

**Cameco Resources  
Crow Butte Operation**



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

**(308) 665-2215  
(308) 665-2341 – FAX**

November 24, 2010

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Keith I. McConnell, Deputy Director  
Decommissioning and Uranium Recovery Licensing Directorate  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Mail Stop T8-F5  
Washington D.C. 20555-0001

Subject: 2010 Annual Pond Inspection Report  
Source Materials License SUA-1534  
Docket Number 40-8943

Dear Mr. McConnell:

Enclosed please find enclosed a revised certified copy of the Crow Butte Mine 2010 Annual Pond Inspection Report. This report is required under License Condition 11.4 of Source Materials License SUA-1534 in accordance with the latest revision of the Evaporation Pond Inspection Program dated February 5, 1996. Mr. David Coe, an independent contractor and a registered Professional Engineer in the State of Nebraska, performed the pond inspection and the technical evaluation, and wrote the final report. Civil surveys were performed by Pine Ridge Land Surveys of Chadron, Nebraska. This report replaces the one submitted on November 10, 2010.

If you have any questions, please feel free to contact me at (308) 665-2215 ext 114.

Sincerely,  
CAMECO RESOURCES  
CROW BUTTE OPERATION

A handwritten signature in cursive script that reads "Larry Teahon".

Larry Teahon  
SHEQ Manager

# CROW BUTTE RESOURCES, INC.

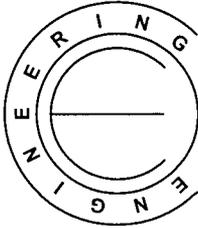


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Mr. Keith McConnell  
November 24, 2010  
Page Two

Attachments: As Stated

cc: Jenny Coughlin - NDEQ  
CBO - File  
ec: Joe Brister – Cheyenne Office



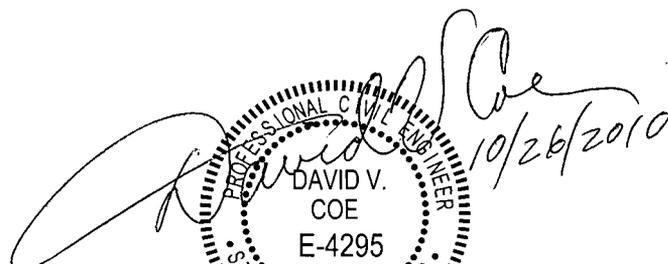
**CROW BUTTE RESOURCES, INC.**

**CROW BUTTE MINE  
DAWES COUNTY, NEBRASKA**

**2010 POND INSPECTION REPORT**

By: David V. Coe, PE  
Nebraska Registration No. E - 4295

October 26, 2010

  
PROFESSIONAL CIVIL ENGINEER  
DAVID V.  
COE  
E-4295  
STATE OF NEBRASKA  
10/26/2010

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Attachment 2	-	2010 Annual Survey Data (Pages 1-4)

## **1.0 GENERAL:**

An annual inspection of the Crow Butte ISL Mine pond system is required by the Evaporation Pond Onsite Inspection Program dated December 1992 (Revised February 26, 1993, August 30, 1993 and February 5, 1996) and by reference under license condition number 11.4 of SUA-1534. The inspection program provides for systematic inspections and an annual technical evaluation and inspection report, which compares field inspection data with engineering design reports to assess structural stability and hydraulic and hydrologic capacities.

The 2010 annual report covers the time period of September 29, 2009 through October 8, 2010. During that period five evaporation ponds were in use, two R&D ponds (Cells 1 & 2) and three commercial ponds (Ponds 1, 3 and 4).

The R&D pond design report was prepared by Klohn Leonoff Consulting Engineers in 1983 and construction of R&D cells 1 and 2 was completed in 1985. The R&D ponds have two horizontal to one vertical interior and exterior embankment slopes with a 34-mil interior hypalon liner placed on top of six inches of sand. The underdrain leak detection system piping is located beneath the pond liner and reports to two six-inch monitor stand pipes. The overall depth of the R&D ponds is 15 feet and the maximum operating level is 12 feet. This provides three feet of freeboard.

The commercial evaporation pond design report was prepared by Western Water Consultants, Inc. in 1988. Construction of ponds 3 and 4 was completed in 1990 and construction of pond 1 was completed in 1992. The exterior slopes of these ponds are 2.5 horizontal to 1 vertical. The interior slopes are 2:1. Ponds 3 and 4 have a 20-mil PVC bottom liner, an intermediate geonet and a 60-mil high-density polyethylene (HDPE) top liner. In pond 1, a 30-mil very low-density polyethylene (VLDPE) bottom liner was installed with an intermediate geonet and 60 mil HDPE top liner. Each pond has a leak detection system consisting of six separate perforated four-inch pipes, which report to leak detection standpipes located on the interior slopes.

The overall depth of Pond 1 is 17 feet from crest to pond bottom and the maximum operating level is 12 feet. The 12 feet provides five feet of freeboard. The overall depth of Ponds 3 and 4 is 17.5 feet with a maximum operating level of 12.5 feet, which equates to a five-foot freeboard.

## **2.0 REVIEW OF INSPECTION DATA:**

The Evaporation Pond Onsite Inspection Program dated December 1992 as amended calls for systematic inspections on a daily, weekly, monthly and quarterly basis. Data from the inspection reports are shown on Charts 1 through 4 including pond depths and underdrain measurements. **Zero pond depths are shown on the charts as a result of frozen pond conditions. Recording indicate the existing freeboard along with the pond depth at the time of inspection.**

Two groundwater monitor wells are installed in the uppermost aquifer (Brule) in the commercial pond area and one groundwater monitor well in the R&D pond area. The wells are sampled quarterly for indications of leaks in the ponds. The wells provide backup leak detection for the underdrain leak detection system. The analysis of the quarterly samples tracks alkalinity, chloride, sulfate, sodium and conductivity. The concentration of the above chemicals is compared to baseline data established in 1990 and 1991. A review of the quarterly analysis reports for 2009 indicates all parameters have not substantially deviated from the baseline parameters.

A new sprinkler system was installed on the commercial evaporation ponds during 2006 & 2007. The new sprinkler systems have a large influence on the reduction or likelihood of leaks caused by abrasive action of the sprinkler system. The sprinkler system function is to increase the rate of evaporation from the three commercial ponds. The sprinkler system in pond #4 sometimes uses water from pond #3. Previous old aeration sprinkler systems were blamed for the principle cause of liner leaks. At the time of this inspection; all ponds had the new sprinkler systems. Power requirements for the operation of the sprinkler systems were transferred from the middle of Ponds 3 & 4 to the north end of the commercial pond area. Power requirements for the south end of pond 4 have to be supplied through small generators.

### **3.0 TECHNICAL EVALUATION**

- The technical evaluation of the Crow Butte Mine ponds utilizes data from the systematic inspection reports, results of the annual survey and a visual inspection of the ponds to assess the hydraulic capacities and structural stability of the ponds.
- Diary notes of the annual inspection are attached to this report as Attachment 1. The notes cover the visual inspection of the five ponds and the review of the reports and records for the review period of September 29, 2009 through October 8, 2010.

