	49	21766	425	110	74°	2310	SH	53	67113	420	40	[illegible]
29								0801	vm	25	11600	415	20	72°	2355	AH	48	58219	420	20	[illegible]
30								0800	vm	65	22700	410	0	72°	2310	SH	72	69619	410	50	[illegible]
31								0746	PX	51	26167	415	29	72°	1510	SH	43	49371	420	60	[illegible]

WEEKLY COMPOSITE SAMPLE

DATE	TIME	INITIALS

WEEKLY COMPOSITE SAMPLE

DATE	TIME	INITIALS

WEEKLY COMPOSITE SAMPLE

DATE	TIME	INITIALS

TABLE 4

CROW BUTTE PROJECT
DEEP WELL DATA ANALYSIS
AUGUST 1999

LABORATORY	ELEMENT	AUG5,1999	AUG12,1999	AUG19,1999	AUG26,1999	MONTHLY AVG.	LIMIT
CROW BUTTE LAB	Na mg/l	4,244	3,948	3,423	3,507	3,781	40,000
CROW BUTTE LAB	SO4 mg/l	1,965	1,664	1,762	1,172	1,641	10,000
CROW BUTTE LAB	Cl mg/l	4,029	3,767	2,860	3,465	3,530	40,000
ENERGY LAB	As mg/l					0.12	1
ENERGY LAB	Ba mg/l					<0.10	20
ENERGY LAB	Se mg/l					<0.10	2
CROW BUTTE LAB	V mg/l	11.0	8.4	4.4	5.3	7	50
CROW BUTTE LAB	U-nat mg/l	2.9	3.7	3.6	10.7	5	25
ENERGY LAB	Ra 226 pCI/l					1,250	5,000
CROW BUTTE LAB	Alkalinity mg/l	2,000	1,800	1,950	1,900	1,913	4,100
CROW BUTTE LAB	Ph STD UNIT	8.3	8.3	8.3	8.2	8.3	5.0-8.5
CROW BUTTE LAB	Temp (F)	72	73	72	73	73	NONE

Report Approved By:
Energy Lab - CRM for ELI
Crow Butte Lab - SM
Plant Superintendent - CRM

RG

CROW BUTTE RESOURCES, INC.
1670 BROADWAY, SUITE 3450
DENVER, COLORADO 80202

(303) 830-3549
(303) 830-3544 FAX

October 22, 1999

Nebraska Department of Environmental Quality
Ground Water Section
Suite 400, The Atrium
1200 "N" Street
P.O. Box 98922
Lincoln, Nebraska 68509-8922
Attn: Mr. David Miesbach

Re: **September 1999 Monthly Monitoring Report for Crow Butte Mine Class 1 Non Hazardous Waste Injection Well, Permit Number NE0206369**

Dear Mr. Miesbach:

Attached is the monthly monitoring report (MMR) data for the Class 1 Injection Well (Deep Disposal Well (DDW)) located at the Crow Butte Mine near Crawford, Nebraska. The MMR is submitted in accordance with Part II, B. of permit number NE0206369.

Table 1 lists the operating statistics from the DDW continuous recording devices for the month. All permit parameters were in compliance for the month.

Table 2 lists the operating statistics based on the daily inspection readings. The daily readings are taken by the process plant operators three times a day and a copy of the actual recording sheet is shown on Table 3. A summary of the weekly grab sample assay results is given on Table 4.

Please contact me if you need additional information pertaining to the DDW monthly monitoring report.

Sincerely,

Steven D. Magnuson
Vice President

Attachments

cc: Dave Carlson, NDEQ

Table 1			
Crow Butte Project			
Deepwell Operational Monitoring			
Continuous Data Record Statistics			
September 1999			
	Min.	**Average**	**Max.**
Injection Pressure	0.0	85.6	231.0
Flowrate (GPM)	0.0	55.8	87.0*
Annulus Pressure (psi)	140.3	412.8	447.0
pH		7.6	
Gallons/Day (Gals.)		79257	
Total Gals. In Month			2377719

Table 2			
Crow Butte Project			
Deepwell Operational Monitoring			
Daily Manual Inspection Statistics			
September 1999			
	Min.	**Average**	**Max.**
Injection Pressure	0.0	65.7	220.0
Flowrate (GPM)	17.0	58.3	77.0
Annulus Pressure (psi)	380.0	418.3	450.0
Total Gals. In Month			2377719

* - Pump startup surge of 114 gpm for less than 60 seconds 9/17/99 @ 22:46.

TABLE 3

Crow Butte Project
Deep Well Injection Data Record

MONTH Sept
YEAR 1999

	MORNING SHIFT							DAY SHIFT							EVENING SHIFT						
Date	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F
1								0807	KE	66	28737	415	30	70°	[illegible]	[illegible]	65	44332	415	0	[illegible]
2								0740	KE	62	27676	415	130	70°	0135	TC	54	42077	415	0	72°
3								0830	KE	54	16763	405	50	70°	1530	TC	55	47203	410	0	72°
4								0830	SH	71	21775	405	90	70°	0700	KR	48	27837	400	47	71°
5								1105	SH	71	27883	400	220	70°	2041	vm	34	61101	400	0	72°
6								1035	SH	72	31814	400	110	71°	2033		33	50780	400	0	71°
7								1100	SH	69	37128	410	0	72°	10:06	vm	75	65777	400	132	70°
8								0800	KE	57	18260	400	45	72°	2048	TC	45	43837	400	0	72°
9								0745	KE	50	31003	400	10	72°	2057	TC	72	64328	400	116	72°
10								0740	KE	56	6464	410	0	72°	2045	[illegible]	69	57989	400	0	72°
11								0807	KE	34	18878	405	0	72°	2130	KE	70	66695	405	170	72°
12								1025	SH	74	38560	355	130	70°	20:30	vm	57	7432	380	175	70°
13								1014	SH	75	44408	385	145	70	21:00	vm	74	8946	390	167	71°
14								1460	SH	76	62866	440	160	72°	20:28	vm	67	9161	430	0	70°
15								0857	SH	57	18875	435	45	71°	20:30	vm	71	17887	435	162	71°
16								1008	CD	65	5990	427	90	70	2031	KE	51	67196	435	55	71°
17								1540	TC	53	32847	425	0	71°	2006	KE	41	63742	435	0	70
18								0815	TC	62	30970	430	0	70°	0145	KE	63	40846	435	0	71°
19								0854	TC	65	32842	420	0	70°	0320	KE	40	7444	420	0	71°
20			Day	shift				07:15	vm	53	17061	430	0	70°							
21	07:18	vm	71	36235	430	43	70°	2215	SH	73	75797	430	170	70°	2235	SH	73	82248	440	160	70°
22								07:20	vm	74	42012	470	142	70°	2115	SH	57	59632	430	105	70°
23								09:22	vm	33	18630	432	0	70°	2215	SH	48	55681	430	40	70°
24								0740	TC	66	29168	424	0	70°	1930	CD	36	56224	433	0	70
25								0720	TC	67	[illegible]	450	0	70°	1927	PB	56	70758	431	37	70°
26								0759	TC	74	24472	430	0	70°	1921	PB	66	62963	430	165	70°
27								0700	TC	63	20530	410	80	70	2040	PB	67	62309	416	140	70°
28								07:20	vm	69	29867	426	0	70°	2130	SH	76	81542	430	180	70°
29								07:16	vm	71	31859	426	160	70°	2225	SH	71	64464	430	165	70°
30								07:32	vm	70	28274	428	36	70°	2215	SH	54	84751	430	24	70°
31																					

WEEKLY COMPOSITE SAMPLE

DATE	TIME	INITIALS

WEEKLY COMPOSITE SAMPLE

DATE	TIME	INITIALS

WEEKLY COMPOSITE SAMPLE

DATE	TIME	INITIALS

TABLE 4

CROW BUTTE PROJECT

DEEP WELL DATA ANALYSIS

SEPTEMBER 1999

LABORATORY	ELEMENT	SEPT2,1999	SEPT9,1999	SEPT16,1999	SEPT23,1999	SEP30,1999	MONTHLY AVG.	LIMIT
CROW BUTTE LAB	Na mg/l	5822.0	2,236	5,109	3,150	2,667	3,797	40,000
CROW BUTTE LAB	SO4 mg/l	1687.0	1,667	1,751	1,560	1,437	1,620	10,000
CROW BUTTE LAB	Cl mg/l	6768.0	1,128	5,540	2,659	2,155	3,650	40,000
ENERGY LAB	As mg/l						0.12	1
ENERGY LAB	Ba mg/l						<0.10	20
ENERGY LAB	Se mg/l						<0.10	2
CROW BUTTE LAB	V mg/l	13.0	2.7	11.6	5.6	3.5	7.3	50
CROW BUTTE LAB	U-nat mg/l	3.9	4.3	5.2	3.6	8.1	5.0	25
ENERGY LAB	Ra 226 pCI/l						1,640	5,000
CROW BUTTE LAB	Alkalinity mg/l	1675.0	2,050	1,625	1,775	1,700	1,765	4,100
CROW BUTTE LAB	Ph STD UNIT	8.2	8.1	8.2	8.2	8.2	8.2	5.0-8.5
CROW BUTTE LAB	Temp (F)		72	71	70	70	71	NONE

Report Approved By:

Energy Lab - CRM for ELI

Crow Butte Lab - SM

Plant Superintendent - CRM

CROW BUTTE RESOURCES, INC.
1670 BROADWAY, SUITE 3450 **(303) 830-3549**
DENVER, COLORADO 80202 **(303) 830-3544 FAX**

November 23, 1999

Nebraska Department of Environmental Quality
Ground Water Section
Suite 400, The Atrium
1200 "N" Street
P.O. Box 98922
Lincoln, Nebraska 68509-8922
Attn: Mr. David Miesbach

Re: October 1999 Monthly Monitoring Report for Crow Butte Mine Class 1 Non Hazardous Waste Injection Well, Permit Number NE0206369

Dear Mr. Miesbach:

Attached is the monthly monitoring report (MMR) data for the Class 1 Injection Well (Deep Disposal Well (DDW)) located at the Crow Butte Mine near Crawford, Nebraska. The MMR is submitted in accordance with Part II, B. of permit number NE0206369.

Table 1 lists the operating statistics from the DDW continuous recording devices for the month. All permit parameters were in compliance for the month.

Table 2 lists the operating statistics based on the daily inspection readings. The daily readings are taken by the process plant operators three times a day and a copy of the actual recording sheet is shown on Table 3. A summary of the weekly grab sample assay results is given on Table 4.

Please contact me if you need additional information pertaining to the DDW monthly monitoring report.

Sincerely,

Steven D. Magnuson
Vice President

Attachments

cc: Dave Carlson, NDEQ

Table 1			
Crow Butte Project Deepwell Operational Monitoring Continuous Data Record Statistics October 1999			
	Min.	**Average**	**Max.**
Injection Pressure	0.0	89.4	277.5
Flowrate (GPM)	0.0	51.7	90.0
Annulus Pressure (psi)	405.0	422.1	462.0
pH		7.6	
Gallons/Day (Gals.)		74024	
Total Gals. In Month			2294741

Table 2			
Crow Butte Project Deepwell Operational Monitoring Daily Manual Inspection Statistics October 1999			
	Min.	**Average**	**Max.**
Injection Pressure	0.0	81.0	207.0
Flowrate (GPM)	15.0	52.2	78.0
Annulus Pressure (psi)	414.0	428.5	452.0
Total Gals. In Month			2294741

TABLE 3

Crow Butte Project
Deep Well Injection Data Record

Month Oct --
Year 1999

	DAY SHIFT							EVENING SHIFT						
Date	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F
1	07:16	Von	57	26863	425	35	69	2215	SH	75	84099	430	20	70°
2	0740	JE	70	33525	425	110	69°	1940	JE	47	75221	420	0	70°
3	0735	JE	65	28665	425	135	69°	2050	JE	60	68625	425	100	70°
4	0750	JE	56	28912	420	35	69°	2044	JE	38	57650	420	0	70°
5	0720	JE	58	27946	420	35	69°	2045	JE	54	70564	420	40	69°
6	0906	SH	26	20438	425	0	70	20:25	von	54	55652	430	150	70°
7	0806	SH	59	33030	430	30	70	20:43	von	78	82727	430	153	70°
8	0910	JE	51	33526	425	10	70°	20:50	von	29	43774	430	0	69
9	0755	JE	72	21764	420	185	69°	20:35	von	41	51242	430	0	70°
10	0800	JE	49	14626	430	40	69°	2255	RL	70	67737	430	160	70°
11	0750	JE	66	22786	425	160	69°	2043	SH	51	60677	425	44	70°
12	0745	E.D.	27	27946	421	0	69°	2059	SH	44	55701	422	0	69°
13	0730	JE	63	37760	425	60	69°	19:39	von	35	56814	430	0	70°
14	0901	SH	37	17236	430	40	69°	19:49	von	51	41355	430	0	70°
15	1143	SH	39	29468	430	0	70°	21:19	von	32	49525	426	50	69
16	0915	RL	61	30108	425	140	70°	20:58	von	29	52918	425	0	69°
17	1155	SH	25	30685	425	0	70°	21:02	von	75	68254	420	200	69°
18	0745	JE	28	30613	425	0	70°	2000	JE	51	67998	420	60	69°
19	0820	JE	25	21409	425	0	68°	1940	JE	15	56675	425	0	69°
20	0725	JE	60	25442	425	180	68°	1935	JE	67	56480	414	197	69°
21	0850	JE	63	22166	420	190	68°	2000	JE	61	61546	420	170	69°
22	07:12	von	40	24967	422	55	69°	2300	SH	71	71356	420	180	69°
23	07:20	von	42	28610	420	54	68°	2200	SH	65	72815	420	170	69°
24	09:11	von	41	23841	418	53	68°	0901	SH	77	0	420	200	69°
25	07:15	von	73	32258	415	207	69°	2250	SH	75	93557	420	140	69°
26	0950	P.S.	51	41725	440	46	69°	1930	JE	25	65781	450	0	69°
27	0725	JE	68	28783	450	190	69°	1945	JE	58	73293	450	165	69°
28	0745	JE	39	15275	450	0	69°	1940	JE	61	41836	441	165	69°
29	0842	JE	44	30000	450	0	69°	1945	JE	57	67512	445	165	69°
30	07:41	von	29	20476	455	53	69°	22:38	SH	67	60336	450	160	69°
31	07:40	von	65	23917	452	200	68°	2209	SH	70	68570	450	50	69°

Weekly Composite Sample

DATE	TIME	INITIALS

Weekly Composite Sample

DATE	TIME	INITIALS

TABLE 4

CROW BUTTE PROJECT
DEEP WELL DATA ANALYSIS
OCTOBER 1999

LABORATORY	ELEMENT	OCT7,1999	OCT14,1999	OCT21,1999	OCT28,1999	MONTHLY AVG.	LIMIT
CROW BUTTE LAB	Na mg/l	4,694	10,482	5,802	5,371	6,587	40.00
CROW BUTTE LAB	SO4 mg/l	1,639	2,400	1,827	1,718	1,896	10,00
CROW BUTTE LAB	Cl mg/l	4,831	13,730	6,708	6,465	7,934	40.00
ENERGY LAB	As mg/l					0.14	[illegible]
ENERGY LAB	Ba mg/l					<0.10	2
ENERGY LAB	Se mg/l					<0.10	[illegible]
CROW BUTTE LAB	V mg/l	8.4	21.0	13.0	12.5	14.0	5
CROW BUTTE LAB	U-nat mg/l	6.6	7.7	12.9	3.9	7.8	2
ENERGY LAB	Ra 226 pCI/l					1.572	5.00
CROW BUTTE LAB	Alkalinity mg/l	1,750	1,650	1,675	1,725	1,700	4.10
CROW BUTTE LAB	Ph STD UNIT	8.3	8.4	8.2	8.3	8.3	5.0-8
CROW BUTTE LAB	Temp (F)	70	70	69	69	70	NO

Report Approved By:
Energy Lab - CRM for ELI
Crow Butte Lab - SM
Plant Superintendent - CRM

CROW BUTTE RESOURCES, INC.

