3/29/2013
78 FR 19330

(19)

PUBLIC SUBMISSION

As of: May 14, 2013
Received: May 10, 2013
Status: Pending_Post
Tracking No. 1jx-8595-he15
Comments Due: May 13, 2013
Submission Type: Web

Docket: NRC-2011-0148
Strata Energy, Inc., Ross In-Situ Uranium Recovery Project, Crook County, Wyoming; Notice of Materials License Application, Opportunity to Request a Hearing and to Petition for Leave to Intervene, and Commission Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information for Contention Preparation

Comment On: NRC-2011-0148-0007
Supplemental Environmental Impact Statement for the Ross In-Situ Uranium Recovery Project in Crook County, Wyoming

Document: NRC-2011-0148-DRAFT-0022
Comment on FR Doc # 2013-07332

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General Comment

See attached comments

Attachments

Ross ISR Mine Comments 05-10-13

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May 10, 2013

Cindy Bladey, Chief
Rules, Announcements and Directives Branch
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Office of Administration
Mail Stop TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Comments on Docket ID NRC-2011-014: Supplemental Environmental Impact Statement for the Ross In-Situ Uranium Recovery Project in Crook County, Wyoming

Dear Chief Bladey:

The Wyoming Outdoor Council is Wyoming's oldest statewide environmental advocacy organization and has worked to protect Wyoming's environment and lands for the last forty-eight years. Since 1892, the Sierra Club has worked to help people enjoy, explore and protect the planet. Today, the Sierra Club has more than 2.1 million members and supporters throughout the United States, including 1000 members who live here in Wyoming. Upon review of the Draft Supplemental Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming, there are areas of particular concern to the Wyoming Outdoor Council and Sierra Club that we would liket to comment on.

The NRC and Strata Energy, Inc. must take additional steps to ensure the protection of groundwater quantity and quality in and near the project area. Based on our review, before a permit is granted, the following areas specifically require further attention to ensure the necessary measures are taken to protect the invaluable groundwater resources in northeastern Wyoming from irreversible harm.

- **Water consumption**

  Water tables near uranium ISR projects, such as on the Christensen Ranch in northeastern Wyoming, have been drawn down (in places, as much as 100 feet) as a

result of permanent disposal of non-remediated withdrawn water as part of the ISR process (Lustgarten 2010). In the case of the Ross ISR Project, due to "limited Lance and Fox Hills Formations recharge area and their low recharge rates [estimated by Strata Energy to be between 0.03 and 0.09 cm/yr (Strata, 2011b)]...drawdowns in the vicinity of the Lance District would likely be present for tens of years after cessation of uranium-recovery activities." Despite this information, the conclusion is illogically made that cumulative impacts to groundwater quantity would be "small" because "consumptive use would be mitigated by alternative water supplies as necessary" (SEIS 5-23). However, the SEIS states "groundwater...would be used for domestic purposes and agricultural irrigation, while surface water...would be used for road and construction dust control...process water from ground water is the largest component of Ross Project water use" (SEIS 4-25). While it is helpful to know where water for non-production purposes will come from, this distracting statement does not provide a clear plan to mitigate the 1.25 percent net withdrawl of water from the ore zone as a result of the production process (SEIS 4-24, 5-23). Additionally, while it is perhaps easy to play down a 1.25 percent net withdrawal as miniscule (Strata ER Vol. 2), such a number is actually quite significant when recharge amounts are so small (Strata 2011b), and considering that this aquifer is needed for other purposes, including being one of only three limited water supplies to the city of Gillette, WY. These issues need to be fully reviewed and mitigated in the NRC's environmental review of this project in order to meet the requirements of the National Environmental Policy Act (NEPA).

- **Unidentified improperly abandoned drill holes in project area**

Groundwater aquifers in the project area are vitally important as drinking water sources, in particular for the city of Gillette, WY. Contamination of these water sources would therefore be devastating to the population that relies on them. Improperly abandoned, unplugged wells provide pathways for contamination and have been the cause of some past excursions during other ISR processes in Wyoming (NRC 2009; SEIS 4-32, 35,42). Strata has only identified and plugged 55 improperly abandoned drill holes out of an estimated several thousand that exist (SEIS 4-43). The SEIS acknowledges the risk such wells pose to water quality in the ore-zone and adjacent aquifers (SEIS xxviii), but still concludes that impacts to groundwater would be "small" (SEIS xxviii). A more thorough assessment is needed to identify and locate abandoned wells in the project area as well as to properly plug those that would create hydrologic connections, which could allow aquifer contamination if the ISR process were to begin.

- **History of excursions**

A study completed by the NRC in 2009 reports a total of 63 excursion occurrences in all three of the currently licensed and operating ISR facilities in the U.S. (two in Wyoming and one in Nebraska). Forty-three of those excursions have occurred in both Wyoming operations, one of which was "not controlled in a timely manner" (NRC 2009). Despite this history of common excursions, the NRC has illogically concluded that

the risk to groundwater quality is "small" (SEIS 5-27). Again, this issue needs to be more fully investigated in the NEPA analysis for the Ross ISR Project.

- **History of consistently incomplete aquifer restoration**

In addition to a history of excursions, the goal of groundwater quality restoration to "pre-operational conditions" is "not attainable" for some harmful constituents, including "arsenic...and radium-226 (NRC 2009). The Christensen Ranch project in northeastern Wyoming is one example where only 50 percent of the parameters were restored to baseline levels. The parameters that remain above baseline levels on the Christensen Ranch project include lead, total dissolved solids, and radium-226 (NRC 2009). This issue needs to be fully evaluated and disclosed to the public, allowing them a full opportunity to comment on this issue.

- **Conclusion**

In order to protect the limited groundwater resources in northeastern Wyoming, we kindly ask for closer consideration of the risks posed by (1) water consumption during the ISR process in an already water scarce region, (2) prolific non-located and unplugged abandoned wells in and near the project area, (3) excursions, and (4) non-remediable groundwater constituents that result from the ISR process. We also ask that feasible and appropriate mitigation plans be created based on these closer analyses prior to the NRC granting a permit to Strata Energy, Inc.

Thank you for considering these comments.

Sincerely,

On Behalf of

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