The annual survey (elevations of base four base lines) was completed October 22<sup>nd</sup> and compared with previous annual survey data. No problems were indicated from a review of the survey information. The maximum differential between the two years of survey data was considered insignificant. Generally, the major differential elevation was approximately 0.1 foot. The "V" ditch elevation had a variation of about 0.5 foot. There was a positive elevation difference near the fence line. This would probably be attributed to deposition from blowing wind conditions. The flat bottom ditches had a few differential elevations as great as 0.2 foot difference. A mid-point slope elevation had a difference of about 0.3 foot... Results of the annual survey are included as Attachment 2.

Photos of the ponds have been taken for the last eleven years. There has been significant improvement in the vegetative cover of the pond embankment slopes over the course of those years. The gravel surfacing of the embankment berms improves the stability of the dam embankments. The mixture of vegetation and gravel surfacing gives the impression of a sparse vegetative cover. The gravel surfacing of the top of the berms prevents erosion near the top shoulder of the embankments and provides additional stability of the

berm when ATV travels on the berm during inclement weather. There are remaining sections of the pond's berms that could be surfaced with a limestone base course.

No problems in the existing embankment alignment or sloughing were detected during the visual inspection of the ponds, diversion ditches and embankments. There were no signs of seepage in the embankments or at the toe of the embankment slopes. The drainage channel between ponds 3 & 4 has significantly improved since 2005 and it was in good shape in 2010. The drainage off the road along the northeast corner of Pond #1 was significantly improved during the 2010 season.

A review of the weekly, monthly and quarterly inspection reports indicate there were no significant shortfalls of the pond operations during the year of 2010. All the required inspections, reports and record keeping were accomplished during 2010. The monitoring well analysis reports were taken on a quarterly basis. No significant deviation from baseline data was reported.

Calculations of diversion ditches were not included in this report, but are referenced in the previous annual reports. There have been no changes in the capacity of the diversion ditches over the last twelve years. The existing ditch calculation of ditch flow can be found in Attachment 2 of the 2001 annual inspection report. These ditch calculations are also permanent records on file in the office of Crow Butte Mine. The installed ditches are capable of containing the design storm (USBR one-hour thunderstorm, zone 3) with an adequate freeboard.

The ponds were operated in 2010 at a slight lower level than in 2009. The capability of transferring one pond's storage into another pond without overfilling was maintained during the 2010 year. As of October 8, 2010 the pond system contained about 32 acre-feet (AF) of stored water. The allowable storage capacity of the five ponds is 122.4 AF, which provides for transfer of any one pond's storage to another pond in the system in the event of an emergency.

#### **4.0 CONCLUSIONS:**

The visual inspection of the five evaporation ponds and diversion ditches along with the review of the available inspection reports and data indicate the ponds are operating in the constraints of the engineering design.

The aeration system reduces the chances of liner damage and leaks. The system enhances the rate of evaporation. The salt build-up on the pond liner was not significant during this year's inspection. Vegetation was in good shape. Mowing of the embankment slopes has not been done this year. Mowing of the berm top might enhance the appearance of the graveled surfaces versus vegetative cover mixed in with the gravel surfacing. Absence of mowing reduces the slope damage on the embankments. There was an abundant presence of vegetation on most of the slopes this year.

The pond system is operating within its designed storage capacity. Adequate freeboard existed in each pond throughout the year and reserve capacity was available in the system to transfer the contents of any one pond to other ponds.

The addition of gravel surfacing on the top of the embankment berms helps stabilize the embankments. Continuation of this practice would enhance the areas without gravel surfacing. Gopher and rodent maintenance has shown a good improvement over the last few years. During 2010, the injection of gopher repellent or poison was not accomplished with mechanical trenching machines. Poison was injected manually by hand. It would be a good to improve the vegetative cover on the east cut bank of pond #1. The erosion of the cut bank on pond #1 has little effect on the safety of the pond itself. Drainage or runoff channels improvement along the northeast end of Pond #1 was accomplished during the spring of 2010.

The R & D ponds have excellent vegetative cover. The safety of the R & D ponds is sound.