86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
(308) 665-2341 – FAX

December 22, 1999

Nebraska Department of Environmental Quality
Ground Water Section
PO Box 98922
Lincoln, Nebraska 68509-8922

Attention: Mr. Dave Miesbach

Re: November 1999 Monthly Monitoring Report for Crow Butte Mine Class I Non-Hazardous Waste Injection Well, Permit Number NE0206369

Dear Mr. Miesbach:

Attached is the monthly monitoring report (MMR) data for the Class I Injection Well (Deep Disposal Well (DDW)) located at the Crow Butte Mine near Crawford, Nebraska. The MMR is submitted in accordance with Part II, B. of the referenced UIC permit.

Table 1 lists the operation statistics for the DDW continuous recording devices for the month. All the permit parameters were in compliance for the month. Table 2 lists the operating statistics based on the daily inspection readings. The process plant operators take the daily readings three times a day and a copy of the actual recording sheet is shown on Table 3. A summary of the weekly grab sample assay results is given on Table 4.

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

Attachments: As Stated

cc: Dave Carlson – NDEQ

Table 1

Crow Butte Project
Deepwell Operational Monitoring
Continuous Data Record Statistics
November 1999

	Min.	Average	Max.
Injection Pressure	0.0	77.4	270.0
Flowrate (GPM)	0.0	49.7	99.0
Annulus Pressure (psi)	421.0	438.7	493.0
pH		7.9	
Gallons/Day (Gals.)		70956	
Total Gals. In Month			2128677

Table 2

Crow Butte Project
Deepwell Operational Monitoring
Daily Manual Inspection Statistics
November 1999

	Min.	Average	Max.
Injection Pressure	0.0	60.8	230.0
Flowrate (GPM)	20.0	48.7	76.0
Annulus Pressure (psi)	425.0	445.3	492.0
Total Gals. In Month			2128677

Crow Butte Project
Deep Well Injection Data Record

Month: Nov
Year: 1999

Date	DAY SHIFT Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead LJ Press	Temp F	EVENING SHIFT Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead LJ Press	Temp F
1	07:12	[illegible]	72	36279	442	170	69°	2142	SH	49	85335	450	50	65°
2	07:17	[illegible]	50	25176	[illegible]	35	68°	2330	XH	41	925	450	0	65°
3	0750	[illegible]	67	22709	438	205	69°	2216	PC	46	95560	446	0	69°
4	07:57	PC	47	23074	445	65	69°	2222	PC	41	53091	440	0	69°
5	0845	PC	46	37759	445	40	69°	2030	PC	27	55264	445	0	69°
6	0900	SH	61	27706	450	100	70°	2040	PC	46	57977	450	0	69°
7	1000	SH	46	31707	450	50	69°	20:40	[illegible]	73	70670	452	230	70°
8	0925	SH	59	34309	450	142	69°	20:00	[illegible]	35	59517	453	0	69°
9	0813	SH	42	22922	455	105	70°	20:07	[illegible]	44	52200	453	45	69°
10	1344	SH	28	40210	455	0	69°	20:00	[illegible]	53	66186	453	110	70°
11	0725	PC	42	18006	446	19	70°	2119	SH	38	48545	452	10	69°
12	0715	PC	51	30941	450	50	70°	20:21	[illegible]	34	61033	456	0	69°
13	0730	PC	57	17533	450	0	70°	2205	P.S.	65	63105	445	173	69°
14	0725	PC	54	23909	441	0	70°	2020	P.S.	62	63224	440	167	69°
15	1351	SH	23	48695	447	0	70°	19:45	[illegible]	74	60077	454	210	70°
16	1392	SH	20	37279	455	150	69°	20:00	[illegible]	30	47376	454	0	68°
17	1320	SH	41	12598	470	0	66°	19:29	[illegible]	67	33775	446	160	69°
18	1824	SH	35	30753	450	0	69°	2155	PC	50	49094	452	0	69°
19	1350	PC	54	42121	450	0	69°	1920	PC	30	59457	434	0	69°
20	0940	PC	60	29162	450	0	70°	2150	PC	67	74050	436	153	69°
21	0750	PC	46	31607	440	0	69°	1925	PC	48	66040	433	29	69°
22	0950	PC	55	41497	430	0	69°	2020	PS	49	66355	427	51	69°
23	07:22	[illegible]	45	22527	450	35	66°	2215	PC	62	70660	425	120	69°
24	07:20	[illegible]	35	29577	450	0	66°	2256	SH	30	66991	450	0	67°
25	07:11	[illegible]	31	30177	450	31	67°	2330	SH	45	1830	450	40	68°
26	07:04	[illegible]	51	29474	438	140	67°	2137	XH	76	76433	430	150	68°
27	0745	PC	47	29800	450	0	68°	2003	PC	36	65352	432	0	68°
28	0820	PC	46	34591	450	0	69°	1935	PC	69	76362	432	210	69°
29	0946	PC	69	36609	430	0	69°	2010	PC	59	77030	430	143	69°
30	0920	PC	59	28599	450	0	69°	2000	PC	76	66450	446	316	69°
31														

Weekly Composite Sample

DATE	TIME	INITIALS

Weekly Composite Sample

DATE	TIME	INITIALS

CROW BUTTE PROJECT
DEEP WELL DATA ANALYSIS
NOVEMBER 1999

LABORATORY	ELEMENT	Nov4,1999	Nov11,1999	Nov18,1999	ov25,1999	NTHLY AVG.	LIMIT
CROW BUTTE LAB	Na mg/l	7,318	6,252	7,585	4,387	6,386	40,000
CROW BUTTE LAB	SO4 mg/l	2,091	1,960	1,871	1,977	1,975	10,000
CROW BUTTE LAB	Cl mg/l	8,933	7,126	10,228	4,936	7,806	40,000
ENERGY LAB	As mg/l					0.14	1
ENERGY LAB	Ba mg/l					<0.10	20
ENERGY LAB	Se mg/l					<0.10	2
CROW BUTTE LAB	V mg/l	22.0	17.0	23.0	7.5	17	50
CROW BUTTE LAB	U-nat mg/l	7.4	8.3	6.6	5.7	7	25
ENERGY LAB	Ra 226 pCI/l					1,440	5,000
CROW BUTTE LAB	Alkalinity m	1,975	1,850	1,312	1,900	1,759	4,100
CROW BUTTE LAB	Ph STD UN	8.4	8.4	8.2	8.1	8.3	5.0-8.5
CROW BUTTE LAB	Temp (F)	69	70	69	68	69	NONE

Report Approved By:
Energy Lab - CRM for ELI
Crow Butte Lab - SM
Plant Manager - CRM

CROW BUTTE RESOURCES, INC.

86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
(308) 665-2341 – FAX

January 19, 2000

Nebraska Department of Environmental Quality
Ground Water Section
PO Box 98922
Lincoln, Nebraska 68509-8922

Attention: Mr. Dave Miesbach

Re: December 1999 Monthly Monitoring Report for Crow Butte Mine Class I Non-Hazardous Waste Injection Well, Permit Number NE0206369

Dear Mr. Miesbach:

Attached is the monthly monitoring report (MMR) data for the Class I Injection Well (Deep Disposal Well (DDW)) located at the Crow Butte Mine near Crawford, Nebraska. The MMR is submitted in accordance with Part II, B. of the referenced UIC permit.

Table 1 lists the operation statistics for the DDW continuous recording devices for the month. All the permit parameters were in compliance for the month. Table 2 lists the operating statistics based on the daily inspection readings. The process plant operators take the daily readings twice per day and a copy of the actual recording sheet is shown on Table 3. A summary of the weekly grab sample assay results is given on Table 4.

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

Attachments: As Stated

cc: Dave Carlson – NDEQ

Table 1			
Crow Butte Project			
Deepwell Operational Monitoring			
Continuous Data Record Statistics			
December1999			
	Min.	**Average**	**Max.**
Injection Pressure	0.0	18.6	204.7
Flowrate (GPM)	0.0	37.4	100.0
Annulus Pressure (psi)	413.0	435.7	515.0
pH		7.3	
Gallons/Day (Gals.)		53565	
Total Gals. in Month			1660530

Table 2			
Crow Butte Project			
Deepwell Operational Monitoring			
Daily Manual Inspection Statistics			
December1999			
	Min.	**Average**	**Max.**
Injection Pressure	0.0	15.8	170.0
Flowrate (GPM)	0.0	37.3	75.0
Annulus Pressure (psi)	400.0	439.9	490.0
Total Gals. in Month			1660530

Crow Butte Project
Deep Well Injection Data Record

Month [illegible]
Year [illegible]

	DAY SHIFT							EVENING SHIFT						
Date	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F	Time	Initials	Injection Flow	Daily Gallons	Annulus Pressure	Wellhead IJ Press	Temp F
1	[illegible]	[illegible]	31	[illegible]	442	0	67°	2400	SH	33	1948	445	0	68°
2	[illegible]	[illegible]	53	[illegible]	[illegible]	125	[illegible]	2226	SH	74	69610	440	140	68°
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2215	SH	74	75335	440	90	68°
4	[illegible]	[illegible]	72	87279	[illegible]	150	67°	2224	SH	67	94036	440	130	68°
5	0740	JE	72	35316	425	170	68°	2002	TC	45	80[illegible]	440	0	68°
6	0710	JE	60	23546	430	30	65°	2002	TC	51	5[illegible]240	430	0	68°
7	0710	JE	3	779	490	0	68°							
8	0710	JE	73	10640	480	0	68°	2003	TC	42	2[illegible]	[illegible]	0	68°
9	0800	SH	0	11160	450	0	68°	19:22	vm	0	23471	450	0	59°
10	0800	AD	9	14703	437	0	68°	19:50	vm	39	30730	440	0	66°
11	0830	JE	92	15516	446	0	68°	19:51	vm	36	32272	435	0	66°
12	1155	SH	13	22008	440	0	66°	20:21	vm	49	40659	435	0	66°
13	0716	JE	0	9590	460	0	66°	2020	TC	25	17715	460	0	66°
14	0716	PR	12	5800	446	0	66°	1945	TC	55	17292	400	0	66°
15	0765	JE	0	8260	490	0	66°	2000	TC	62	28438	460	0	66°
16	0706	JE	0	16900	449	0	66°	0735	TC	18	27805	445	0	66°
17	0834	SH	0	14025	445	0	63°	20:10	vm	42	32371	435	0	65°
18	0940	AD	17	20893	430	0	66	20:24	vm	15	34244	440	0	62°
19	0800	JE	16	8657	445	0	65°	21:50	vm	18	38124	445	0	64°
20	~~[illegible]~~							19:58	vm	14	39358	440	0	62°
21	0720	TC	0	5479	460	0	64°	1925	PR	0	16379	476	0	62°
22	0804	TC	22	17384	430	0	62°	1760	PR	30	44686	427	0	62°
23	0830	TC	26	29153	410	0	62°	1535	PR	18	71760	423	0	62°
24	0705	TC	48	23045	420	0	62°	2020	JE	41	47956	431	0	62°
25	0745	PR	40	12761	425	0	62°	2400	SH	69	3709	430	0	62°
26	0[illegible]28	vm	18	32774	[illegible]	0	66°	2315	SH	75	400	440	51	68°
27	09:20	vm	71	30699	430	0	66°	22[illegible]	SH	65	8[illegible]410	430	0	66°
28	07:10	vm	16	28757	430	0	65°	2120	SH	70	74557	430	40	68°
29	0825	TC	68	35835	[illegible]	0	68°	1921	PR	41	78613	426	0	66°
30	0815	TC	40	2[illegible]537	430	0	66°	1935	PR	28	56353	424	0	66°
31	0730	TC	35	[illegible]	440	0	65°	1955	JE	65	67278	435	0	66°

Weekly Composite Sample

DATE	TIME	INITIALS

Weekly Composite Sample

DATE	TIME	INITIALS

CROW BUTTE PROJECT
DEEP WELL DATA ANALYSIS
DECEMBER 1999

LABORATORY	ELEMENT					MONTHLY AVG.		LIMIT
		DEC2,1999	DEC9,1999	DEC16,1999	DEC23,1999	DEC30,1999		
CROW BUTTE LAB	Na mg/l	4,574	19,542	20,200	10,808	7,339	12,493	40,000
CROW BUTTE LAB	SO4 mg/l	2,094	2,497	2,957	1,877	2,025	2,290	10,000
CROW BUTTE LAB	Cl mg/l	4,418	18,769	27,459	14,972	9,504	15,024	40,000
ENERGY LAB	As mg/l						<0.10	1
ENERGY LAB	Ba mg/l						<0.10	20
ENERGY LAB	Se mg/l						<0.10	2
CROW BUTTE LAB	V mg/l	7.7	35.0	37.0	30.0	19.0	26	50
CROW BUTTE LAB	U-nat mg/l	2.8	7.0	3.8	6.3	5.9	5.2	25
ENERGY LAB	Ra 226 pCi/l						2,110	5,000
CROW BUTTE LAB	Alkalinity m	2,200	700	612	750	1,475	1,147	4,100
CROW BUTTE LAB	Ph STD UN	8.3	8.0	8.0	8.3	8.3	8.2	5.0-8.5
CROW BUTTE LAB	Temp (F)	68	67	66	62	66	66	NONE

Report Approved By:
Energy Lab - CRM for ELI
Crow Butte Lab - SM
Plant Manager - CRM

Appendix G

Radon Release Calculations

Third and Fourth Quarter, 1999

Radon Effluent Release Calculation (Production and Startup)

Third Quarter 1999 Radon Release from Leaching Operations:

$$\left[\left(\frac{7.04E^{-4}\ \text{Curies}}{\text{meter}^3}\right)\times\left(\frac{16{,}457\ \text{liters}}{\text{min}}\right)\times(0.72)\times(92\ \text{days})\times\left(\frac{\text{meter}^3}{1000\ \text{liters}}\right)\times\left(\frac{24\ \text{hours}}{\text{day}}\right)\times\left(\frac{60\ \text{min}}{\text{hour}}\right)\right]=1{,}105\ \text{Curies}$$

