

URGEISCEmails

From: David Cory Frankel [davidcoryfrankel@gmail.com]
Sent: Friday, November 07, 2008 9:25 PM
To: NRCREP Resource
Cc: Shannon Anderson
Subject: Re: GEIS - Comments - Crow Butte Resources - Abitz Opinion Part 3 of 3
Attachments: Abitz Opinion - CBR summary-28july2008 part 3 of 3.pdf

Abitz Opinion Part 3 of 3

on 11/7/08 4:14 PM, David Cory Frankel at davidcoryfrankel@gmail.com wrote:

> Dear Sir,
>
> As an example of the need for site specific data, please see the
> attached from Dr. Hannan LaGarry " EXPERT OPINION REGARDING ISL MINING
> IN DAWES COUNTY, NEBRASKA" which explains the faults and fractures
> between the mined aquifer and drinking water aquifers near the Crow Butte mine at Crawford, NE.
>
> Also, see the attached documents from the current licensing
> proceedings In Re Crow Butte - including the opinion of Dr. Richard
> Abitz (sent under separate cover due to file size limits) concerning
> inadequacies in the licensing application for renewal by Crow Butte Resources, Inc.
>
> I am also attaching the opinion of Mr. Paul Robinson concerning Crow
> Butte Resources.
>
> Many thanks.
>
> David Frankel
> POB 3014
> Pine Ridge, SD 57770

Federal Register Notice: 73FR43795
Comment Number: 1308

Mail Envelope Properties (C53A1C5E.29972%davidcoryfrankel)

Subject: Re: GEIS - Comments - Crow Butte Resources - Abitz Opinion Part 3 of 3
Sent Date: 11/7/2008 9:25:01 PM
Received Date: 11/7/2008 9:26:16 PM
From: David Cory Frankel

Created By: davidcoryfrankel@gmail.com

Recipients:
"Shannon Anderson" <sanderson@powderriverbasin.org>
Tracking Status: None
"NRCREP Resource" <NRCREP.Resource@nrc.gov>
Tracking Status: None

Post Office: gmail.com

Files	Size	Date & Time
MESSAGE	912	11/7/2008 9:26:16 PM
Abitz Opinion - CBR summary-28july2008 part 3 of 3.pdf		3745453

Options
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Return Notification: No
Reply Requested: No
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Recipients Received:

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- 21) Page 4-9 notes that the most common surface release is from piping. How is the spill cleaned up? What is done with the contaminated soil?
- 22) Section 4.2.2.4 (Hazardous Waste) does not mention the arsenic and selenium released from the ore zone. What is the quantity generated and where does it end up in the waste streams?
- 23) Page 5-15 mentions pond sprays from the enhanced evaporation system. This system has the potential to release mist to the surroundings. See comment 17.
- 24) Section 5.8 discusses radiation safety controls and monitoring. There is no discussion of air monitoring for radon and daughters downwind of the exhaust vents. What data support such an omission, given hundreds of curies of radon are emitted from this facility.
- 25) Page 5-28 notes subsurface releases are from ponds and excursions. There can also be subsurface releases from slow leaking pipelines when the leak is too slow to set off the alarm,
- 26) Section 5.8.7.2 discusses radon monitoring, and notes that 7 locations are monitored. There is no map to show the location of these monitors relative to facilities and downwind direction.
- 27) Page 5-78 discusses results for air particulate, and notes uranium results are shown on Figs 5.8-18 through 5.8-24. Why are there no displayed results for Ra-226 and Pb-210?
- 28) Page 5-87 notes that uranium was elevated in the sediment from English Creek. Sediments downstream from the mine areas should be monitored in the future to determine if concentrations increase in the future.
- 29) The discussion on monitoring well baseline water quality (p. 5-107) indicates the wells are only used to establish excursion limits, which reveals the inadequate approach to establishing baseline in the exempt zone of the aquifer. Monitor wells will reflect the baseline water quality in most of the exempt zone, and should be used to establish baseline in the exempt zone.
- 30) The discussion on upper control limits and excursion monitoring (p. 5-107) does not cite statistically valid methods for establishing the upper control limits. The use of the noted improper method can result in a large volume of contaminated

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groundwater to pass by the monitor wells, as the proposed method only accounts for a rapid increase in contamination, and not a slow increase that is more representative of a migrating plume.