### Commercial Pond 1 - 2010

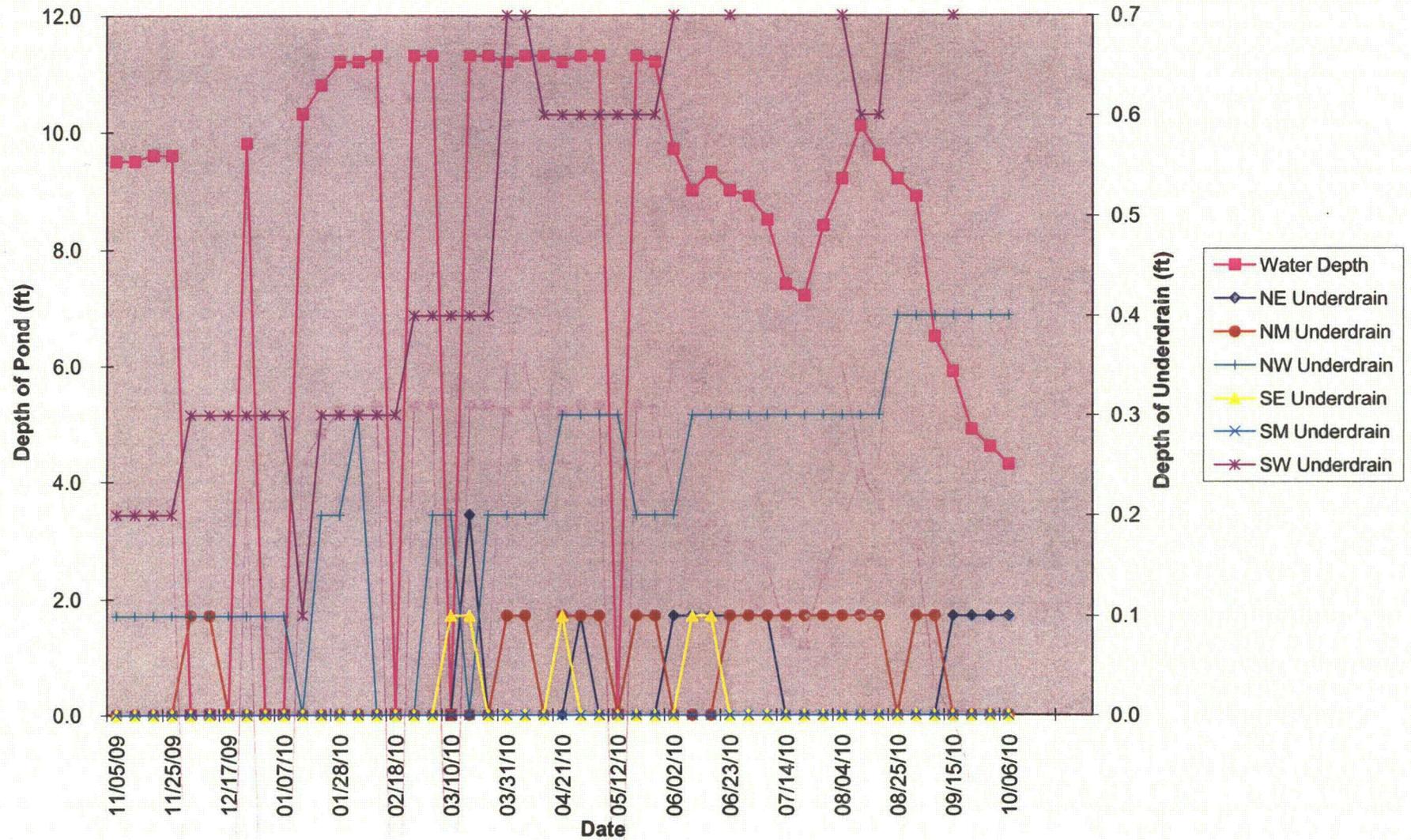


CHART 1

### Commercial Pond 3 - 2010

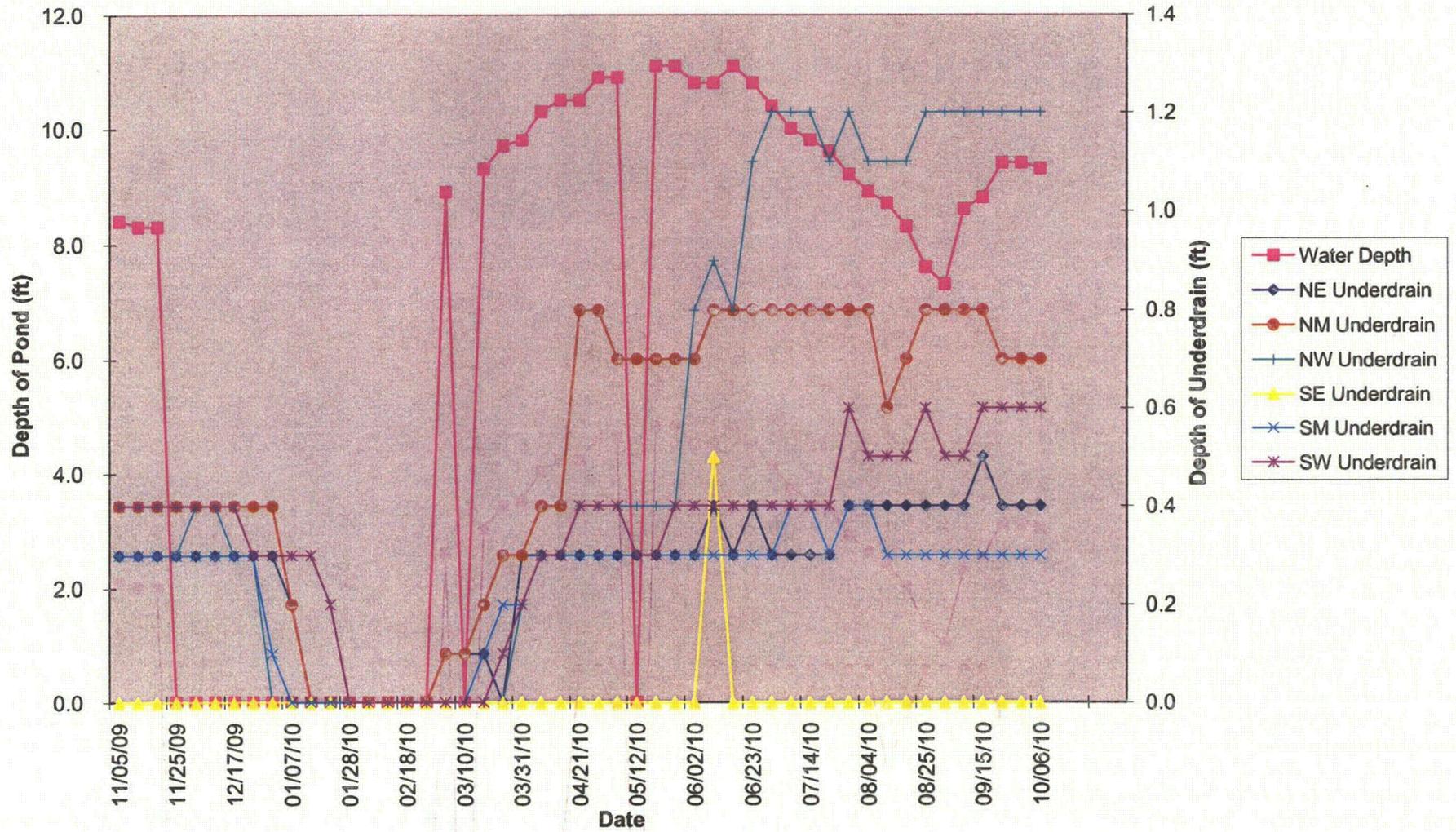


CHART 2

### Commercial Pond 4 - 2010

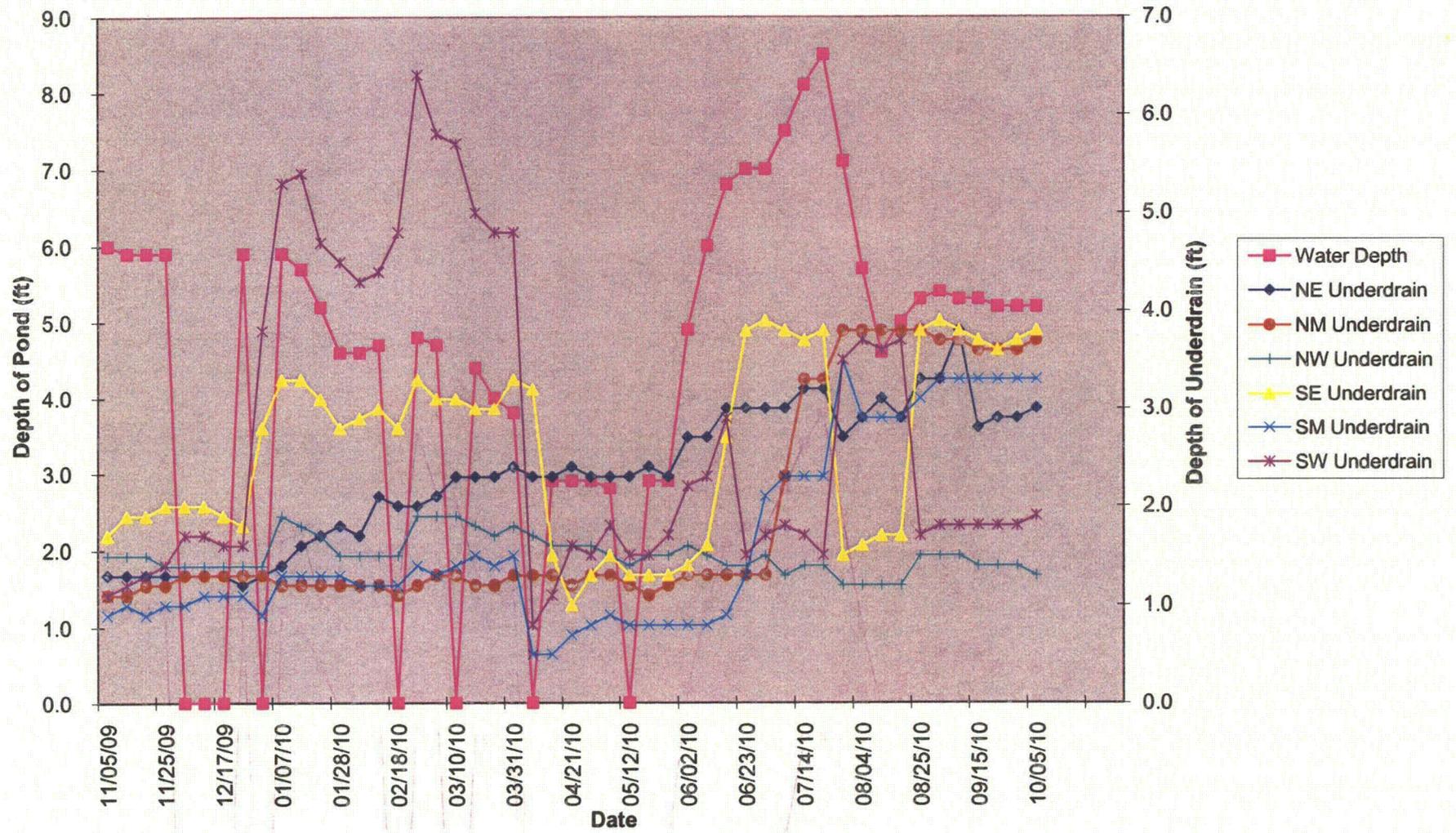


CHART 3

# R & D Pond Levels - 2010

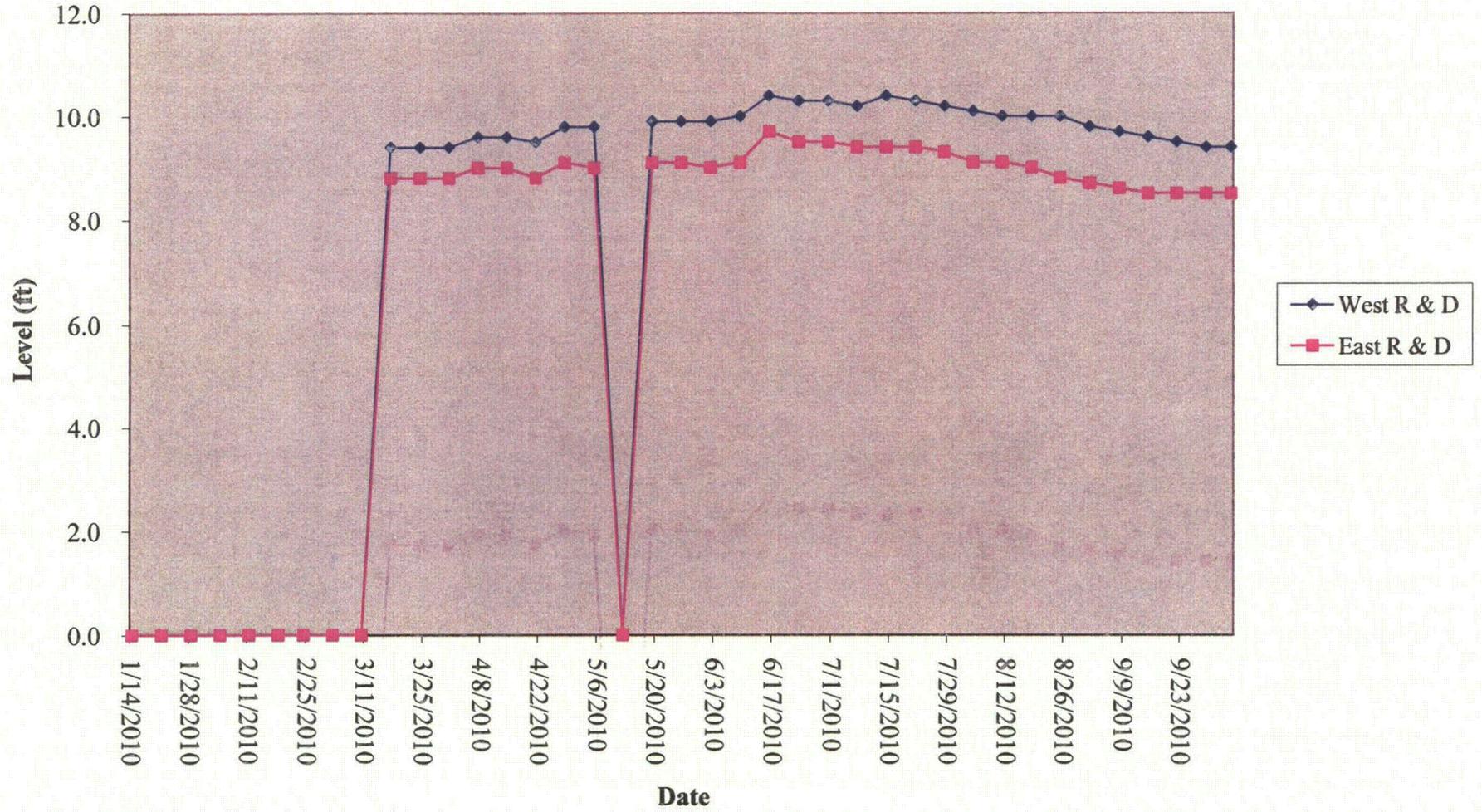


CHART 4

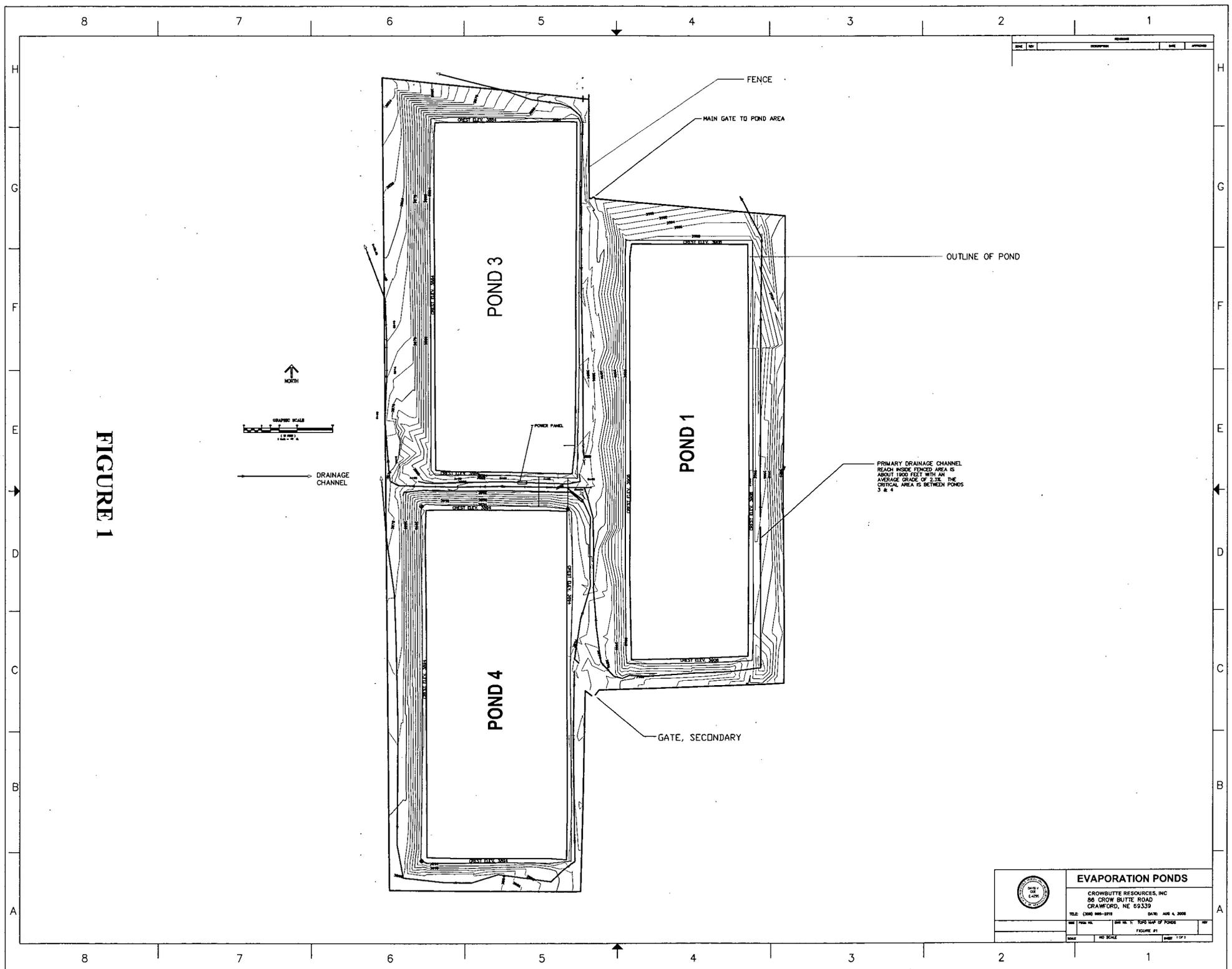
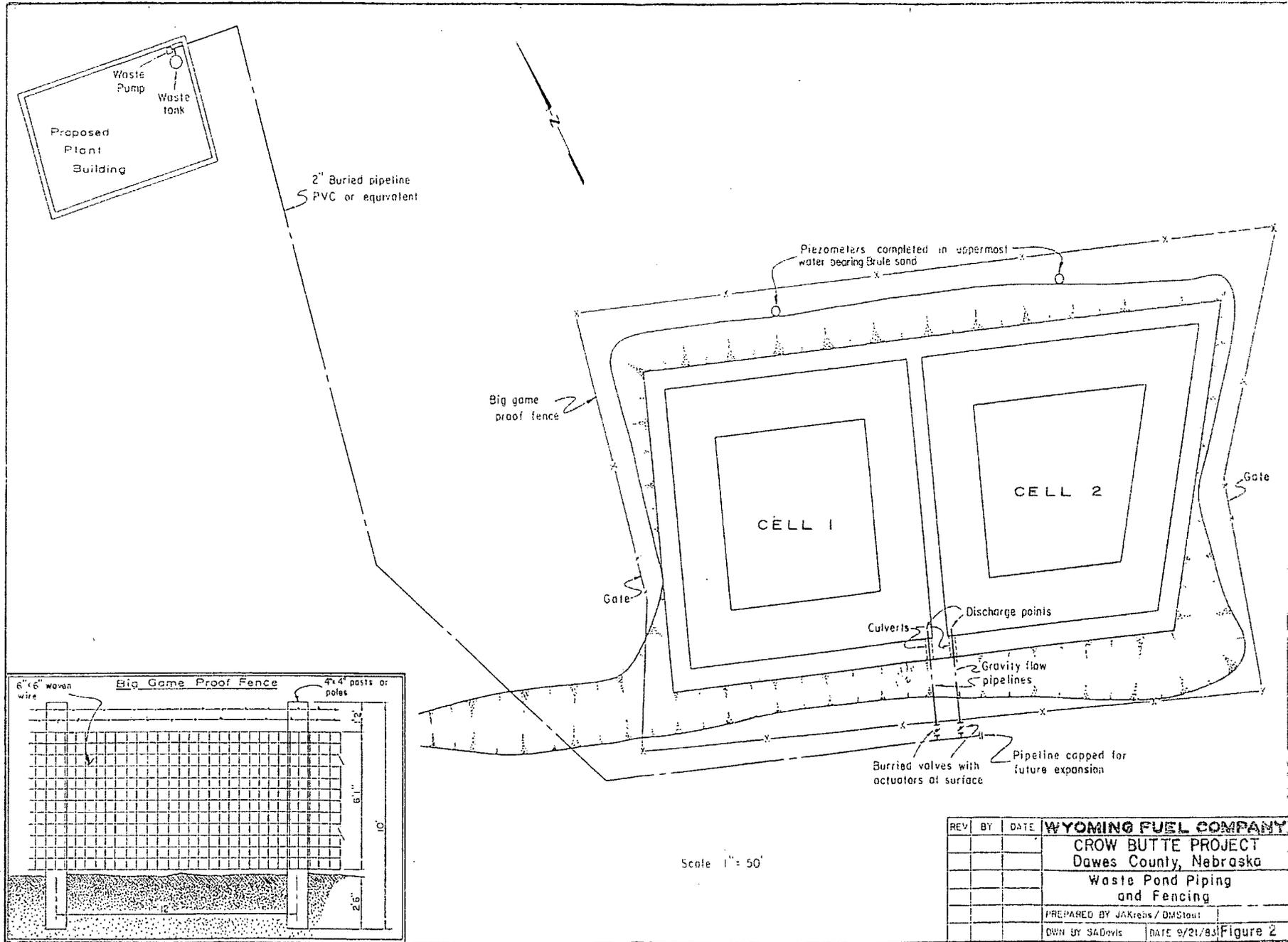


FIGURE 1

	<b>EVAPORATION PONDS</b>			
	CROWBUTTE RESOURCES, INC. 26 CROW BUTTE ROAD CRAWFORD, NE 69339			
TEL: (408) 888-8211	FAX NO.	DATE: AUG 4, 2008	SHEET NO. 1: TPO MAP OF PONDS	
DATE	NO SCALE	FIGURE #1	SHEET 1 OF 1	

FIGURE 2



REV	BY	DATE	WYOMING FUEL COMPANY
			CROW BUTTE PROJECT
			Dawes County, Nebraska
			Waste Pond Piping and Fencing
			PREPARED BY JAKrebs / DMStout
			DWN BY S4Davis DATE 9/21/83 Figure 2