Fourth Quarter 1999 Radon Release from Leaching Operations:

$$\left[\left(\frac{7.04E^{-4}\ \text{Curies}}{\text{meter}^3}\right)\times\left(\frac{16{,}684\ \text{liters}}{\text{min}}\right)\times(0.72)\times(92\ \text{days})\times\left(\frac{\text{meter}^3}{1000\ \text{liters}}\right)\times\left(\frac{24\ \text{hours}}{\text{day}}\right)\times\left(\frac{60\ \text{min}}{\text{hour}}\right)\right]=1{,}120\ \text{Curies}$$

Radon Release from Wellfield Startup:

$$\left[\left(\frac{7.04E^{-4}\text{Curies}}{\text{meter}^3}\right)\times(7.48\ \text{acres})\times\left(\frac{4074\ \text{meter}^2}{\text{acre}}\right)\times(1.52\ \text{meters})\times(0.29)\right]=10\ \text{Curies}$$

Total Estimated Radon Emissions from Leaching: 2,235 Curies

Radon Effluent Release Calculation (Restoration)

Second Half 1999 Radon Release from Restoration:

$$(220{,}485{,}334 \text{ liters}) \times \left(\frac{0.697\ \mu\text{Ci}}{\text{liter}}\right) = 154 \text{ Curies (production potential)}$$

$$154 \text{ Curies} \times 0.25 = 39 \text{ Curies (25\% Wellfield Loss)}$$

$$(154 \text{ Curies} - 39 \text{ Curies}) \times 0.10 = 12 \text{ Curies (10\% Ion Exchange Loss)}$$

$$(87{,}309{,}439 \text{ liters}) \times \left(\frac{0.470\ \mu\text{Ci}}{\text{liter}}\right) = 41 \text{ Curies (100\% Reverse Osmosis Loss)}$$

Startup of additional restoration patterns:

$$\left[\left(\frac{7.04\text{E}^{-4}\text{Curies}}{\text{meter}^3}\right) \times (3.46 \text{ acres}) \times \left(\frac{4074 \text{ meter}^2}{\text{acre}}\right) \times (1.52 \text{ meters}) \times (0.29)\right] = 4 \text{ Curies}$$

Total Estimated Radon Emissions from Restoration: 96 Curies

Total Estimated Radon Emissions from Crow Butte Operations, 2nd Half 1999: 2,331 Curies

Appendix H

Quarterly Pond Inspections

Third and Fourth Quarter, 1999

CROW BUTTE RESOURCES, INC.

86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
(308) 665-2341 – FAX

TO: File
THROUGH: Chuck Miller
FROM: Rhonda Grantham
DATE: September 30, 1999
SUBJECT: Third Quarter Visual Evaporation Pond Inspection

On September 17, 1999 the quarterly visual evaporation pond inspection was performed as required by License Condition No. 11.4 of SUA-1534. The R & D Evaporation Ponds and the Commercial Evaporation Ponds #1, #3, and #4 were all included in the inspection. All ponds are inspected on a daily basis.

1. No apparent settlement or erosion problems with dikes or slopes have occurred at the R & D Ponds. With the exception of very small erosional gullies on the slopes of all of the Commercial Ponds, generally the pond slopes are in good condition. Erosional activity that was discussed in the second quarter report has been repaired. Some new gopher and/or mole activity was evident at the south end of Pond #1 and at the north end of Pond #3. No apparent settlement of dikes or slopes was evident at the Commercial Ponds.

2. The game proof fences and entrance gates at both sets of Ponds appear to be in good condition. The Radioactive Materials signs posted on the fences are visible and readable.

3. No pond or feed line seepage has been noted.

4. The standpipe underdrains of the R & D ponds remain at less than six inches and no sampling has been required. As per License Condition #11.4, on a weekly basis, CBR samples any underdrain of the Commercial Ponds that contains six inches or more of fluid. The samples are analyzed for conductivity and if the sampling results are below the action level no further sampling is necessary. Currently nine of the underdrains are measured at a weekly frequency for conductivity. At no time during the third quarter, 1999, did the conductivity of the underdrains of the Commercial Ponds exceed the action level.

5. Footage markers on all of the ponds are readable. All liners appear to be in good condition.

6. Inspections are performed on all of the ponds on a daily basis. Inspection forms were reviewed and are on file.

cc: Steve Collings
Steve Magnuson

CROW BUTTE RESOURCES, INC.

86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169

(308) 665-2215
(308) 665-2341 – FAX

TO: File
THROUGH: Chuck Miller
FROM: Rhonda Grantham
DATE: December 28, 1999
SUBJECT: Fourth Quarter Visual Evaporation Pond Inspection

On December 23, 1999 the quarterly visual evaporation pond inspection was performed as required by License Condition No. 11.4 of SUA-1534. The R & D Evaporation Ponds and the Commercial Evaporation Ponds #1, #3, and #4 were all included in the inspection. All ponds are inspected on a daily basis.

1. No apparent settlement or erosion problems with dikes or slopes have occurred at the R & D Ponds. With the exception of one washout on the south slope of Pond #1 and very small erosional gullies on the slopes of all of the Commercial Ponds, generally the pond slopes are in good condition. There is increased gopher and mole activity evident on all of the slopes of Pond #1, on the west and north slopes of Pond #3, on the west slope of Pond #4, and on the east slope of the East R&D Pond. No apparent settlement of dikes or slopes was evident at the Commercial Ponds.

2. The game proof fences and entrance gates at both sets of Ponds appear to be in good condition. The Radioactive Materials signs posted on the fences are visible and readable.

3. No pond or feed line seepage has been noted.

4. The standpipe underdrains of the R & D ponds remain at less than six inches and no sampling has been required. As per License Condition No.11.4, on a weekly basis, CBR samples any underdrain of the Commercial Ponds that contains six inches or more of fluid. The samples are analyzed for conductivity and if the sampling results are below the action level no further sampling is necessary. Currently seven of the underdrains are measured at a weekly frequency for conductivity. At no time during the fourth quarter, 1999, did the conductivity of the underdrains of the Commercial Ponds exceed the action level.

5. Footage markers on all of the ponds are readable. All liners appear to be in good condition.

6. Inspections are performed on all of the ponds on a daily basis. Inspection forms were reviewed and are on file.

cc: Steve Collings
Steve Magnuson

Appendix I

Monthly Restoration Reports

Third and Fourth Quarter, 1999

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

JULY 1999

MINE UNIT 1

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):	x		

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

The Mine Unit 1 Baseline Restoration wells were sampled on July 15, 1999. The samples were sent to Energy Labs in Casper, Wyoming.

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

AUGUST 1999

MINE UNIT 1

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):	x		

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

Mine Unit 1 restoration and stabilization complete. Results from final stabilization sample of baseline restoration wells sampled July 15, 1999 is attached. The reports are a summary of all six rounds of stabilization samples.

ENERGY LABORATORIES
Billings • Casper • Gillette • Rapid City

ENERGY LABORATORIES, INC.

SHIPPING: 2393 SALT CREEK HIGHWAY • CASPER, WY 82601
MAILING: P.O. BOX 3258 • CASPER, WY 82602
E-mail: energy@trib.com • FAX: (307) 234-1639 • PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	UJ6P	UJ6	UJ6	UJ6	UJ6	UJ6
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:	99-16097	99-20850	99-24859	99-28317	99-30541	99-35537
Sample Matrix:	Water	Water	Water	Water	Water	Water
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:	March 22, 1999	April 22, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 23, 1999
Revised Report Date:	-	April 28, 1999	-	-	-	-

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	16.7	18.0	18.9	19.0	18.2	18.0
Magnesium	Mg	mg/L	1.0	4.4	4.9	5.0	5.0	4.8	5.4
Sodium	Na	mg/L	1.0	347	354	353	345	352	353
Potassium	K	mg/L	1.0	11.9	12.5	12.7	12.2	13.6	14.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	5.7	5.2	6.4
Bicarbonate	HCO_3	mg/L	1.0	409	421	427	428	432	438
Sulfate	SO_4	mg/L	1.0	325	325	342	331	332	323
Chloride	Cl	mg/L	1.0	131	126	138	129	138	126
Ammonium as N	NH_4	mg/L	0.05	0.05	0.08	0.14	< 0.05	0.13	0.15
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.61	0.64	0.69	0.70	0.71	0.80
Silica	SiO_2	mg/L	1.0	15.5	17.7	16.4	17.0	15.6	14.4
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1040	1050	1080	1080	1120	1060
Conductivity		µmhos/cm	1.0	1720	1740	1730	1780	1730	1800
Alkalinity	$CaCO_3$	mg/L	1.0	336	347	350	359	362	368
pH		std. units	0.10	8.08	8.25	8.16	8.37	8.33	8.41
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.003	0.003	0.003	0.002	0.002	0.001
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.44	0.43	0.50	0.45	0.44	0.54
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.01	< 0.01	0.01	< 0.01	0.01	0.01
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	< 0.05*	< 0.01	0.02	0.03	0.03	0.03
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.001	0.001	0.002	0.001	0.002	0.005
Vanadium	V	mg/L	0.01	0.04	0.02	0.02	0.01	0.01	0.01
Zinc	Zn	mg/L	0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	0.208	0.291	0.345	0.269	0.347	0.314
Radium 226	^{226}Ra	pCi/L	0.2	127	115	124	133	130	143
Radium Error Estimate ±				3.1	3.2	3.4	3.6	3.5	3.7
Quality Assurance Data			Target Range						
Anion		meq		17.22	17.30	18.06	17.75	18.09	17.69
Cation		meq		16.61	17.04	17.06	16.70	16.98	17.08
WYDEQ A/C Balance		%	-5 - +5	-1.80	-0.76	-2.84	-3.07	-3.15	-1.75
Calc TDS		mg/L		1058	1071	1101	1078	1096	1080
TDS A/C Balance		dec. %	0.80 - 1.20	0.98	0.98	0.98	1.00	1.02	0.98

*Molybdenum was analyzed at a detection limit of 0.05 for this Round

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	PR-15	PR-15	PR-15	PR-15	PR-15	PR-15	PR-15
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7
Laboratory ID:	99-16100	99-20259	99-24861	99-28321	99-30543	99-33331	[illegible]
Sample Matrix:	Water	Water	Water	Water	Water	Water	Water
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99	[illegible]
Report Date:	March 12, 1999	April 02, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999	[illegible]
Revised Report Date:		April 05, 1999	•	•	•	•	•

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	11.6	13.8	13.6	11.3	10.8	11.2
Magnesium	Mg	mg/L	1.0	2.7	3.2	3.2	2.6	2.6	3.3
Sodium	Na	mg/L	1.0	210	214	214	217	230	228
Potassium	K	mg/L	1.0	10.9	11.5	12.0	11.5	12.9	13.0
Carbonate	CO_3	mg/L	1.0	3.7	3.3	3.4	4.1	5.3	7.5
Bicarbonate	HCO_3	mg/L	1.0	289	289	291	335	354	375
Sulfate	SO_4	mg/L	1.0	160	156	163	152	155	139
Chloride	Cl	mg/L	1.0	87.7	86.2	92.5	81.0	85.8	72.0
Ammonium as N	NH_4	mg/L	0.05	< 0.05	0.06	0.06	< 0.05	0.07	0.13
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.31	0.47	0.49	0.58	0.59	0.68
Silica	SiO_2	mg/L	1.0	13.6	14.1	13.5	13.0	13.0	12.0
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	606	651	670	675	685	669
Conductivity		µmho/c	1.0	1070	1110	1090	1140	1100	1140
Alkalinity	$CaCO_3$	mg/L	1.0	243	242	244	281	298	318
pH		std. unit	0.10	8.35	8.31	8.31	8.34	8.42	8.55
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.033	0.030	0.034	0.041	0.043	0.045
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.41	0.40	0.25	0.40	0.40	0.49
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.02	0.02	0.02	< 0.01	0.02	0.05
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	0.13	0.14	0.12	0.16	0.15	0.14
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.002	0.002	0.002	0.003	0.003	0.003
Vanadium	V	mg/L	0.01	0.32	0.29	0.33	0.42	0.38	0.38
Zinc	Zn	mg/L	0.01	0.01	< 0.01	< 0.01	0.02	0.01	< 0.01
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	0.307	0.420	0.403	0.468	0.808	0.852
Radium 226	^{226}Ra	pCi/L	0.2	12.8	25.0	29.5	30.4	25.5	31.7
Radium Error Estimate ±				0.7	1.3	1.7	1.7	1.5	1.8
Quality Assurance Data			Target Range						
Anion		meq		10.70	10.55	10.91	11.11	11.64	11.33
Cation		meq		10.23	10.57	10.38	10.52	11.11	11.11
WYDEQ A/C Balance		%	-5 - 15	-2.23	0.11	-1.57	-2.70	-2.37	-0.99
Calc TDS		mg/L		646	647	662	661	693	674
TDS A/C Balance		dec. %	0.80 - 1.20	0.94	1.01	1.01	1.02	0.99	0.99

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:		PR-19	PR-19	PR-19	PR-19	PR-19	PR-19
Round:		Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:		99-16101	99-20238	99-24862	99-28320	99-30543	99-35539
Sample Matrix:		Water	Water	Water	Water	Water	Water
Sample Date:		02-19-99	03-16-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:		March 12, 1999	April 02, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:			April 05, 1999	-	-	-	-
Major Ions		**Units**	**Reporting Limit**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
Calcium	Ca	mg/L	1.0	26.4	27.8	30.7	35.6	51.2	67.0
Magnesium	Mg	mg/L	1.0	6.3	6.9	7.7	8.5	13.2	18.0
Sodium	Na	mg/L	1.0	346	359	381	385	513	616
Potassium	K	mg/L	1.0	11.3	12.0	13.6	14.0	19.5	24.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	406	412	429	444	534	607
Sulfate	SO_4	mg/L	1.0	320	341	391	402	589	696
Chloride	Cl	mg/L	1.0	145	141	172	170	263	313
Ammonium as N	NH_4	mg/L	0.05	0.06	0.15	0.17	0.14	0.28	0.36
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.44	0.42	0.40	0.41	0.37	0.36
Silica	SiO_2	mg/L	1.0	9.8	10.9	10.6	11.0	10.8	10.5
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1060	1130	1200	1280	1740	2120
Conductivity		µmhos/cm	1.0	1770	1820	1930	2090	2650	3300
Alkalinity	$CaCO_3$	mg/L	1.0	333	338	352	365	438	498
pH		std. units	0.10	8.07	7.93	7.90	7.98	7.90	8.30
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.016	0.016	0.020	0.018	0.018	0.018
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.50	0.52	0.59	0.55	0.63	0.85
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.09	0.19	0.28	0.40	0.46	0.70
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.03	0.03	0.04	0.04	0.06	0.09
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	< 0.05*	0.08	0.08	0.11	0.14	0.13
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Selenium	Se	mg/L	0.001	0.001	0.002	0.002	0.002	0.003	0.004
Vanadium	V	mg/L	0.01	0.09	0.07	0.06	0.06	0.07	0.08
Zinc	Zn	mg/L	0.01	0.01	0.04	0.03	0.07	0.04	0.04
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	1.05	1.54	1.66	1.19	2.70	4.17
Radium 226	^{226}Ra	pCi/L	0.2	439	623	730	711	1600	1910
Radium Error Estimate ±				7.3	7.2	8.3	8.3	11.6	13.3
Quality Assurance Data			**Target Range**						
Anion		meq		17.44	17.87	20.06	20.49	28.47	33.30
Cation		meq		17.20	17.92	19.13	19.60	26.32	32.33
WYDEQ A/C Balance		%	-5 - +5	-0.70	0.14	-2.37	-2.22	-3.53	-1.48
Calc TDS		mg/L		1069	1106	1223	1250	1728	2050
TDS A/C Balance		dec. %	0.80 - 1.20	0.99	1.02	0.98	1.02	1.01	1.03

*Molybdenum was analyzed at a detection limit of 0.05 for this Round.