- 31) The absence of uranium as an indicator of excursion is not justified (p. 5-107). Uranium is highly mobile in the lixiviant and is an excellent indicator of excursions.
- 32) Section 6.1.3.1 notes that one baseline well per 4 acres is used to establish water quality prior to mining. Are the wells randomly located within each 4 acre zone. If not, why not?
- 33) Section 6.1.3.2 states that if the baseline concentration exceeds the NDEQ MCL, then the baseline average plus two standard deviations is used to set the restoration goal. What is the justification for this approach? Using the mean and standard deviation is inappropriate unless it can be demonstrated that the data follow a normal or log normal distribution.
- 34) Analytical data to support the results in Tables 6.1-2 through 6.1-11 are not available to verify that proper statistical methods were used to derive the restoration results.
- 35) Section 6.1.4 states that Mine Unit 1 was successfully restored to primary or secondary standards. Bicarbonate, sulfate, manganese, selenium, vanadium, uranium and radium were not restored to their primary standard, and there is no summary of secondary standards in Table 6.1-2. What secondary standards apply and why?
- 36) Section 6.2.3.4 notes that on site burial is possible. If the disposal ponds are to be used as burial sites, will the liners in the system be redesigned to account for permanent disposal? What limits will be placed on the materials that can go into the disposal cell? Will a risk analysis be performed to justify the construction of a disposal cell?
- 37) Section 6.4.1 gives clean-up criteria for radium and uranium in soil. Why are there no clean-up levels listed for radon decay products (e.g., lead-210), arsenic, molybdenum and selenium?
- 38) Section 7.6 and 7.12.1.1 discuss air quality impacts. There is no discussion of potential air impacts from contaminated particulate during decommission

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- activities. The disturbance of contaminated soil during site remediation could suspend contaminants and transport them considerable distances. What type of air monitoring will be performed to ensure that contamination is not spread by air borne dust?
- 39) Section 7.12.5 discusses air exposure and notes radon and its decay products are the only concern. This is incorrect. Particulate from contaminated soil and mist from the evaporation ponds are also air exposure concerns. Why is there no discussion of these sources?
- 40) The MILDOS-Area code was used to model the radon dose to receptors. Why are there no input and output files provided to evaluate the model? Tables 7.12-3 through 7.12-7 provide some of the model information. Absent is the wind rose for the area, average wind speeds at 10 and 60 meters, rainfall events and duration, and topographic effects that influence the model results. Also, there is no summary table to compare model results with actual measurements from radon monitors.
- 41) There is insufficient data provided for the accident scenarios discussed in Section 7.14.5 to properly evaluate the meaning of the stated results.
- 42) The discussion of economic impacts under Section 8.1.2 notes that failure to renew the license will be detrimental to the economy in the area. However, there is no discussion of the long-term effects of mining. In reality, mining will end and the economy will suffer at some point, and there is little chance for recreation or other industry in an area contaminated by ISL operations. Therefore, the discussion in this section is merely innuendo to intimidate the reader.
- 43) Section 8.3.1.2 discusses the effectiveness of groundwater restoration as a reason to continue mining. Based on comment 35, one can hardly say the restoration was an overall success. Only by using undefined secondary standards can CBR claim to have restored the groundwater.
- 44) Section 9.3 notes the groundwater impact is temporary, as restoration returns the groundwater to pre-mining levels. This is simply not true. Restoration to pre-mining levels was not achieved in Mine Unit 1 (comment 35). Secondary standards are not pre-mining levels.

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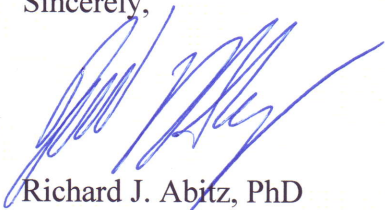
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- 45) Section 9.3 also notes radiological impacts will be small because all radioactive wastes will be transported off site. This is a false statement, as comment 36 notes that on site disposal is a possible option.
- 46) Section 9.4 states there is considerable value offered by CBR to the U.S. energy needs. This implies all the mined uranium is bought and used by the U.S. What assurance is given by CBR that all their mined uranium that is sold on the spot market ends up in the U.S.? Can any ISL operation tell the buyer of their product that the product has to stay in the U.S.?

References

- Crow Butte Resources, Inc., 2007, Application for 2007 License Renewal, USNRC Source Materials License SUA-1534, Crow Butte License Area, Crawford, Nebraska.
- U.S. Environmental Protection Agency (EPA), 1992. Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance, Washington, DC.
- U.S. Environmental Protection Agency (EPA), 2000a. Guidance for the Data Quality Objective Process – QA/G-4, EPA/600/R-96/055, Washington, DC.
- U.S. Environmental Protection Agency (EPA), 2000b. Guidance for the Data Quality Assessment – Practical Methods for Data Analysis - QA/G-9, EPA/600/R-96/084, Washington, DC.
- Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance, Washington, DC.
- Pacific Northwest National Laboratory (PNNL), 2007. Visual Sample Plan, Version 5.0 User's Guide, PNNL-16939, Richland, WA.

Sincerely,



Richard J. Abitz, PhD
Principal Geochemist/Owner