## CBR POND INSPECTION, October 8, 2010 by David V. Coe, PE

I arrived at Crow Butte Resources mining operation about 9:30 this morning. I met with Walt Nelson. We discussed the safety requirements for performing work at Crow Butte Resources. I reviewed the safety requirements and signed acknowledgement of safety requirements for entering the restricted areas of Crow Butte Resources. Walt Nelson and I then made a physical inspection of the commercial retaining ponds and the research & development ponds. The annual survey of the elevation points had not been accomplished. Walt will send me the survey information after it is completed. Walt indicated they had experienced a couple of line leaks in commercial Pond #4. They are still working on cleaning the monitoring drains for Pond #4. The weekly monitoring of the material between the pond liners had increase conductivity reading in all the ponds. Pond #4 has had conductivity reading in most of the monitoring tubes accessing the space between the two liners. I noticed the readings had a positive increase from September, 2009 and October, 2010. Pond #1 began having conductivity readings during the first part of March and continued through September. October readings were significantly lower. Pond #3 experienced conductivity readings in April, 2010 (NM tube); June had conductivity readings in the NW tube and July readings showed up in the SW tube. Walt indicated it is very difficult to clean up the moisture between the two liners. This is accomplished with flushing clean water into one area and vacuuming out water from an adjacent tube. The cleaning process is very time consuming.