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:			13-28 P	13-28 P	13-28 P	13-28 P	13-28 P	13-28 P			
Round:			Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
Laboratory ID:			99-16099	99-20256	99-24864	99-28319	99-30545	99-35540			
Sample Matrix:			Water	Water	Water	Water	Water	Water			
Sample Date:			02-19-99	03-16-99	04-19-99	05-20-99	06-17-99	07-15-99			
Report Date:			March 23, 1999	April 13, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999			
Revised Report Date:				April 15, 1999	•	•	•	•			
Major Ions		**Units**	**Reporting Limit**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**		
Calcium	Ca	mg/L	1.0	18.3	20.3	19.4	20.8	19.2	18.0		
Magnesium	Mg	mg/L	1.0	4.5	5.1	5.0	4.9	4.8	5.3		
Sodium	Na	mg/L	1.0	335	348	357	336	357	340		
Potassium	K	mg/L	1.0	9.7	10.6	11.5	11.0	12.0	12.0		
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.8		
Bicarbonate	HCO_3	mg/L	1.0	405	418	428	424	429	416		
Sulfate	SO_4	mg/L	1.0	291	307	310	312	332	299		
Chloride	Cl	mg/L	1.0	130	131	133	131	140	122		
Ammonium as N	NH_4	mg/L	0.05	0.05	0.11	0.11	0.06	0.12	0.14		
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10		
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	0.27	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10		
Fluoride	F	mg/L	0.10	0.58	0.54	0.53	0.56	0.59	0.68		
Silica	SiO_2	mg/L	1.0	14.0	14.8	15.7	14.0	14.0	14.2		
Non-Metals											
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1010	1050	1080	1050	1060	1020		
Conductivity		µmhos/cm	1.0	1610	1740	1740	1750	1700	1700		
Alkalinity	$CaCO_3$	mg/L	1.0	333	343	351	348	352	348		
pH		std units	0.10	8.17	7.99	8.23	8.12	8.13	8.31		
Trace Metals											
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10		
Arsenic	As	mg/L	0.001	0.022	0.025	0.026	0.025	0.027	0.029		
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10		
Boron	B	mg/L	0.10	0.44	0.46	0.31	0.44	0.44	0.53		
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Iron	Fe	mg/L	0.01	0.04	0.04	0.05	0.06	0.06	0.06		
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Manganese	Mn	mg/L	0.01	0.03	0.04	0.03	0.04	0.04	0.03		
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		
Molybdenum	Mo	mg/L	0.01	0.08	0.11	0.12	0.10	0.11	0.10		
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01		
Selenium	Se	mg/L	0.001	0.002	0.003	0.003	0.003	0.003	0.003		
Vanadium	V	mg/L	0.01	0.16	0.16	0.13	0.14	0.14	0.13		
Zinc	Zn	mg/L	0.01	< 0.01	0.02	0.03	0.03	0.02	0.01		
Radiometrics											
Uranium	^{238}U	mg/L	0.0003	0.463	0.739	0.734	0.456	0.756	0.710		
Radium 226	^{226}Ra	pCi/L	0.2	160	192	212	203	206	185		
Radium Error Estimate ±				4.5	4.1	4.4	4.4	4.1	4.1		
Quality Assurance Data			**Target Range**								
Anion	meq			16.43	16.98	17.26	17.19	17.94	16.67		
Cation	meq			16.13	16.87	17.23	16.52	17.22	16.45		
WYDEQ A/C Balance	%		-5 - +5	-0.91	-0.33	-0.09	-2.58	-2.06	-0.66		
Calc TDS	mg/L			1008	1017	1067	1042	1095	1024		
TDS A/C Balance	dec. %		0.80 - 1.20	1.00	1.00	1.01	1.01	0.97	1.00		

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	IJ-25 P	IJ-25-P	IJ-25-P	IJ-25-P	IJ-25-P	IJ-25-P
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:	99-16098	99-20837	99-24863	99-28316	99-30547	99-33541
Sample Matrix:	Water	Water	Water	Water	Water	Water
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:	•	April 15, 1999	•	•	•	•

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	19.0	18.8	18.2	17.0	16.9	16.0
Magnesium	Mg	mg/L	1.0	4.8	4.8	4.5	4.3	4.2	4.7
Sodium	Na	mg/L	1.0	336	339	333	329	351	341
Potassium	K	mg/L	1.0	13.2	13.2	13.2	12.5	14.3	14.4
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	419	410	409	421	425	430
Sulfate	SO_4	mg/L	1.0	310	304	315	315	331	302
Chloride	Cl	mg/L	1.0	127	120	133	127	138	118
Ammonium as N	NH_4	mg/L	0.05	0.07	0.11	0.11	< 0.05	0.10	0.15
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16	< 0.10
Fluoride	F	mg/L	0.10	0.56	0.57	0.58	0.60	0.63	0.69
Silica	SiO_2	mg/L	1.0	13.7	14.3	13.6	14.0	13.3	13.4

Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1030	1050	1050	1040	1070	1030
Conductivity		µmhos/cm	1.0	1690	1680	1670	1720	1670	1710
Alkalinity	$CaCO_3$	mg/L	1.0	344	337	336	346	349	353
pH		std. units	0.10	8.10	7.97	8.06	8.11	8.15	8.21

Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.020	0.020	0.025	0.023	0.025	0.027
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.49	0.51	0.35	0.51	0.50	0.64
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.04	0.04	0.06	0.05	0.05	0.04
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	0.07	0.10	0.10	0.11	0.11	0.10
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.002	0.002	0.003	0.002	0.002	0.003
Vanadium	V	mg/L	0.01	0.08	0.07	0.07	0.09	0.09	0.10
Zinc	Zn	mg/L	0.01	< 0.01	0.02	0.03	0.04	0.02	0.01

Radiometrics									
Uranium	^{238}U	mg/L	0.0003	0.757	1.04	0.966	0.666	1.12	1.26
Radium 226	^{226}Ra	pCi/L	0.2	253	218	236	225	242	202
Radium Error Estimate ±				5.4	4.4	4.7	4.7	4.5	4.3

Quality Assurance Data		Target Range						
Anion	meq		16.95	16.49	17.07	17.10	17.81	16.72
Cation	meq		16.32	16.44	16.13	15.85	16.85	16.41
WYDEQ A/C Balance	%	-5 - 4.5	-1.91	-0.15	-2.83	-3.78	-2.78	-0.93
Calc TDS	mg/L		1035	1021	1037	1031	1083	1026
TDS A/C Balance	dec. %	0.80 - 1.20	1.00	1.01	1.01	1.01	0.99	1.00

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	UJ-13 P	UJ-13 P	UJ-13 P	UJ-13 P	UJ-13 P	UJ-13 P	UJ-13 P
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	
Laboratory ID:	99-16106	99-20860	99-24860	99-28323	99-30546	99-35542	
Sample Matrix:	Water	Water	Water	Water	Water	Water	
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99	
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 6, 1999	August 13, 1999	
Revised Report Date:	•	April 13, 1999	•	•	•	•	

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	16.0	19.7	20.2	21.0	20.9	19.6
Magnesium	Mg	mg/L	1.0	4.2	5.2	5.3	5.3	5.4	5.7
Sodium	Na	mg/L	1.0	332	350	354	339	367	346
Potassium	K	mg/L	1.0	11.3	12.3	12.7	12.0	13.7	13.4
Carbonate	CO_3	mg/L	1.0	< 1.0	5.1	< 1.0	5.0	6.1	6.2
Bicarbonate	HCO_3	mg/L	1.0	402	419	432	424	439	434
Sulfate	SO_4	mg/L	1.0	306	326	335	351	353	319
Chloride	Cl	mg/L	1.0	126	125	139	135	145	123
Ammonium as N	NH_4	mg/L	0.05	0.05	0.15	0.24	0.13	0.26	0.30
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	< 0.10
Fluoride	F	mg/L	0.10	0.59	0.64	0.63	0.61	0.62	0.72
Silica	SiO_2	mg/L	1.0	14.0	15.8	14.2	15.0	13.9	14.2

Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1060	1080	1110	1100	1120	1080
Conductivity		µmho/c	1.0	1720	1740	1750	1820	1760	1780
Alkalinity	$CaCO_3$	mg/L	1.0	330	351	354	355	369	365
pH		std. unit	0.10	8.18	8.33	8.28	8.32	8.39	8.40

Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.006	0.012	0.017	0.013	0.016	0.016
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.43	0.41	0.28	0.44	0.45	0.54
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.02	0.10	0.13	0.05	0.07	0.06
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	< 0.05*	0.10	0.13	0.21	0.19	0.21
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Vanadium	V	mg/L	0.01	0.03	0.03	0.02	0.02	0.02	0.02
Zinc	Zn	mg/L	0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01

Radiometrics									
Uranium	^{238}U	mg/L	0.0003	0.242	1.27	1.60	1.49	1.75	1.71
Radium 226	^{226}Ra	pCi/L	0.2	376	665	764	770	920	849
Radium Error Estimate ±				6.5	7.6	8.5	8.7	8.7	9.1

Quality Assurance Data		Target Range							
Anion	meq		16.56	17.37	18.01	18.25	18.87	17.46
Cation	meq		15.89	16.98	17.21	16.56	17.84	16.88
WYDEQ A/C Balance	%	-5 - +5	-2.07	-1.15	-2.30	-4.86	-2.81	-1.68
Calc TDS	mg/L		1012	1069	1098	1096	1146	1065
TDS A/C Balance	dec. %	0.80 - 1.20	1.05	1.01	1.01	1.00	0.98	1.01

*Molybdenum was analyzed at a detection limit of 0.05 for this Round.

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	PAI-S	PAI-S	PAI-S	PAI-S	PAI-S	PAI-S
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:	99-16102	99-20355	99-24866	99-28323	99-30548	99-35543
Sample Matrix:	Water	Water	Water	Water	Water	Water
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-18-99
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:	-	April 15, 1999	-	-	-	-

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	13.6	19.3	29.6	38.0	39.4	25.0
Magnesium	Mg	mg/L	1.0	3.8	5.5	8.5	10.1	10.8	7.0
Sodium	Na	mg/L	1.0	349	387	466	477	555	441
Potassium	K	mg/L	1.0	14.4	17.8	19.2	20.0	23.1	19.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	418	436	494	519	560	483
Sulfate	SO_4	mg/L	1.0	306	358	459	514	595	437
Chloride	Cl	mg/L	1.0	132	152	201	226	267	184
Ammonium as N	NH_4	mg/L	0.05	< 0.05	0.07	0.12	0.08	0.17	0.16
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.42	0.39	0.38	0.39	0.39	0.46
Silica	SiO_2	mg/L	1.0	13.3	14.5	16.7	15.0	14.5	14.4
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1070	1180	1460	1610	1760	1420
Conductivity		µmho/c	1.0	1770	1920	2330	2560	2680	2270
Alkalinity	$CaCO_3$	mg/L	1.0	343	357	406	426	459	396
pH		std. unit	0.10	8.21	8.05	8.22	8.08	8.13	8.11
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.013	0.011	0.013	0.012	0.012	0.013
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.43	0.54	0.46	0.60	0.64	0.65
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Iron	Fe	mg/L	0.01	< 0.01	0.01	0.05	0.06	0.06	0.04
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	< 0.01	0.01	0.03	0.03	0.04	0.02
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	< 0.05*	0.08	0.06	0.06	0.09	0.08
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.001	0.002	0.003	0.002	0.003	0.003
Vanadium	V	mg/L	0.01	0.20	0.19	0.15	0.20	0.17	0.14
Zinc	Zn	mg/L	0.01	0.01	0.02	0.02	0.04	0.03	0.02
Radiometrics									
Uranium	^{234}U	mg/L	0.0003	3.03	3.65	5.26	5.01	9.35	6.54
Radium 226	^{226}Ra	pCi/L	0.2	35.8	58.5	119	172	202	114
Radium Error Estimate ±				2.2	2.3	3.3	4.0	4.1	3.3

Quality Assurance Data		Target Range						
Anion	meq		16.98	18.91	23.37	25.62	29.12	22.24
Cation	meq		16.56	18.70	22.97	24.02	27.62	21.52
WYDEQ A/C Balance	%	-5 - +5	-1.27	-0.54	-0.88	-3.23	-2.65	-1.64
Calc TDS	mg/L		1042	1172	1449	1561	1786	1370
TDS A/C Balance	dec. %	0.80 - 1.20	1.03	1.01	1.01	1.03	0.99	1.04

*Molybdenum was analyzed at a detection limit of 0.05 for this Round.

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	PAI-4	PAI-4	PAI-4	PAI-4	PAI-4	PAI-4
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:	99-16107	99-20254	99-24563	99-28324	99-30549	99-33544
Sample Matrix:	Water	Water	Water	Water	Water	Water
Sample Date:	02-09-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:		April 15, 1999				

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	16.2	16.2	17.0	15.0	15.3	15.2
Magnesium	Mg	mg/L	1.0	4.4	5.1	4.8	4.4	4.2	4.7
Sodium	Na	mg/L	1.0	334	350	345	319	319	314
Potassium	K	mg/L	1.0	12.0	13.1	13.2	12.0	13.0	13.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	429	421	399	396	393	393
Sulfate	SO_4	mg/L	1.0	300	307	304	306	298	278
Chloride	Cl	mg/L	1.0	144	136	133	125	129	112
Ammonium as N	NH_4	mg/L	0.05	0.10	0.13	0.13	0.09	0.14	0.17
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.50	0.47	0.46	0.50	0.51	0.60
Silica	SiO_2	mg/L	1.0	12.3	13.7	14.4	14.0	12.3	12.7
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1080	1060	1050	997	982	960
Conductivity		µmhos/c	1.0	1790	1750	1710	1670	1570	1600
Alkalinity	$CaCO_3$	mg/L	1.0	352	346	327	325	323	323
pH		std. unit	0.10	8.28	8.23	8.26	8.16	8.16	8.28
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.49	0.50	0.35	0.49	0.47	0.46
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.05	0.05	0.05	0.06	0.06	0.05
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.02	0.02	0.02	0.02	0.01	0.01
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	0.10	0.12	0.12	0.15	0.16	0.17
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	< 0.001	0.002	0.001	< 0.001	< 0.001	0.001
Vanadium	V	mg/L	0.01	< 0.10*	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Zinc	Zn	mg/L	0.01	< 0.01	0.02	0.01	< 0.01	0.01	0.01
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	0.172	0.158	0.122	0.103	0.129	0.130
Radium 226	^{226}Ra	pCi/L	0.2	174	173	184	160	161	157
Radium Error Estimate ±				4.4	3.9	4.2	3.9	3.6	3.9
Quality Assurance Data			Target Range						
Anion		meq		17.38	17.18	16.65	16.43	16.34	15.45
Cation		meq		16.03	16.91	16.61	15.32	15.34	15.16
WYDEQ A/C Balance		%	-5 - +5	-4.04	-0.78	-0.12	-3.51	-3.13	-0.92
Calc TDS		mg/L		1039	1053	1032	993	989	948
TDS A/C Balance		dec. %	0.80 - 1.20	1.04	1.00	1.02	1.00	0.99	1.01

*Vanadium was analyzed at a detection limit of 0.10 for this Round.

