



# Rio Algom

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**Return Receipt Requested**

July 16, 2001

Mr. Steve Ingle  
WDEQ/LQD  
Herschler Building  
122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

**RE: Corrective Action Report 11, West Evaporation Pond Leak**  
**Permit to Mine 633, License SUA-1548, Docket 40-8964**

Dear Mr. Ingle:

On September 14, 2000, during a routine inspection, it was discovered that the west evaporation pond sump contained greater than 6 inches of water. The water level in the pond, four feet six inches at the time of the discovery, was immediately lowered in order to stop the leak. The sump water was analyzed for chloride, specific conductance, bicarbonate,  $U_{nat}$ , and sulfate with the results shown below:

| <b>Chemical</b>              | <b>Concentration</b> |
|------------------------------|----------------------|
| Chloride                     | 8,510 mg/l           |
| Specific Conductance @ 25 °C | 32.95 m Siemens      |
| Bicarbonate                  | 283.1 mg/l           |
| $U_{nat}$ as $U_3O_8$        | 22.6 mg/l            |
| Sulfate                      | 7,429 mg/l           |

Upon receipt of the confirming analysis, both Steve Ingle of WDEQ and John Lusher of NRC were notified via telephone on September 22, 2000.

After patching the suspect locations, the water level was slowly raised beginning on October 30<sup>th</sup>. On November 6<sup>th</sup>, with the pond level at four feet six inches, the sump began collecting water. The water level of the pond was dropped to three feet eight inches in order to stop the leakage.

The pond did not leak again until January 6, 2001. A sample was taken on the same day with the following results:

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| <b>Chemical</b>                                   | <b>Concentration</b> |
|---|----------------------|
| Chloride  | 9,428 mg/l           |
| Specific Conductance @ 25 °C                      | 41.39 m Siemens      |
| Bicarbonate                                       | 448 mg/l             |
| U <sub>nat</sub> as U <sub>3</sub> O <sub>8</sub> | 25.0 mg/l            |
| Sulfate   | 11,212 mg/l          |

A weekly sample taken on January 19, 2001 contained 8,300 mg/l chloride and had a specific conductance of 22.22 m Siemens. The pond quite leaking on January 22<sup>nd</sup> without any change in the pond's water level and has not leaked since.

A monthly sample was taken on 3/15/01; results shown below.

| <b>Chemical</b>                                   | <b>Concentration</b> |
|---|----------------------|
| Chloride  | 2,740 mg/l           |
| Specific Conductance @ 25 °C                      | 13.98 m Siemens      |
| Bicarbonate                                       | 472 mg/l             |
| U <sub>nat</sub> as U <sub>3</sub> O <sub>8</sub> | 6.5 mg/l             |
| Sulfate   | 4,196 mg/l           |

The pond did not leak again until 3/29/01 so a weekly sample was taken. The conductivity was at 14.80 m Siemens and the chloride was at 6,400 mg/l. The water level was drawn down to the one foot six inch (1' 6") level and the leakage stopped.

Repairs were made to the liner during the last two reporting periods. Beginning on July 7<sup>th</sup>, the water level was raised to the 5' 8" level; above all patches. There has been no leakage from the pond since the water level was raised. Therefore, since the repairs have been confirmed, this will be the last report regarding this matter.

If you have any questions or comments regarding the submittal, please feel free to contact me at (307) 358-3744, ext. 62.

Sincerely,



John W. Cash  
Manager EHS and Regulatory Affairs

Steve Ingle  
June 16, 2001  
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xc: Pat Drummond (RAMC - Smith Ranch Facility)  
J. Lusher-U.S. NRC (Div. of Low Level Waste Mgt. & Dec.) Rockville, MD  
**Certified Mail -7099 3220 0002 1632 0387, return receipt  
requested**  
B. Ferdinand (RAMC-Smith Ranch Facility)  
M. Freeman (RAMC-OKC Office)  
P. Goranson (RAMC-OKC Office)  
file