Walt Nelson and I began our inspection of the commercial retention ponds about 9:50 this morning. We started on the northwest corner of pond #1. Below are my visual comments as I walked around the top of the berms and the toe of the slopes of the three retention ponds. Pond #1 depth was 4.3' or about 12.7 feet of freeboard remaining.

On the west berm of pond #1 there is vegetation mixed with a limestone gravel surface. The vegetation showed a slight improvement over last year and it was well established on the limestone surface. The vegetation mixed in with the gravel surfacing does not have any detrimental effect on the safety of the pond embankment. It would be nice to have all the berm tops of the ponds gravel surfaced with limestone base course material. The gravel surface provides a durable surface which is resistant to surface erosion when compared to a marginal soil with limited vegetative cover. The vegetation along outside slope of the pond is good and well established. I did not see any evidence of a longitudinal cracking along the embankment of pond number 1. The gopher control is currently accomplished by hand with Crow Butte employees. There are no signs of leaks along the toe of the dam embankment.

Walt and I discussed the grading work completed on the east area of Pond #1. The drainage is much improved since last year's inspection. The erosion was has shown improvement over last year's inspection. The sheet erosion along the middle cut slope of pond #1 was more prevalent. Walt indicated the wet spring added to this erosion on the east cut bank slope.

The pond depths were substantially lower than the last few years. The vegetation along the west embankment of Pond #1 looks very good.

This completed the visual inspection of pond #1. We then began inspection of pond #3 at the northeast corner and walking to the west and along the west embankment of pond #3. The vegetation along the north and west embankments is very well established. The pond depth of pond #3 was 9.3 feet (this is to the water surface; which would leave about 8.2 feet of additional storage). I reviewed the vegetation establishment and drainage between ponds #3 & #4. This has been graded to drain and is now performing very well. The riprap embankment of the slope below the two ponds is in good shape and there was no evidence of new erosion and no evidence of leakage near the toe of the dam embankment along the west side of the ponds.

The same sloughing of the pond embankment along the west outer side was again observed. Filling in the slough areas and stabilizing the area with netting until the vegetation is established could improve this. The sloughing was not significant, about 6 to 10 inches lower than the main elevation of the pond berm. There were two locations along the west embankments of Ponds #3 & #4 that had minor sloughing. This could be improved by adding good top soil in the deficient areas. The added top soil should be seeded, mulched and covered with a disposable landscape fabric.

I then inspected the embankment of Pond #4. The pond depth of #4 was 5.4 feet leaving about 12.1 feet of additional storage. Walt indicated they are still having problems with leaking in Pond #4 when they raise the level of the pond beyond the 7 or 8 foot elevation. They are cleaning the water between the two pond liners.

There was also a small section of Pond #4, east berm, with barren soil and no vegetation. About the only way to correct this section is to add some decent top soil to the barren soil and seed the area.

We completed our visual inspection of the commercial ponds walking up the east embankment of Pond #3. Crow Butte Resources have added a new point of truck delivery to the commercial ponds. The trucks deposit their loads at a pipeline near the entrance gate of the pond area. The old site was near the northeast corner of the fenced area of Pond #3. CBR have also added a new pipeline for extracting pond storage for re-processing (reclaiming uranium from the waste pond). The line going into the pond was an 8" diameter ductile iron pipe and transitioned to a 6" diameter size on the top of the embankment. There is a pump at the bottom of the pond inside the 8" pipe.

Walt said they had a slight outbreak of Leafy Spurge along the south embankment of Pond #1 & Pond #4. The control work was accomplished by CBR employees.

I completed the inspection of the commercial ponds by walking the east berm of pond #3. The top of the berm did not have gravel surfacing. The vegetation on the berm was rather sparse. The evaporation systems were operating on the three ponds.

The inspection of the commercial ponds was completed by 11:00 this morning. Walt Nelson and I went to the Research & Development Ponds to inspect their condition.

The R & D ponds consist of two ponds about 15 feet deep with a filling allowable depth of 11.5 feet. The personnel adding water to the R & D ponds assume the free board height of 11.5 feet. This marked elevation was noted on both pond liners. I noticed CBR was storing water in these ponds between 4 & 5 feet deep. . The two ponds have a cutoff dike on their south side.

There has been no change in the cutoff dike. The dike still has a good growth of vegetation in the bottom of the channel. There was no standing water in the bottom of the cutoff dike.

CBR add a blue dye to the water to enhance the evaporation characteristics of the pond's water. The blue color was noticeable.

The depth of water on the east pond was 8.5 feet. The pond depth on the west pond was 9.3 feet. The depths of the pond waters in the R & D areas were somewhat higher than last year.

I walked around the berms of both R & D ponds. The vegetation in the whole pond area is excellent. There is native gravel surfacing around the berms of these ponds. I completed my field inspection of the evaporation ponds about 11:20 this morning.

We went back to the office area and screened out clothing and skin for traces of radioactive material. Everything checked out okay.

I went into the office area and reviewed the daily and weekly pond inspection reports. I also reviewed the quarterly safety reports completed by Walt Nelson. The reports seemed to be in order and are being accomplished as outlined in their operational procedures or directives. There was corrective action taken by Walt Nelson to address this shortcoming. The records I reviewed were from October, 2009 to September 2010.

I reviewed Walt Nelson's quarterly reports.

I reviewed the ground water sampling of the commercial ponds and the R. & D ponds. There are two wells on the west side of the commercial ponds and one adjacent to and north of the R & D ponds. These wells have a benchmark analysis taken in 1991, and then the water is sampled on a quarterly basis to determine if any contamination of the ground water is evident.

My opinion, the evaporation ponds are being administered in a safe and prudent manner. The monitoring for leaks and serious pond erosion is in compliance with the approved monitoring plan. Records of monitoring reports are being maintained in compliance with the monitoring plan. The liner in the R & D ponds seems to be of high quality.

Fencing was good in all pond areas.

I reviewed Walt Nelson's quarterly pond inspection reports. A leak was found February 24, 2010 in Pond #4. The pond storage level was lowered and remedial corrective actions were taken. The quarterly monitoring of the monitoring wells was accomplished on a weekly basis during the spring months. The level of water between the pond liners was above the 6" level. In several quarterly inspection reports discontinued use of items seem to be discarded along the embankments and seldom are these items removed from the fenced area of the ponds.