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:		PR-8	PR-8	PR-8	PR-8	PR-8	PR-8
Round:		Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:		99-16103	99-20853	99-24869	99-28327	99-30551	99-35545
Sample Matrix:		Water	Water	Water	Water	Water	Water
Sample Date:		02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:		March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:		•	April 13, 1999	•	•	•	•
Major Ions							
Calcium	Ca	mg/L	1.0	15.0	18.2	17.5	17.0	18.9	18.0
Magnesium	Mg	mg/L	1.0	3.9	4.6	4.6	4.5	4.7	5.0
Sodium	Na	mg/L	1.0	371	386	375	366	387	371
Potassium	K	mg/L	1.0	10.9	11.9	12.1	12.0	13.6	13.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	431	429	403	421	433	428
Sulfate	SO_4	mg/L	1.0	352	335	343	368	384	348
Chloride	Cl	mg/L	1.0	157	150	143	152	164	138
Ammonium as N	NH_4	mg/L	0.05	0.13	0.12	0.17	0.15	0.18	0.21
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.59	0.53	0.48	0.52	0.51	0.60
Silica	SiO_2	mg/L	1.0	12.6	14.5	15.2	14.0	12.7	13.3
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1160	1160	1150	1160	1190	1160
Conductivity		µmho/c	1.0	1960	1900	1830	1880	1920	1870
Alkalinity	$CaCO_3$	mg/L	1.0	353	352	331	346	355	351
pH		std. unit	0.10	8.11	8.09	8.20	8.17	8.04	8.23
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.025	0.021	0.024	0.022	0.023	0.024
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.47	0.50	0.32	0.47	0.47	0.44
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.12	0.17	0.15	0.23	0.25	0.20
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.02	0.02	0.02	0.02	0.02	0.02
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	0.06	0.07	0.08	0.09	0.09	0.09
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.001	0.003	0.003	0.003	0.004	0.004
Vanadium	V	mg/L	0.01	0.07	0.08	0.05	0.05	0.05	0.04
Zinc	Zn	mg/L	0.01	< 0.01	0.04	0.03	0.02	0.02	0.02
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	2.28	2.1	1.62	1.68	1.56	1.58
Radium 226	^{226}Ra	pCi/L	0.2	204	190	184	199	206	192
Radium Error Estimate ±				4.9	4.1	4.1	4.4	4.2	4.3
Quality Assurance Data			Target Range						
Anion		meq		18.85	18.70	17.83	18.90	19.75	18.20
Cation		meq		17.51	18.43	17.91	17.48	18.55	17.82
WYDEQ A/C Balance		%	-5 - +5	-3.69	-0.72	0.22	-3.91	-3.14	-1.05
Calc TDS		mg/L		1139	1156	1113	1146	1203	1133
TDS A/C Balance		dec. %	0.80 - 1.20	1.02	1.00	1.03	1.01	0.99	1.03

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	IJ-45 P	IJ-45 P	IJ-45 P	IJ-45 P	IJ-45 P	IJ-45 P
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:	99-16104	99-20251	99-24870	99-28326	99-30544	99-35546
Sample Matrix:	Water	Water	Water	Water	Water	Water
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:		April 15, 1999	•	•	•	•

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	16.6	18.1	17.6	17.0	18.7	18.1
Magnesium	Mg	mg/L	1.0	4.3	4.8	4.7	5.0	4.8	5.2
Sodium	Na	mg/L	1.0	342	349	353	334	355	343
Potassium	K	mg/L	1.0	12.2	12.8	13.1	12.0	13.9	14.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	404	404	402	399	403	412
Sulfate	SO_4	mg/L	1.0	304	312	319	339	347	323
Chloride	Cl	mg/L	1.0	139	136	140	146	149	127
Ammonium as N	NH_4	mg/L	0.05	0.05	0.06	0.06	< 0.05	0.09	0.12
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	0.12	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.58	0.55	0.54	0.55	0.56	0.64
Silica	SiO_2	mg/L	1.0	15.7	17.2	18.1	17.0	15.8	16.0
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1060	1070	1090	1090	1080	1090
Conductivity		µmho/c	1.0	1790	1740	1750	1760	1710	1730
Alkalinity	$CaCO_3$	mg/L	1.0	332	332	330	328	330	328
pH		std. unit	0.10	7.98	7.99	8.17	8.00	8.01	8.27
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.035	0.033	0.037	0.031	0.033	0.035
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.54	0.55	0.39	0.51	0.53	0.51
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.10	0.10	0.10	0.12	0.26	0.20
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.02	0.02	0.02	0.02	0.03	0.02
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	0.16	0.16	0.15	0.16	0.16	0.16
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.002	0.002	0.002	0.001	0.002	0.002
Vanadium	V	mg/L	0.01	0.22	0.22	0.22	0.21	0.18	0.18
Zinc	Zn	mg/L	0.01	< 0.01	0.03	0.03	0.02	0.03	0.02
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	0.932	1.20	1.18	0.828	1.16	1.22
Radium 226	^{226}Ra	pCi/L	0.2	445	431	447	468	509	487
Radium Error Estimate ±				7.2	6.2	6.2	6.7	6.5	6.7
Quality Assurance Data			Target Range						
Anion		meq		16.93	17.01	17.23	17.77	18.06	16.90
Cation		meq		16.39	16.83	16.98	16.12	17.16	16.64
WYDEQ A/C Balance		%	-5 - +5	-1.60	-0.52	-0.73	-4.82	-2.56	-0.77
Calc TDS		mg/L		1037	1054	1068	1071	1107	1044
TDS A/C Balance		dec. %	0.80 - 1.20	1.02	1.02	1.02	1.02	0.98	1.04

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	PT-5 PR-2	PT-5 PR-2	PT-5 PR-2	PT-5 PR-2	PT-5 PR-2	PT-5 PR-2	PT-5 PR-2
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	
Laboratory ID:	99-16105	99-28852	99-24868	99-28328	99-30550	99-35547	
Sample Matrix:	Water	Water	Water	Water	Water	Water	
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99	
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999	
Revised Report Date:		April 15, 1999	-	-	-	-	

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	12.9	15.4	14.8	14.0	14.6	14.0
Magnesium	Mg	mg/L	1.0	3.5	4.3	4.2	4.0	4.0	4.4
Sodium	Na	mg/L	1.0	346	355	360	349	355	351
Potassium	K	mg/L	1.0	10.5	11.2	12.0	11.2	12.2	12.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	405	407	421	400	405	401
Sulfate	SO_4	mg/L	1.0	302	325	334	352	356	334
Chloride	Cl	mg/L	1.0	127	127	134	135	141	126
Ammonium as N	NH_4	mg/L	0.05	0.08	0.06	0.09	0.08	0.09	0.14
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.58	0.49	0.51	0.50	0.49	0.58
Silica	SiO_2	mg/L	1.0	14.0	16.2	16.8	15.5	14.2	14.2
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1070	1060	1080	1100	1090	1050
Conductivity		µmho/c	1.0	1750	1740	1760	1790	1740	1750
Alkalinity	$CaCO_3$	mg/L	1.0	332	334	345	328	332	329
pH		std. unit	0.10	8.06	8.06	8.22	8.13	8.09	8.17
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.011	0.011	0.014	0.010	0.012	0.011
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.41	0.42	0.37	0.39	0.39	0.39
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.07	0.05	0.04	0.07	0.07	0.07
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.01	0.02	0.01	0.01	0.01	0.01
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	0.05	0.06	0.05	0.07	0.07	0.08
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.001	0.002	0.002	0.001	0.002	0.002
Vanadium	V	mg/L	0.01	0.09	0.08	0.09	0.07	0.07	0.06
Zinc	Zn	mg/L	0.01	< 0.01	0.03	0.02	0.03	0.02	0.02
Radiometrics									
Uranium	^{238}U	mg/L	0.0003	2.06	2.36	2.22	1.68	2.36	2.40
Radium 226	^{226}Ra	pCi/L	0.2	263	243	248	239	246	233
Radium Error Estimate ±				5.5	4.7	4.8	5.0	4.5	4.7
Quality Assurance Data			Target Range						
Anion		meq		16.55	17.06	17.67	17.73	18.06	17.13
Cation		meq		16.27	16.87	17.07	16.52	16.83	16.66
WYDEQ A/C Balance		%	-5 - +5	-0.84	-0.56	-1.72	-3.54	-3.52	-1.37
Calc TDS		mg/L		1020	1059	1087	1082	1101	1057
TDS A/C Balance		dec. %	0.80 - 1.20	1.05	1.00	0.99	1.02	0.99	0.99

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES

Sample ID:	FR-4	FR-4 (PAI-1)	FR-4 (PAI-1)	FR-4 (PAI-1)	FR-4 (PAI-1)	FR-4 (PAI-1)
Round:	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Laboratory ID:	99-16108	99-20161	99-24867	99-28325	99-30552	99-355-1
Sample Matrix:	Water	Water	Water	Water	Water	Water
Sample Date:	02-19-99	03-18-99	04-15-99	05-20-99	06-17-99	07-15-99
Report Date:	March 12, 1999	April 12, 1999	May 6, 1999	June 8, 1999	July 8, 1999	August 13, 1999
Revised Report Date:		April 15, 1999	-	-	-	-

Major Ions		Units	Reporting Limit	Results	Results	Results	Results	Results	Results
Calcium	Ca	mg/L	1.0	16.8	21.5	20.4	19.6	21.1	14.0
Magnesium	Mg	mg/L	1.0	4.4	5.6	5.4	5.3	5.4	4.2
Sodium	Na	mg/L	1.0	341	362	369	348	365	271
Potassium	K	mg/L	1.0	11.8	13.2	13.8	13.0	14.6	11.0
Carbonate	CO_3	mg/L	1.0	< 1.0	< 1.0	5.7	< 1.0	< 1.0	< 1.0
Bicarbonate	HCO_3	mg/L	1.0	413	442	444	460	468	399
Sulfate	SO_4	mg/L	1.0	319	345	337	347	354	225
Chloride	Cl	mg/L	1.0	124	130	132	130	134	76.0
Ammonium as N	NH_4	mg/L	0.05	0.07	0.07	0.11	0.08	0.11	0.15
Nitrite as N	NO_2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate + Nitrite as N	$NO_3 + NO_2$	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoride	F	mg/L	0.10	0.59	0.48	0.42	0.44	0.43	0.79
Silica	SiO_2	mg/L	1.0	14.5	17.9	19.0	17.0	15.9	14.5
Non-Metals									
Total Dissolved Solids @ 180°C	TDS	mg/L	2.0	1060	1130	1140	1120	937	839
Conductivity		µmho/c	1.0	1760	1860	1810	1820	2420	1340
Alkalinity	$CaCO_3$	mg/L	1.0	339	362	372	377	384	327
pH		std. unit	0.10	8.24	8.20	8.36	8.18	8.21	8.28
Trace Metals									
Aluminum	Al	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	As	mg/L	0.001	0.004	0.004	0.003	0.002	0.002	0.002
Barium	Ba	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	B	mg/L	0.10	0.42	0.41	0.26	0.37	0.36	0.33
Cadmium	Cd	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	Cr	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Copper	Cu	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Iron	Fe	mg/L	0.01	0.02	0.03	0.04	< 0.01	0.05	0.04
Lead	Pb	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Manganese	Mn	mg/L	0.01	0.01	0.02	0.02	0.02	0.02	0.01
Mercury	Hg	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	Mo	mg/L	0.01	< 0.05*	0.03	0.04	0.08	0.07	0.04
Nickel	Ni	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	Se	mg/L	0.001	0.001	0.001	0.002	< 0.001	0.001	0.001
Vanadium	V	mg/L	0.01	0.04	0.02	0.01	0.02	0.01	0.01
Zinc	Zn	mg/L	0.01	< 0.01	0.01	0.01	0.02	0.01	< 0.01
Radiometrics									
Uranium	^{Nat}U	mg/L	0.0003	1.62	5.44	5.74	4.08	5.88	3.56
Radium 226	^{226}Ra	pCi/L	0.2	105	168	155	155	166	99.1
Radium Error Estimate ±				3.7	3.8	3.8	3.8	3.7	3.0
Quality Assurance Data			Target Range						
Anion		meq		16.96	18.12	18.21	18.46	18.85	13.42
Cation		meq		16.35	17.64	17.89	16.90	17.77	13.14
WYDEQ A/C Balance		%	-5 - +5	-1.81	-1.35	-0.88	-4.40	-2.97	-1.05
Calc TDS		mg/L		1039	1117	1124	1111	1145	816
TDS A/C Balance		dec. %	0.80 - 1.20	1.02	1.01	1.01	1.01	0.82	1.03

*Molybdenum was analyzed at a detection limit of 0.05 for this Round.

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COMPLETE ANALYTICAL SERVICES

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

SEPTEMBER 1999

MINE UNIT 1

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):			

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

OCTOBER 1999

MINE UNIT 1

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):			

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

NOVEMBER 1999

MINE UNIT I

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):			

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

DECEMBER 1999

MINE UNIT 1

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):	x		Restoration approved - FINAL REPORT

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

JULY 1999

MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

I147P, P119, P125, P127, P210, P81, P83, P88, P89. Analytical results are listed in Table 1.