Below is a tabulation of the Evaporation Pond Monitor Wells:

**EVAPORATION  
POND  
MONITORING  
WELLS**

Date	Alk mg/L	Cl mg/L	Conductivity umhos	SO <sub>4</sub> mg/L	Na mg/L
<b>Commercial Pond Monitoring Well #1</b>					
15-Oct-09	178	5.7	440	13	16
12-Dec-09	154	4.3	450	15	14
7-Jan-10	202	5.6	440	14	16
14-Jan-10	200	5.6	440	14	16
21-Jan-10	201	5.7	440	14	15
20-Feb-10	200	5	440	15	14
3-Mar-10	206	6	440	15	15
10-Mar-10	199	5.8	440	15	15
17-Mar-10	200	4.6	440	14	15
24-Mar-10	207	6.1	440	14	15
31-Mar-10	197	6.9	440	16	17
7-Apr-10	196	7.1	440	15	15
14-Apr-10	190	6.7	440	15	15
21-Apr-10	195	6.7	440	14	16
28-Apr-10	195	5.7	440	15	15
5-May-10	195	6.7	440	15	15
11-Jun-10	190	5.7	440	15	15
17-Jun-10	195	5.7	450	13	16
30-Jun-10	195	5.7	440	14	16
23-Jun-10	195	5.3	440	14	16
21-Sep-10	195	5.5	450	15	15

Base Line-  
 Commercial Pond #1    2-Jul-91    197    2.9    423    20.43    17.67  
 Monitoring well

**EVAPORATION POND  
 MONITORING WELLS**

Date	Alk mg/L	Cl mg/L	Conductivity umhos	SO <sub>4</sub> mg/L	Na mg/L
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**Commercial Pond Monitoring Well #2**

15-Oct-09	180	4.6	420	14	14
12-Dec-09	154	5	420	14	15
7-Jan-10	186	5.7	420	15	14
14-Jan-10	184	5.8	420	14	15
21-Jan-10	185	5.8	420	15	14
20-Feb-10	190	4.6	420	15	14
3-Mar-10	180	6.2	420	14	14
10-Mar-10	183	5.9	420	14	15
17-Mar-10	180	5	420	13	14
24-Mar-10	180	6	420	14	14
31-Mar-10	185	6.8	420	15	14
7-Apr-10	187	6.7	420	14	15
14-Apr-10	185	6.5	420	15	14
21-Apr-10	185	6	420	15	15
28-Apr-10	180	6	420	15	14
5-May-10	185	5	420	14	14
11-Jun-10	190	5.3	420	14	14
17-Jun-10	185	5.3	420	13	13
30-Jun-10	185	5.7	420	14	14
23-Jun-10	185	5.7	420	16	14
28-Jul_10					
21-Sep-10	185	5.3	420	15	16

Base Line-Commercial Pond #2    2-Jul-91    190    3.47    412    11.33    13.37  
 Monitoring well

**EVAPORATION  
POND  
MONITORING  
WELLS**

Date	Alk mg/L	Cl mg/L	Conductivity umhos	SO <sub>4</sub> mg/L	Na mg/L
------	-------------	------------	-----------------------	-------------------------	------------

**RESEARCH &  
DEVELOPMENT  
PONDS  
MONITORING WELL**

15-Oct-09	170	2.1	400	7.7	16
5-Mar-10	170	2.1	390	10	15
29-Apr-10	240	2.5	400	9.4	16
21-Sep-10	175	1.8	400	9.1	17
<b>Base Line</b>	<b>175</b>	<b>1.7</b>	<b>409</b>	<b>10.8</b>	<b>14.5</b>

Photos of my inspection follow on the next six pages of this report.

**EVAPORATION POND MONITORING WELLS**



DAVID V. COE, PE  
Nebraska Registration No. 4295



**#1 Southwest view of evaporation pond #1, date: 10/08/10**



**#2 Northwest view of pond #1. Date: 10/08/10**



**New piping arrangements @ pond #3, white pipe is for truck dumping. Date: 10/08/10**



**#4 Northwest view of pond #4. Date: 10/08/10**



**Good vegetation along south embankment of Pond #1, Date: 10/08/10**



**#6 View of vegetation between Ponds #3 & #4 Date: 10/08/10**



**Northeast view of Pond #3. 10/08/10**



**#8 Northeast views of R&D ponds. Cell #1 (west pond) in foreground.  
Date: 10/08/10**



**Northwest view of east R & D pond: Date: 10/08/10**



**Photo #10 View of diversion ditch on the south side of the R & D ponds  
Photo taken 10/08/10**



**North view of west embankment & berm of pond #1, good protection against erosion of berm & protection of area adjacent to pond liner. 10/08/10**



**North embankment slope of R & D ponds; Good vegetation. 10/08/10**

CROW BUTTE RESOURCES, INC.  
 RANGE ONE  
 CROSS SECTIONS FOR PONDS  
 STATION 0+00  
 October 22, 2010

LEFT OF BASELINE	SEA LEVEL ELEVATION	DESCRIPTION	SHOT TAKEN ON
0.00	3851.76	0+00 B.L.	REBAR&CAP
89.05	3851.06	FENCE	GROUND
117.80	3852.57	GROUND	HUB GONE
132.05	3854.42	TOE OF SLOPE	TOE
162.85	3867.31	MIDPOINT SLOPE/DIRT	GROUND
195.25	3879.94	OUTSIDE OF BERM	GROUND
356.75	3880.88	MIDPOINT POND ON BERM	REBAR GONE
532.65	3881.09	OUTSIDE EDGE BERM	GROUND
538.25	3879.22	"V" OF DITCH	GROUND
548.55	3883.23	TOP OF SLOPE	GROUND
553.75	3884.15	FENCE	GROUND
563.85	3884.22	WEST EDGE OF ROAD	GROUND
576.75	3884.25	EAST EDGE OF ROAD	GROUND
585.25	3883.72	SIDE OF DITCH	GROUND
588.15	3883.07	"V" OF DITCH	GROUND
594.65	3885.27	TOP OF DITCH (new 2006)	GROUND
639.65	3888.56	0+00 E.B.	REBAR&CAP

Note: Elevations taken with a Topcon Total Station, with my estimated accuracy of .10 of a foot.