Mine Unit 2 Restoration Data

WellNum2	Date	U3O8	V	Total CO3	PH	Ca	Na	Cl	SO4	Cond
I147p	5-Jul-99	2.6	0	—	—	—	—	—	—	2380
I147p	12-Jul-99	2.3	0	—	—	—	—	—	—	2280
I147p	20-Jul-99	2.3	<0.1	—	—	—	—	—	—	2230
I147p	27-Jul-99	2.5	<0.1	—	—	—	—	—	—	2280
p119	19-Jul-99	1.7	0.6	—	—	—	—	—	—	963
p119	27-Jul-99	2.5	0.8	—	—	—	—	—	—	2280
p125	5-Jul-99	3.7	0.3	—	—	—	—	—	—	1182
p125	12-Jul-99	3.6	<.1	—	—	—	—	—	—	1227
p125	19-Jul-99	3.6	<.1	—	—	—	—	—	—	1227
p127	5-Jul-99	14.2	0.1	—	—	—	—	—	—	1953
p127	12-Jul-99	13.6	<0.1	—	—	—	—	—	—	1941
p127	20-Jul-99	15.3	0.1	—	—	—	—	—	—	2280
p127	27-Jul-99	15.6	0	—	—	—	—	—	—	2080
p210	5-Jul-99	6.3	<0.1	—	—	—	—	—	—	3440
p210	12-Jul-99	6.4	0	—	—	—	—	—	—	3460
p210	20-Jul-99	6.2	<0.1	—	—	—	—	—	—	3490
p210	27-Jul-99	6.6	0	—	—	—	—	—	—	3420
p81	5-Jul-99	2.5	2.3	—	—	—	—	—	—	1338
p81	12-Jul-99	2.3	2	—	—	—	—	—	—	1345
p81	20-Jul-99	2.3	1.6	—	—	—	—	—	—	1253
p81	27-Jul-99	2	1.6	—	—	—	—	—	—	1256
p83	5-Jul-99	2.6	0.8	—	—	—	—	—	—	3040
p83	12-Jul-99	2.7	1.2	—	—	—	—	—	—	2640
p83	20-Jul-99	2.6	1.6	—	—	—	—	—	—	2500
p83	27-Jul-99	2.5	2	—	—	—	—	—	—	2280
p88	5-Jul-99	4.3	0.1	—	—	—	—	—	—	2070
p88	12-Jul-99	2.5	0.4	—	—	—	—	—	—	1318
p88	19-Jul-99	2.5	0.4	—	—	—	—	—	—	1318
p89	19-Jul-99	4.1	1.6	—	—	—	—	—	—	2740
p89	27-Jul-99	2.7	0.6	—	—	—	—	—	—	2050

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

AUGUST 1999

MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

I147P, P119, P120, P127, P210, P81, P83, P89, P93. Analytical results are listed in Table 1.

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

SEPTEMBER 1999

MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

I147P, P104, P119, P120, P127, P210, P81, P83, P93.

Mine Unit 2 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
I147p	1-Sep-99	2.2	0	—	—	—	—	—	—	2440
I147p	8-Sep-99	1.9	0	—	—	—	—	—	—	2430
I147p	15-Sep-99	3.1	0	—	—	—	—	—	—	2390
I147p	21-Sep-99	2.1	0.4	—	—	—	—	—	—	2580
I147p	29-Sep-99	2.3	0.4	—	—	—	—	—	—	2530
p104	13-Sep-99	—	—	—	—	—	—	—	—	—
p104	21-Sep-99	2.6	1	—	—	—	—	—	—	1512
p104	29-Sep-99	3.2	1	—	—	—	—	—	—	1613
p119	1-Sep-99	1.7	0.7	—	—	—	—	—	—	892
p119	8-Sep-99	1.2	0.9	—	—	—	—	—	—	842
p119	15-Sep-99	1.6	0.6	—	—	—	—	—	—	804
p120	7-Sep-99	2.7	1.3	—	—	—	—	—	—	1660
p120	16-Sep-99	2.9	1.3	—	—	—	—	—	—	1441
p120	21-Sep-99	2.3	1.6	—	—	—	—	—	—	1319
p120	29-Sep-99	2.1	1.6	—	—	—	—	—	—	1175
p127	1-Sep-99	14.5	0.1	—	—	—	—	—	—	1924
p127	8-Sep-99	15.3	0.2	—	—	—	—	—	—	2060
p127	15-Sep-99	15.4	<0.1	—	—	—	—	—	—	2040
p127	21-Sep-99	16.6	0.1	—	—	—	—	—	—	2250
p210	1-Sep-99	5.9	0	—	—	—	—	—	—	3310
p210	8-Sep-99	5.7	0.2	—	—	—	—	—	—	3340
p210	15-Sep-99	6	0.2	—	—	—	—	—	—	3290
p210	21-Sep-99	5.8	0.1	—	—	—	—	—	—	3380
p210	29-Sep-99	6.3	0.1	—	—	—	—	—	—	3520
p81	1-Sep-99	1.7	1.5	—	—	—	—	—	—	1217
p81	8-Sep-99	1.2	1.6	—	—	—	—	—	—	1232
p81	15-Sep-99	1.3	1.6	—	—	—	—	—	—	1077
p81	21-Sep-99	1.4	1.7	—	—	—	—	—	—	1092
p81	29-Sep-99	1.6	1.7	—	—	—	—	—	—	989
p83	1-Sep-99	1.4	1.6	—	—	—	—	—	—	1783
p83	8-Sep-99	1.1	2	—	—	—	—	—	—	1752
p83	15-Sep-99	1.4	2	—	—	—	—	—	—	1680
p83	21-Sep-99	1.2	2	—	—	—	—	—	—	1679
p83	29-Sep-99	1.2	2	—	—	—	—	—	—	1679
p93	1-Sep-99	2.4	0.8	—	—	—	—	—	—	1469
p93	8-Sep-99	1.4	0.9	—	—	—	—	—	—	1761
p93	13-Sep-99	2.1	1.2	—	—	—	—	—	—	1265
p93	21-Sep-99	21	1.3	—	—	—	—	—	—	1211
p93	29-Sep-99	2.2	1.3	—	—	—	—	—	—	1119

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

OCTOBER 1999

MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

I147P, P81, P83, P93, P96, P102, P104, P120, P127, P210

Mine Unit 2 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
I147p	6-Oct-99	---	0.2	---	---	---	---	---	---	2760
I147p	11-Oct-99	2.3	0.1	---	---	---	---	---	---	2520
I147p	18-Oct-99	2.4	0	---	---	---	---	---	---	2430
I147p	26-Oct-99	---	0.1	---	---	---	---	---	---	2210
p102	6-Oct-99	---	---	---	---	---	---	---	---	---
p102	18-Oct-99	1.4	1.1	---	---	---	---	---	---	1499
p102	26-Oct-99	---	1	---	---	---	---	---	---	1448
p104	6-Oct-99	---	1	---	---	---	---	---	---	1527
p104	11-Oct-99	2.5	1.2	---	---	---	---	---	---	1352
p104	18-Oct-99	1.9	1	---	---	---	---	---	---	1236
p104	26-Oct-99	---	0.8	---	---	---	---	---	---	1283
p120	6-Oct-99	---	1.5	---	---	---	---	---	---	1111
p120	11-Oct-99	1.5	1.4	---	---	---	---	---	---	1045
p120	18-Oct-99	1.5	1.4	---	---	---	---	---	---	1017
p120	26-Oct-99	---	1	---	---	---	---	---	---	1048
p127	6-Oct-99	---	0.2	---	---	---	---	---	---	2490
p127	11-Oct-99	19	0.3	---	---	---	---	---	---	2480
p127	18-Oct-99	19.5	<0.1	---	---	---	---	---	---	2460
p127	26-Oct-99	---	0.1	---	---	---	---	---	---	2480
p210	6-Oct-99	---	0.3	---	---	---	---	---	---	3470
p210	11-Oct-99	5.3	0.1	---	---	---	---	---	---	3170
p210	26-Oct-99	5.3	0	---	---	---	---	---	---	3220
p81	6-Oct-99	---	1.4	---	---	---	---	---	---	1048
p83	6-Oct-99	---	1.9	---	---	---	---	---	---	1633
p83	11-Oct-99	1.2	2	---	---	---	---	---	---	1389
p83	18-Oct-99	1.4	2	---	---	---	---	---	---	1490
p83	26-Oct-99	---	1.4	---	---	---	---	---	---	1613
p93	6-Oct-99	---	1	---	---	---	---	---	---	1107
p93	11-Oct-99	2	1	---	---	---	---	---	---	1082
p93	18-Oct-99	1.9	1	---	---	---	---	---	---	1022
p96	19-Oct-99	1.8	---	---	---	---	---	---	---	---
p96	26-Oct-99	---	0.3	---	---	---	---	---	---	1928

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

NOVEMBER 1999

MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

I147P, P83, P94, P96, P98, P102, P108, P110, P117, P118, P120, P127, P210

Mine Unit 2 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
I147p	02-Nov-99	2.2	0.4	—	—	—	—	—	—	2370
I147p	09-Nov-99	2.1	0.2	—	—	—	—	—	—	2270
I147p	16-Nov-99	2.6	0.2	—	—	—	—	—	—	2170
I147p	24-Nov-99	2	0.3	—	—	—	—	—	—	2250
I147p	30-Nov-99	1.8	0.3	—	—	—	—	—	—	2210
p102	02-Nov-99	1.1	1.2	—	—	—	—	—	—	1367
p102	09-Nov-99	1.1	0.9	—	—	—	—	—	—	1198
p102	16-Nov-99	1.6	1.2	—	—	—	—	—	—	1067
p102	24-Nov-99	1	1	—	—	—	—	—	—	1128
p102	30-Nov-99	0.5	1.3	—	—	—	—	—	—	1037
p108	11-Nov-99	4.4	0.5	—	—	—	—	—	—	1704
p110	11-Nov-99	0.5	3.9	—	—	—	—	—	—	477
p117	11-Nov-99	0.7	1.2	—	—	—	—	—	—	506
p118	11-Nov-99	0.8	0.2	—	—	—	—	—	—	668
p120	02-Nov-99	1	1	—	—	—	—	—	—	1011
p120	09-Nov-99	0.7	0.8	—	—	—	—	—	—	901
p120	10-Nov-99	0.8	0.8							901
p127	01-Nov-99	17.7	0.2	—	—	—	—	—	—	2430
p127	09-Nov-99	17.4	0.1	—	—	—	—	—	—	2380
p127	16-Nov-99	16.4	0.1	—	—	—	—	—	—	2320
p127	24-Nov-99	15.8	0.2	—	—	—	—	—	—	2240
p127	30-Nov-99	14.2	0.2	—	—	—	—	—	—	2130
p210	02-Nov-99	5.3	0.2	—	—	—	—	—	—	3230
p210	09-Nov-99	5.3	0	—	—	—	—	—	—	3270
p210	16-Nov-99	5.3	0.2	—	—	—	—	—	—	3200
p210	24-Nov-99	5.3	0.2	—	—	—	—	—	—	3550
p210	30-Nov-99	5.1	0.2	—	—	—	—	—	—	3220
p83	02-Nov-99	1.2	1.5	—	—	—	—	—	—	1605
p83	09-Nov-99	1.2	1.5	—	—	—	—	—	—	1605
p83	16-Nov-99	0.9	1.3	—	—	—	—	—	—	1472
p83	24-Nov-99	1.2	1.3	—	—	—	—	—	—	1628
p83	30-Nov-99	1	1.3	—	—	—	—	—	—	1559
p94	11-Nov-99	1.3	0	—	—	—	—	—	—	1030
p96	02-Nov-99	1.5	0.2	—	—	—	—	—	—	1849
p96	09-Nov-99	1.3	0.3	—	—	—	—	—	—	1605
p96	16-Nov-99	1.1	0.4	—	—	—	—	—	—	1449
p96	25-Nov-99	0.8	0.6	—	—	—	—	—	—	1356
p96	30-Nov-99	1	0.5	—	—	—	—	—	—	1335
p98	10-Nov-99	1.5	0.7	—	—	—	—	—	—	1586
p98	16-Nov-99	1.5	0.8	—	—	—	—	—	—	1586
p98	24-Nov-99	2	0.6	—	—	—	—	—	—	2160
p98	30-Nov-99	1.5	0.8	—	—	—	—	—	—	1348

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

DECEMBER 1999

MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):	x		Shut in 12/7 through 12/27 for trunkline maintenance

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

I147P, P83, P98, I175P

Mine Unit 2 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
I147p	29-Dec-99	1.2	0.3	---	---	---	---	---	---	2350
I175p	29-Dec-99	1.1	0.7	---	---	---	---	---	---	1516
p210	29-Dec-99	5.1	0.2	---	---	---	---	---	---	3320
p83	29-Dec-99	0.9	1.3	---	---	---	---	---	---	1576
p98	01-Dec-99	1.5	0.8	---	---	---	---	---	---	1348

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

JULY 1999

MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep	x		(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

P213, P223, P226, P228, P232, P233, P241, P244, P246, P248, P250, P262

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P213, P223, P226, P228, P232, P233, P241, P244, P246, P248, P250. Analytical results are listed in Table 1.

Mine Unit 3 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
P213	27-Jul-99	17.1	0.2	-	-	-	-	-	-	5100
P223	27-Jul-99	39.7	0.2	-	-	-	-	-	-	4810
P226	27-Jul-99	32.7	0.7	-	-	-	-	-	-	5270
P228	27-Jul-99	30	0.9	-	-	-	-	-	-	5840
P232	27-Jul-99	34.7	1.3	-	-	-	-	-	-	5670
P233	27-Jul-99	28	0.4	-	-	-	-	-	-	5040
P241	27-Jul-99	51.5	0.7	-	-	-	-	-	-	5370
P244	27-Jul-99	14.9	2	-	-	-	-	-	-	5170
P246	27-Jul-99	10.9	1.5	-	-	-	-	-	-	4540
P248	27-Jul-99	22	1	-	-	-	-	-	-	4440
P250	27-Jul-99	44.5	0.4	-	-	-	-	-	-	5180

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

AUGUST 1999

MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep	x		(if yes, complete part 3)
c. Groundwater Treatment	x		
d. Wellfield Recirculation		x	
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

P223, P226, P228, P232, P233, P241, P244, P246, P248, P250, P262

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P213, P223, P226, P228, P232, P233, P241, P244, P246, P248, P250, P262. Analytical results are listed in Table 1.