*Philip R. Curd*  
 Philip R. Curd, LS-664



PAGE / OF 4

CROW BUTTE RESOURCES, INC.  
 RANGE TWO  
 CROSS SECTIONS FOR PONDS  
 STATION 5+00  
 October 22, 2010

LEFT OF BASELINE	SEA LEVEL ELEVATION	DESCRIPTION	SHOT TAKEN ON
0.00	3862.22	5+00 B.L.	REBAR&CAP
92.65	3860.98	FENCE	GROUND
144.02	3862.34	HUB	HUB
150.22	3863.00	TOE OF SLOPE	GROUND
173.05	3871.30	MIDPOINT OF SLOPE	GROUND
194.65	3880.62	OUTSIDE EDGE BERM/DIRT	GROUND
205.15	3881.51	INSIDE EDGE BERM/LINER	LINER
522.4	3880.58	INSIDE EDGE BERM/LINER	LINER
528.02	3880.55	OUTSIDE EDGE BERM/REBAR	REBAR
537.65	3878.81	"V" OF DITCH	GROUND
563.10	3882.92	WEST EDGE OF ROAD	GROUND
577.5	3883.42	EAST EDGE ROAD	GROUND
608.9	3894.28	MIDPOINT OF SLOPE	GROUND
634.45	3904.82	OUTSIDE EDGE BERM	GROUND
636.76	3905.09	PREV. OUTSIDE EDGE BERM	REBAR
646.2	3905.32	INSIDE EDGE BERM	LINER
907.2	3905.24	EDGE BERM	LINER
909.2	3905.24	INSIDE EDGE BERM	LINER
915.36	3905.01	CENTER OF BERM	REBAR
918.78	3905.12	OUTSIDE EDGE BERM	GROUND
934.2	3900.0	W. EDGE FLAT BOTTOM DITCH	GROUND
945.2	3899.85	E. EDGE FLAT BOTTOM DITCH	GROUND
970.3	3908.82	TOE OF SLOPE	GROUND
993.25	3910.22	FENCE	GROUND
998.9	3910.97	TOP OF SLOPE	GROUND
1007.0	3914.19	W. EDGE OF ROAD	GROUND
1019.35	3914.77	E. EDGE OF ROAD	GROUND
1022.3	3916.22	E. TOE OF SLOPE	GROUND
1033.5	3919.79	MIDPOINT OF SLOPE	GROUND
1077.3	3929.17	TOP OF SLOPE	GROUND
1094.5	3929.57	5+00 E.B.	REBAR&CAP

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CROW BUTTE RESOURCES, INC.  
 RANGE THREE  
 CROSS SECTIONS FOR PONDS  
 STATION 10+00  
 October 22, 2010

LEFT OF BASELINE	SEA LEVEL ELEVATION	DESCRIPTION	SHOT TAKEN ON
0.00	3874.28	10+00 B.L.	REBAR&CAP
95.7	3868.95	FENCE	GROUND
122.2	3870.68	TOE OF SLOPE	HUB
148.05	3879.51	MIDPOINT SLOPE	GROUND
174.35	3890.08	OUTSIDE EDGE BERM	REBAR GONE
186.05	3890.79	INSIDE EDGE BERM	LINER
500.41	3890.80	INSIDE EDGE BERM	LINER
509.90	3889.77	OUTSIDE EDGE BERM	REBAR
537.1	3887.97	WEST EDGE ROAD	GROUND
545.3	3888.14	EAST EDGE ROAD	GROUND
553.22	3886.99	W. EDGE FLAT BOTTOM DITCH	GROUND
560.72	3887.03	E. EDGE FLAT BOTTOM DITCH	GROUND
570.2	3889.62	TOP OF DITCH	GROUND
598.83	3891.25	TOE OF SLOPE	HUB/gone
617.41	3898.24	MIDPOINT OF SLOPE	GROUND
634.57	3904.95	OUTSIDE EDGE BERM	REBAR
644.19	3905.35	INSIDE EDGE BERM	LINER
908.85	3904.97	INSIDE EDGE BERM	LINER
918.84	3904.96	OUTSIDE EDGE BERM	REBAR
932.1	3900.46	W. EDGE FLT. BTM. DITCH/TRAIL	GROUND
942.7	3900.43	E. EDGE FLT. BTM. DITCH/TRAIL	GROUND
974.8	3911.10	TOP OF DITCH	GROUND
989.59	3912.03	FENCE	GROUND
1014.22	3914.88	TOP OF DITCH	GROUND
1020.38	3913.65	"V" OF DITCH	GROUND
1024.7	3915.19	TOP OF DITCH	GROUND
1039.08	3917.68	MIDPOINT OF SLOPE	GROUND
1067.56	3920.58	TOP OF SLOPE	GROUND
1086.73	3920.0	LOW POINT	GROUND
1148.45	3924.9	10+00 E.B.	REBAR&CAP

PAGE 3 OF 4

CROW BUTTE RESOURCES, INC.  
 RANGE FOUR  
 CROSS SECTIONS FOR PONDS  
 STATION 15+00  
 October 22, 2010

LEFT OF BASELINE	SEA LEVEL ELEVATION	DESCRIPTION	SHOT TAKEN ON
0.00	3883.65	15+00 B.L.	REBAR&CAP
99.61	3875.52	FENCE	GROUND
136.73	3876.06	TOE OF SLOPE	HUB
156.03	3883.65	MIDPOINT OF SLOPE	GROUND
173.01	3890.19	OUTSIDE EDGE BERM	GROUND
186.07	3891.07	INSIDE EDGE BERM	LINER
499.27	3890.88	INSIDE EDGE BERM	LINER
508.82	3891.06	OUTSIDE EDGE BERM	GROUND
514.88	3889.62	"V" OF DITCH	GROUND
524.24	3892.19	TOP OF DITCH	GROUND
536.12	3892.52	FENCE	GROUND
554.4	3893.04	TOE OF SLOPE	GROUND
559.53	3894.6	TOP OF SLOPE	GROUND
696.93	3903.59	HIGH POINT	GROUND
789.75	3905.02	LOW POINT	GROUND
985.56	3915.14	15+00 E.B.	REBAR&CAP

PAGE 4 OF 4

<b>NRC FORM 253</b> <small>(9-96)</small>		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>DATE OF REQUEST</b> 12-2-10	<b>CONTROL NUMBER</b>
<b>MESSENGER/COURIER RECEIPT</b>					
<b>TO:</b> KEITH McCONNELL		<b>OFFICE</b> FSME	<b>BUILDING</b> TWFN	<b>ROOM NUMBER</b> 8F5	
<b>FROM:</b> CROW BOTTE Resources, INC		<b>OFFICE</b> ADM	<b>BUILDING</b> OWFN	<b>ROOM NUMBER</b> PI-37	
<b>DESCRIPTION</b> 7010 0780 0000 1413 5199		<b>MESSENGER/COURIER SIGNATURE</b>			
		<b>MESSENGER/COURIER</b>		<b>DATE RECEIVED</b>	
				<b>TIME RECEIVED</b>	
		<b>MESSENGER/COURIER</b>		<b>DATE RECEIVED</b>	
				<b>TIME RECEIVED</b>	
		<b>RECIPIENT'S SIGNATURE</b>			
<b>RECIPIENT</b>		<b>DATE RECEIVED</b>			
		<b>TIME RECEIVED</b>			
<b>SENDER:</b> 1. Complete "DATE OF REQUEST," "TO:," "FROM:," and unclassified "DESCRIPTION" blocks. 2. Obtain MESSENGER/COURIER signature, date received, and time received in first blocks provided. 3. Retain "SENDER'S SUSPENSE COPY."		<b>MESSENGER/COURIER:</b> 1. Deliver package to recipient or next messenger/courier enroute to addressee. 2. Obtain MESSENGER/COURIER or RECIPIENT signature, date received, and time received in the appropriate blocks provided.		<b>RECIPIENT:</b> 1. Provide signature, date received, and time received in the appropriate blocks. 2. Retain RECIPIENT'S COPY. 3. Return original to messenger/courier immediately, who will return it to the sender.	

NRC FORM 253 (9-96)

**RETURN THIS COPY TO SENDER**



7010 0780 0000 1413 5199



**RETURN RECEIPT  
REQUESTED**



**CAMECO RESOURCES**

*Crow Butte Operation  
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P.O. Box 169  
Crawford, NE  
69339 USA*

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Decommissioning and Uranium  
Recovery Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs  
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