Mine Unit 3 Restoration Data

WellNum2	Date	U3O8	V	Total CO3	PH	Ca	Na	Cl	SO4	Cond
P213	3-Aug-99	25.3	0.2	-	-	-	-	-	-	5280
P213	6-Aug-99	27.3	0.1	-	-	-	-	-	-	5130
P223	3-Aug-99	36.7	0.2	-	-	-	-	-	-	4640
P223	6-Aug-99	35.6	0.3	-	-	-	-	-	-	4320
P226	3-Aug-99	31	0.6	-	-	-	-	-	-	5180
P226	6-Aug-99	30.2	0.7	-	-	-	-	-	-	5010
P226	27-Aug-99	-	-	-	-	-	-	-	-	-
P228	3-Aug-99	27.5	0.8	-	-	-	-	-	-	5720
P228	6-Aug-99	27.1	1	-	-	-	-	-	-	5580
P232	3-Aug-99	58	1.1	-	-	-	-	-	-	5810
P232	6-Aug-99	19.8	0.1	-	-	-	-	-	-	5630
P232	27-Aug-99	-	-	-	-	-	-	-	-	-
P233	3-Aug-99	32.9	0.6	-	-	-	-	-	-	5230
P233	6-Aug-99	35	0.5	-	-	-	-	-	-	5230
P233	27-Aug-99	-	-	-	-	-	-	-	-	-
P241	3-Aug-99	42.4	0.4	-	-	-	-	-	-	4820
P241	6-Aug-99	19.9	0.2	-	-	-	-	-	-	4880
P244	3-Aug-99	19.6	1.9	-	-	-	-	-	-	5140
P244	6-Aug-99	19.8	1.8	-	-	-	-	-	-	5040
P246	3-Aug-99	11.5	1.2	-	-	-	-	-	-	4100
P246	6-Aug-99	19.9	1.2	-	-	-	-	-	-	4090
P248	3-Aug-99	22.5	1	-	-	-	-	-	-	4090
P248	6-Aug-99	19.9	0.8	-	-	-	-	-	-	3990
P250	3-Aug-99	35.9	0.6	-	-	-	-	-	-	5121
P250	6-Aug-99	19.9	0.4	-	-	-	-	-	-	5120
P262	3-Aug-99	24	0.4	-	-	-	-	-	-	5440
P262	10-Aug-99	23.8	0.3	-	-	-	-	-	-	5310

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

SEPTEMBER 1999

MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation	x		
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P223, P226, P228, P232, P233, P241, P244, P246, P248

Mine Unit 3 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
P223	15-Sep-99	31.7	0.4	-	-	-	-	-	-	4840
P223	21-Sep-99	33.3	0.4	-	-	-	-	-	-	4550
P223	29-Sep-99	30.4	0.4	-	-	-	-	-	-	4590
P226	1-Sep-99	31.6	0.4	-	-	-	-	-	-	5140
P226	8-Sep-99	30.7	0.8	-	-	-	-	-	-	5110
P226	15-Sep-99	312	0.6	-	-	-	-	-	-	5150
P226	21-Sep-99	31.1	0.8	-	-	-	-	-	-	5260
P226	29-Sep-99	31.2	0.8	-	-	-	-	-	-	5150
P228	1-Sep-99	31.6	0.8	-	-	-	-	-	-	5670
P228	8-Sep-99	26.9	1.2	-	-	-	-	-	-	5640
P228	21-Sep-99	25.2	0.9	-	-	-	-	-	-	5690
P228	29-Sep-99	23.8	0.9	-	-	-	-	-	-	5450
P232	1-Sep-99	21.5	1	-	-	-	-	-	-	5600
P232	8-Sep-99	34.5	1.2	-	-	-	-	-	-	5490
P232	15-Sep-99	31.9	0.9	-	-	-	-	-	-	5470
P232	21-Sep-99	30.2	1.1	-	-	-	-	-	-	5460
P232	29-Sep-99	28	1.1	-	-	-	-	-	-	5230
P233	1-Sep-99	35.1	0.4	-	-	-	-	-	-	5240
P233	8-Sep-99	34	0.9	-	-	-	-	-	-	5230
P233	15-Sep-99	35.2	0.6	-	-	-	-	-	-	5320
P233	21-Sep-99	36.2	0.8	-	-	-	-	-	-	5310
P233	29-Sep-99	34.6	0.8	-	-	-	-	-	-	5180
P241	1-Sep-99	37.3	0.2	-	-	-	-	-	-	4910
P241	8-Sep-99	39.9	0.6	-	-	-	-	-	-	5040
P241	15-Sep-99	36.1	0.4	-	-	-	-	-	-	5120
P241	21-Sep-99	32.6	0.4	-	-	-	-	-	-	5130
P241	29-Sep-99	29.6	0.4	-	-	-	-	-	-	4890
P244	21-Sep-99	20.9	1.9	-	-	-	-	-	-	5130
P244	29-Sep-99	21.9	1.9	-	-	-	-	-	-	4960
P246	21-Sep-99	20.9	1.5	-	-	-	-	-	-	4450
P246	29-Sep-99	10.7	1.5	-	-	-	-	-	-	1680
P248	15-Sep-99	20.6	0.9	-	-	-	-	-	-	4110
P248	21-Sep-99	22.7	1.1	-	-	-	-	-	-	4290
P248	29-Sep-99	21.9	1.9	-	-	-	-	-	-	4960

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

OCTOBER 1999

MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep		x	(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation	x		
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P219, P223, P226, P228, P232, P233, P241, P244, P246, P248, P250

Mine Unit 3 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
P219	19-Oct-99	37.7	-	-	-	-	-	-	-	-
P219	26-Oct-99	-	21.6	-	-	-	-	-	-	5170
P223	6-Oct-99	-	0.6	-	-	-	-	-	-	4620
P223	11-Oct-99	24.1	0.3	-	-	-	-	-	-	4600
P223	18-Oct-99	23.3	0.4	-	-	-	-	-	-	4700
P223	26-Oct-99	-	0.4	-	-	-	-	-	-	4690
P226	6-Oct-99	-	0.8	-	-	-	-	-	-	5160
P226	11-Oct-99	30.2	0.4	-	-	-	-	-	-	5110
P226	18-Oct-99	29.7	0.7	-	-	-	-	-	-	5160
P226	26-Oct-99	-	0.6	-	-	-	-	-	-	5150
P228	6-Oct-99	-	0.9	-	-	-	-	-	-	5420
P228	11-Oct-99	21.7	0.4	-	-	-	-	-	-	5390
P228	18-Oct-99	21.4	0.8	-	-	-	-	-	-	5440
P228	26-Oct-99	-	0.7	-	-	-	-	-	-	5430
P232	6-Oct-99	-	1.3	-	-	-	-	-	-	5340
P232	11-Oct-99	24.7	0.6	-	-	-	-	-	-	5420
P232	18-Oct-99	26.5	1	-	-	-	-	-	-	5200
P232	26-Oct-99	-	0.8	-	-	-	-	-	-	5160
P233	6-Oct-99	-	1	-	-	-	-	-	-	5300
P233	11-Oct-99	36.1	0.3	-	-	-	-	-	-	5220
P233	18-Oct-99	35.2	0.9	-	-	-	-	-	-	5240
P233	26-Oct-99	-	0.7	-	-	-	-	-	-	5180
P241	6-Oct-99	-	0.7	-	-	-	-	-	-	4970
P241	11-Oct-99	29.3	0.1	-	-	-	-	-	-	4950
P241	18-Oct-99	29.1	0.6	-	-	-	-	-	-	4970
P241	26-Oct-99	-	0.3	-	-	-	-	-	-	4960
P244	6-Oct-99	-	1.6	-	-	-	-	-	-	5110
P244	11-Oct-99	20.2	1.5	-	-	-	-	-	-	4980
P244	18-Oct-99	20.5	1.8	-	-	-	-	-	-	5080
P244	26-Oct-99	-	1.4	-	-	-	-	-	-	5080
P246	6-Oct-99	-	1.5	-	-	-	-	-	-	4870
P246	11-Oct-99	9.4	1	-	-	-	-	-	-	4850
P246	18-Oct-99	10.2	1.3	-	-	-	-	-	-	5040
P246	26-Oct-99	-	1.2	-	-	-	-	-	-	4930
P248	6-Oct-99	-	1.2	-	-	-	-	-	-	4370
P248	11-Oct-99	23.2	0.7	-	-	-	-	-	-	4330
P248	18-Oct-99	23.1	1	-	-	-	-	-	-	4360
P248	26-Oct-99	-	0.9	-	-	-	-	-	-	4330
P250	6-Oct-99	-	0.9	-	-	-	-	-	-	5130
P250	11-Oct-99	37.1	0.3	-	-	-	-	-	-	5080
P250	18-Oct-99	33.8	0.6	-	-	-	-	-	-	4990
P250	26-Oct-99	-	0.6	-	-	-	-	-	-	5080

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

NOVEMBER 1999

MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep	x		(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation	x		
e. Other (explain):		x	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

P213, P219, P228, P232, P233, P241, P244, P246, P248, P250

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P213, P219, P223, P226, P228, P232, P233, P241, P244, P246, P248, P250

Mine Unit 3 Restoration Data

WellNum2	Date	U3O8	V	Total CO3	PH	Ca	Na	Cl	SO4	Cond
P213	09-Nov-99	15	0.6	-	-	-	-	-	-	5003
P213	16-Nov-99	13.6	0.7	-	-	-	-	-	-	5070
P213	30-Nov-99	14.1	0.5	-	-	-	-	-	-	5100
P219	02-Nov-99	44.2	0.4	-	-	-	-	-	-	5230
P219	09-Nov-99	20	0.4	-	-	-	-	-	-	5160
P219	16-Nov-99	19.8	0.5	-	-	-	-	-	-	5150
P219	24-Nov-99	32.2	0.3	-	-	-	-	-	-	5140
P219	30-Nov-99	28.7	0.3	-	-	-	-	-	-	5060
P223	01-Nov-99	21.9	0.6	-	-	-	-	-	-	4850
P223	09-Nov-99	36.4	0.6	-	-	-	-	-	-	4680
P223	16-Nov-99	33.6	0.7	-	-	-	-	-	-	4720
P226	02-Nov-99	28.3	0.7	-	-	-	-	-	-	5150
P226	09-Nov-99	28	0.6	-	-	-	-	-	-	5080
P226	16-Nov-99	27.4	0.6	-	-	-	-	-	-	5070
P228	02-Nov-99	20.1	0.7	-	-	-	-	-	-	5400
P228	09-Nov-99	19.5	0.6	-	-	-	-	-	-	5360
P228	16-Nov-99	19.4	0.8	-	-	-	-	-	-	5330
P228	30-Nov-99	17.9	0.7	-	-	-	-	-	-	5300
P232	02-Nov-99	20.5	1.1	-	-	-	-	-	-	5150
P232	09-Nov-99	22.8	0.7	-	-	-	-	-	-	5210
P232	16-Nov-99	24.9	0.9	-	-	-	-	-	-	5180
P232	30-Nov-99	29.3	0.9	-	-	-	-	-	-	5250
P233	02-Nov-99	27.1	0.7	-	-	-	-	-	-	5210
P233	09-Nov-99	26.8	0.4	-	-	-	-	-	-	5140
P233	16-Nov-99	19.7	0.8	-	-	-	-	-	-	5120
P233	30-Nov-99	29.5	0.7	-	-	-	-	-	-	5160
P241	02-Nov-99	27.4	0.3	-	-	-	-	-	-	4960
P241	09-Nov-99	27.5	0.2	-	-	-	-	-	-	4950
P241	16-Nov-99	19.3	1.3	-	-	-	-	-	-	5050
P241	30-Nov-99	27.7	0.4	-	-	-	-	-	-	4840
P244	02-Nov-99	19.8	1.5	-	-	-	-	-	-	5090
P244	09-Nov-99	20	1.3	-	-	-	-	-	-	5040
P244	16-Nov-99	20.9	1.3	-	-	-	-	-	-	5000
P244	16-Nov-99	20.9	1.4	-	-	-	-	-	-	4970
P246	02-Nov-99	8.6	1.2	-	-	-	-	-	-	5030
P246	09-Nov-99	9.2	1.1	-	-	-	-	-	-	5050
P246	16-Nov-99	8.1	1.1	-	-	-	-	-	-	4980
P246	30-Nov-99	6.9	1.2	-	-	-	-	-	-	5000
P248	02-Nov-99	22.1	1.1	-	-	-	-	-	-	4500
P248	09-Nov-99	21	0.8	-	-	-	-	-	-	4380
P248	16-Nov-99	20.3	0.8	-	-	-	-	-	-	4420
P248	30-Nov-99	19	1	-	-	-	-	-	-	4130
P250	02-Nov-99	30.3	0.7	-	-	-	-	-	-	5070
P250	09-Nov-99	29.1	0.6	-	-	-	-	-	-	5050
P250	16-Nov-99	28.8	0.8	-	-	-	-	-	-	5040
P250	30-Nov-99	29.2	0.8	-	-	-	-	-	-	5070

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

DECEMBER 1999

MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		x	(if yes, complete part 2)
b. Groundwater Sweep	x		(if yes, complete part 3)
c. Groundwater Treatment		x	
d. Wellfield Recirculation	x		
e. Other (explain):	x		Shut in 12/8 through 12/19 for trunkline maintenance

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

P213, P219, P228, P232, P233, P241, P244, P246, P248, P250

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P213, P219, P223, P226, P228, P232, P233, P241, P244, P246, P248, P250

Mine Unit 3 Restoration Data

WellNum2	Date	U3O8	V	Total_CO3	PH	Ca	Na	Cl	SO4	Cond
P213	21-Dec-99	20	0.3	-	-	-	-	-	-	5080
P213	29-Dec-99	14.6	0.4	-	-	-	-	-	-	5220
P219	07-Dec-99	34.3	0.4	-	-	-	-	-	-	5280
P219	21-Dec-99	24.7	0.6	-	-	-	-	-	-	5170
P219	29-Dec-99	29.5	0.4	-	-	-	-	-	-	5300
P223	29-Dec-99	20.1	0.4	-	-	-	-	-	-	4740
P226	29-Dec-99	27.3	0.5	-	-	-	-	-	-	5200
P228	21-Dec-99	24.6	0.3	-	-	-	-	-	-	5500
P228	29-Dec-99	19.6	0.7	-	-	-	-	-	-	5520
P232	07-Dec-99	33.3	0.9	-	-	-	-	-	-	5270
P232	21-Dec-99	38.2	0.6	-	-	-	-	-	-	5180
P232	29-Dec-99	24.5	0.8	-	-	-	-	-	-	5400
P233	07-Dec-99	21.2	0.8	-	-	-	-	-	-	5140
P233	21-Dec-99	29.7	0.4	-	-	-	-	-	-	5170
P233	29-Dec-99	26.5	0.6	-	-	-	-	-	-	5260
P241	07-Dec-99	27.1	0.4	-	-	-	-	-	-	4500
P241	21-Dec-99	25.2	<0.1	-	-	-	-	-	-	4130
P241	29-Dec-99	25.1	0.3	-	-	-	-	-	-	4690
P244	21-Dec-99	15.2	1.4	-	-	-	-	-	-	5020
P244	29-Dec-99	14.7	1.3	-	-	-	-	-	-	5210
P246	21-Dec-99	6.7	0.9	-	-	-	-	-	-	4820
P246	29-Dec-99	9.3	1.2	-	-	-	-	-	-	4940
P248	07-Dec-99	18.5	1	-	-	-	-	-	-	3970
P250	07-Dec-99	32.2	0.7	-	-	-	-	-	-	4940
P250	21-Dec-99	31.6	0.6	-	-	-	-	-	-	4840
P250	29-Dec-99	30.6	0.8	-	-	-	-	-	-	5100

Appendix J

Environmental Air, Gamma Exposure and Sediment Monitoring Results

Third and Fourth Quarter, 1999

Eberline Dosimetry Services
7021 Pan American Fwy NE
Albuquerque, NM 87109
(505) 345-9931 Voice (505) 761-5410 Fax
(888) 343-8537 Toll-Free

TLD ENVIRONMENTAL MONITOR REPORT

Customer No. 06192
Report Date October 13, 1999

Exposure Period - 7/1/99 - 10/4

Badge No		Dosimeter Readings (mrem)						
		Chip 1	Chip 2	Chip 3	Chip 4	Chip 5	Date Issued	Date Annealed
Type	Freq	Identification		Average	± 2σ	mrem Per Week	Date Returned	Date Read
01000		61	54	62	52	60	7/1/99	6/15/99
S	Q	CONTROL		57.8	9.0	3.52	10/7/99	10/8/99
01001		21	23	26	26	29	7/1/99	6/15/99
S	Q	AM-1		25.0	6.2	1.52	10/7/99	10/8/99
01002		25	33	25	34	28	7/1/99	6/15/99
S	Q	AM-2		29.0	8.6	1.77	10/7/99	10/8/99
01003		22	22	26	34	27	7/1/99	6/15/99
S	Q	AM-6		26.2	9.8	1.59	10/7/99	10/8/99
01008		27	25	28	25	25	7/1/99	6/15/99
S	Q	AM-8		26.0	2.8	1.58	10/7/99	10/8/99
01009		25	22	14	34	13	7/1/99	6/15/99
S	Q	AM-3		21.6	17.2	1.31	10/7/99	10/8/99
01010		25	17	32	24	26	7/1/99	6/15/99
S	Q	AM-4		24.8	10.7	1.51	10/7/99	10/8/99
01011		28	28	25	29	28	7/1/99	6/15/99
S	Q	AM-5		27.6	3.0	1.68	10/7/99	10/8/99

Frequency Code
W - Weekly
B - BiWeekly
M - Monthly
P - BiMonthly
Q - Quarterly
S - SemiAnnual
A - Annual
I - Irregular

Company CROW BUTTE RESOURCES
Attention RHONDA GRANTHAM
Address P.O. BOX 169

CRAWFORD, NE 69339

Eberline Dosimetry Services
7021 Pan American Fwy NE
Albuquerque, NM 87109
(505) 345-9931 Voice (505) 761-5410 Fax
(888) 343-8537 Toll-Free

TLD ENVIRONMENTAL MONITOR REPORT

Customer No. 06192
Report Date January 25, 2000

Exposure Period 10/4/99 - 1/4/00

Badge No		Dosimeter Readings (mrem)					Date Issued	Date Annealed
		Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
Type	Freq	Identification		Average	± 2σ	mrem Per Week	Date Returned	Date Read
01000		57	39	64	45	56	10/1/99	9/22/99
S	Q	CONTROL		52.2	20.1	3.10	1/11/00	1/18/00
01001		21	24	32	31	32	10/1/99	9/22/99
S	Q	AM-1		28.0	10.3	1.66	1/11/00	1/18/00
01002		34	32	31	33	31	10/1/99	9/22/99
S	Q	AM-2		32.2	2.6	1.91	1/11/00	1/18/00
01003		26	31	31	31	24	10/1/99	9/22/99
S	Q	AM-6		28.6	6.7	1.70	1/11/00	1/18/00
01008		31	27	34	33	31	10/1/99	9/22/99
S	Q	AM-8		31.2	5.4	1.85	1/11/00	1/18/00
01009		35	36	26	35	30	10/1/99	9/22/99
S	Q	AM-3		32.4	8.6	1.92	1/11/00	1/18/00
01010		34	31	34	22	29	10/1/99	9/22/99
S	Q	AM-4		30.0	9.9	1.78	1/11/00	1/18/00
01011		31	24	33	40	35	10/1/99	9/22/99
S	Q	AM-5		32.6	11.7	1.93	1/11/00	1/18/00

Frequency Code
W - Weekly
B - BiWeekly
M - Monthly
P - BiMonthly
Q - Quarterly
S - SemiAnnual
A - Annual
I - Irregular

Company CROW BUTTE RESOURCES
Attention RHONDA GRANTHAM
Address P.O. BOX 169

CRAWFORD, NE 69339

ENERGY LABORATORIES
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PHONE: (307) 235-0515 • TOLL FREE: (888) 235-0515

LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Project:	Annual Stream Sediments
Sample ID:	Sample #1 Stream Sed. S-1
Laboratory ID:	33913-001
Sample Matrix:	Soil
Sample Date:	10-20-99
Date Received:	10-22-99
Report Date:	November 22, 1999

Radiometric	Results	Units	Reporting Limit
Uranium	0.48	pCi/g	0.01
Radium-226	0.37	pCi/g	0.01
Radium Precision ±	0.07		
Lead-210	<0.05	pCi/g	0.05
Lead Precision ±	-		

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Project:	Annual Stream Sediments
Sample ID:	Sample #2 Stream Sed. S-2
Laboratory ID:	33913-002
Sample Matrix:	Soil
Sample Date:	10-20-99
Date Received:	10-22-99
Report Date:	November 22, 1999

Radiometric	Results	Units	Reporting Limit
Uranium	0.71	pCi/g	0.01
Radium-226	0.43	pCi/g	0.01
Radium Precision ±	0.07		
Lead-210	<0.05	pCi/g	0.05
Lead Precision ±	-		

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Project:	Annual Stream Sediments
Sample ID:	Sample #3 Stream Sed. S-5
Laboratory ID:	33913-003
Sample Matrix:	Soil
Sample Date:	10-20-99
Date Received:	10-22-99
Report Date:	November 22, 1999

Radiometric	Results	Units	Reporting Limit
Uranium	0.55	pCi/g	0.01
Radium-226	0.39	pCi/g	0.01
Radium Precision ±	0.07		
Lead-210	<0.05	pCi/g	0.05
Lead Precision ±	-		

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Project:	Annual Stream Sediments
Sample ID:	Sample #4 Stream Sed. E-1 & E-2 Composite
Laboratory ID:	33913-004
Sample Matrix:	Soil
Sample Date:	10-20-99
Date Received:	10-22-99
Report Date:	November 22, 1999

Radiometric	Results	Units	Reporting Limit
Uranium	3.70	pCi/g	0.01
Radium-226	0.85	pCi/g	0.01
Radium Precision ±	0.10		
Lead-210	1.40	pCi/g	0.05
Lead Precision ±	0.35		

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LABORATORY ANALYSIS REPORT - CROW BUTTE RESOURCES, INC.

Project:	Annual Stream Sediments
Sample ID:	Sample #5 Stream Sed. E-4
Laboratory ID:	33913-005
Sample Matrix:	Soil
Sample Date:	10-20-99
Date Received:	10-22-99
Report Date:	November 22, 1999

Radiometric	Results	Units	Reporting Limit
Uranium	6.30	pCi/g	0.01
Radium-226	0.64	pCi/g	0.01
Radium Precision ±	0.08		
Lead-210	1.32	pCi/g	0.05
Lead Precision ±	0.34		

Crow Butte Resources, Inc.
Crow Butte Uranium Project

Track Etch Cup Ambient Radon Concentrations

Air Monitoring Station No.

Period: July 1, 1999 to January 4, 2000

	Gross Count	Average Radon Concentration (x 10^{-9} uCi/ml)	Accuracy (x 10^{-9} uCi/ml)	Percent Effluent Concnetration
AM-1	87	0.7	0.08	7.0%
AM-2	85	0.7	0.08	7.0%
AM-3	70	0.5	0.06	5.0%
AM-4	87	0.7	0.08	7.0%
AM-5	93	0.8	0.08	8.0%
AM-6	66	0.5	0.06	5.0%
AM-8	67	0.5	0.06	5.0%
AB-3 (AM-3 Duplicate)	63	0.5	0.06	5.0%
AB-6 (AM-6 Duplicate)	58	0.4	0.05	4.0%

LLD (x 10^{-9} uCi/ml)	0.2
Effluent Concentration Limit, 10 CFR 20 App B Column 2:	10

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #1

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20862	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
01/04/99-03/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.09E+09	^{210}Pb	1.30E-14	5.91E-16	2.00E-15	6.00E-13	2.17E+00
99-30516	^{nat}U	3.57E-16	N/A	1.00E-16	9.00E-14	3.97E-01
04/01/99-06/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 1.98E+09	^{210}Pb	8.78E-15	4.80E-16	2.00E-15	6.00E-13	1.46E+00
33045-001	^{nat}U	1.63E-16	N/A	1.00E-16	9.00E-14	1.81E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 1.98E+09	^{210}Pb	1.29E-14	1.97E-15	2.00E-15	6.00E-13	2.15E+00
35160-1	^{nat}U	2.49E-16	N/A	1.00E-16	9.00E-14	2.76E-01
10/04/99-12/15/99	^{226}Ra	8.72E-16	2.29E-16	1.00E-16	9.00E-13	9.69E-02
Air Volume in mLs 2.07E+09	^{210}Pb	1.49E-14	2.07E-15	2.00E-15	6.00E-13	2.48E+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

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #2

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20863	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
01/04/99-03/15/99	^{226}Ra	4.15E-16	1.38E-16	1.00E-16	9.00E-13	4.61E-02
Air Volume in mLs	^{210}Pb	1.86E-14	6.46E-16	2.00E-15	6.00E-13	3.11E+00
2.06E+09						
99-30517	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
04/01/99-06/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	9.45E-15	4.73E-16	2.00E-15	6.00E-13	1.58E+00
2.01E+09						
33045-002	^{nat}U	4.82E-16	N/A	1.00E-16	9.00E-14	5.36E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.42E-14	1.99E-15	2.00E-15	6.00E-13	2.36E+00
2.01E+09						
35160-2	^{nat}U	4.33E-16	N/A	1.00E-16	9.00E-14	4.81E-01
10/04/99-12/15/99	^{226}Ra	9.59E-16	2.28E-16	1.00E-16	9.00E-13	1.07E-01
Air Volume in mLs	^{210}Pb	1.08E-14	1.96E-15	2.00E-15	6.00E-13	1.80E+00
2.08E+09						

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

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #3

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20864	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
01/04/99-03/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.27E+09	^{210}Pb	1.23E-14	5.44E-16	2.00E-15	6.00E-13	2.05E+00
99-30518	^{nat}U	4.17E-16	N/A	1.00E-16	9.00E-14	4.63E-01
04/01/99-06/15/99	^{226}Ra	4.40E-16	8.80E-17	1.00E-16	9.00E-13	4.89E-02
Air Volume in mLs 2.16E+09	^{210}Pb	1.50E-14	4.84E-16	2.00E-15	6.00E-13	2.50E+00
33045-003	^{nat}U	1.49E-16	N/A	1.00E-16	9.00E-14	1.66E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.16E+09	^{210}Pb	1.56E-14	1.89E-15	2.00E-15	6.00E-13	2.60E+00
35160-3	^{nat}U	5.26E-16	N/A	1.00E-16	9.00E-14	5.85E-01
10/04/99-12/15/99	^{226}Ra	4.32E-16	2.16E-16	1.00E-16	9.00E-13	4.80E-02
Air Volume in mLs 2.20E+09	^{210}Pb	1.61E-14	1.99E-15	2.00E-15	6.00E-13	2.68E+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

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #4

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20865	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
01/04/99-03/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.14E+09	^{210}Pb	1.64E-14	6.21E-16	2.00E-15	6.00E-13	2.73E+00
99-30519	^{nat}U	4.08E-16	N/A	1.00E-16	9.00E-14	4.53E-01
04/01/99-06/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.05E+09	^{210}Pb	1.31E-14	5.10E-16	2.00E-15	6.00E-13	2.19E+00
33045-004	^{nat}U	2.20E-16	N/A	1.00E-16	9.00E-14	2.44E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.05E+09	^{210}Pb	1.43E-14	1.95E-15	2.00E-15	6.00E-13	2.39E+00
35160-4	^{nat}U	1.80E-16	N/A	1.00E-16	9.00E-14	2.00E-01
10/04/99-12/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.14E+09	^{210}Pb	1.81E-14	2.09E-15	2.00E-15	6.00E-13	3.02E+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

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #5

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20866	^{nat}U	2.80E-16	N/A	1.00E-16	9.00E-14	3.11E-01
01/04/99-03/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.52E-14	5.97E-16	2.00E-15	6.00E-13	2.54E+00
2.07E+09						
99-30520	^{nat}U	1.20E-15	N/A	1.00E-16	9.00E-14	1.33E+00
04/01/99-06/15/99	^{226}Ra	3.45E-15	4.19E-16	1.00E-16	9.00E-13	3.83E-01
Air Volume in mLs	^{210}Pb	1.40E-14	5.12E-16	2.00E-15	6.00E-13	2.34E+00
2.04E+09						
33045-005	^{nat}U	5.68E-16	N/A	1.00E-16	9.00E-14	6.31E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.52E-14	1.96E-15	2.00E-15	6.00E-13	2.54E+00
2.04E+09						
35160-5	^{nat}U	2.82E-16	N/A	1.00E-16	9.00E-14	3.14E-01
10/04/99-12/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.67E-14	2.13E-15	2.00E-15	6.00E-13	2.78E+00
2.05E+09						

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

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #6

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20867	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
01/04/99-03/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.68E-14	5.94E-16	2.00E-15	6.00E-13	2.79E+00
2.08E+09						
99-30521	^{nat}U	2.29E-16	N/A	1.00E-16	9.00E-14	2.54E-01
04/01/99-06/15/99	^{226}Ra	7.23E-16	9.64E-17	1.00E-16	9.00E-13	8.04E-02
Air Volume in mLs	^{210}Pb	1.13E-14	4.82E-16	2.00E-15	6.00E-13	1.89E+00
1.97E+09						
33045-006	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.74E-14	2.07E-15	2.00E-15	6.00E-13	2.90E+00
1.97E+09						
35160-6	^{nat}U	1.18E-15	N/A	1.00E-16	9.00E-14	1.31E+00
10/04/99-12/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs	^{210}Pb	1.61E-14	2.10E-15	2.00E-15	6.00E-13	2.69E+00
2.08E+09						

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

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HIGH VOLUME AIR SAMPLING REPORT

CLIENT: CROW BUTTE RESOURCES

REPORT DATE: January 24, 2000

SAMPLE ID: AM #8

Quarter/Date Sampled Air Volume	Radionuclide	Conc. µCi/mL	Error Est. µCi/mL	L.L.D. µCi/mL	Eff. Conc. µCi/mL	Eff. Conc. %
99-20868	^{nat}U	< 1.00E-16	N/A	1.00E-16	9.00E-14	< 1.11E-01
01/04/99-03/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.07E+09	^{210}Pb	1.50E-14	5.97E-16	2.00E-15	6.00E-13	2.49E+00
99-30522	^{nat}U	1.29E-15	N/A	1.00E-16	9.00E-14	1.43E+00
04/01/99-06/15/99	^{226}Ra	7.14E-15	5.56E-16	1.00E-16	9.00E-13	7.93E-01
Air Volume in mLs 2.05E+09	^{210}Pb	1.21E-14	5.10E-16	2.00E-15	6.00E-13	2.02E+00
33045-007	^{nat}U	2.19E-16	N/A	1.00E-16	9.00E-14	2.43E-01
07/01/99-09/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.06E+09	^{210}Pb	1.09E-14	1.84E-15	2.00E-15	6.00E-13	1.82E+00
35160-7	^{nat}U	1.57E-16	N/A	1.00E-16	9.00E-14	1.75E-01
10/04/99-12/15/99	^{226}Ra	< 1.00E-16	N/A	1.00E-16	9.00E-13	< 1.11E-02
Air Volume in mLs 2.05E+09	^{210}Pb	1.03E-14	1.95E-15	2.00E-15	6.00E-13	1.72E+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

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