



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 8, 2018

Mr. Royal Pond
Manager of Health, Safety, and
Environment/Radiation Safety Officer
Strata Energy, Inc.
2929 New Haven Road
Oshoto, WY 82721

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION, LICENSE CONDITION 9.5, 2018
FINANCIAL ASSURANCE UPDATE, ROSS IN SITU RECOVERY PROJECT,
CROOK COUNTY, WYOMING

Dear Mr. Pond:

By letter dated November 20, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17345A159), Strata Energy, Inc. (the licensee) submitted the 2018 update to the financial surety estimate for activities at its Ross in situ uranium recovery facility. The U.S. Nuclear Regulatory Commission (NRC) staff notified the licensee that this submittal was accepted for a detailed technical review in an e-mail dated April 5, 2018 (ADAMS Accession No. ML18099A026) and provided a schedule to complete the review.

The staff has completed the technical review of the surety estimate and has identified certain areas of deficiency for which additional information is requested. The staff's Request for Additional Information (RAI) is enclosed herein. Please either respond to this RAI or provide a schedule for submitting your responses within 30 days of receipt of this letter.

As a result of this RAI, the proposed schedule for completing this review is being revised. The staff now expects to complete this action by July 12, 2018. The revised date for completing this action is contingent upon receiving a complete response to this RAI in the time frame specified above.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

R. Pond

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If you have any questions, please contact me at 301-415-6443, or by e-mail at Ronald.Burrows@nrc.gov.

Sincerely,

/RA/

Ronald A. Burrows, Project Manager
Uranium Recovery Licensing Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No. 040-9091
License No. SUA-1601

Enclosure:
Request for Additional Information

cc: B.J. Kristiansen, WDEQ

R. Pond

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CROOK COUNTY, WYOMING **May 8, 2018**

ADAMS Accession No.: ML18110A465

*** concurrence via e-mail**

OFFICE	DUWP/NMSS	DUWP/NMSS	DUWP/NMSS	DUWP/NMSS	DUWP/NMSS	DUWP/NMSS
NAME	R. Burrows	R. Augustus*	J.Saxton	S.Achten	B. VonTill	R. Burrows
DATE	05/ 01 /18	05/ 02 /18	05/ 03 /18	05/ 01 /18	05/ 08 /18/	05/ 08 /18

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**U.S. Nuclear Regulatory Commission
Request for Additional Information
Technical Review of 2018 Surety Estimate
Strata Energy, Inc.
for Source Materials License SUA-1601**

The purpose of the following Request for Additional Information (RAI) is to provide the additional information and data that are necessary for the U.S. Nuclear Regulatory Commission (NRC) staff to complete its review of Strata Energy, Inc.'s (Strata's, or the licensee's) submittal provided in accordance with License Condition 9.5 of Source Materials License SUA-1601 (NRC, 2018).

Background

License Condition 9.5 states, in part:

Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC 90 days prior to the anniversary date of February 14th.

In its submittal dated November 20, 2017, the licensee submitted to the NRC staff an update to its estimated costs for a third party for decommissioning and reclamation of activities planned through 2018 (Strata, 2017a).

RAI 1

Description of Deficiency

The pore volume calculations in the 2018 surety update (Strata, 2017a) use a flare factor of 1.44 “[b]ased on groundwater modeling of expected operational conditions and horizontal flare factors applied at other [in situ recovery] ISR facilities (e.g., Lost Creek, Nichols Ranch, and Christensen Ranch)”. However, in the reclamation plan approved for the licensing of the Ross ISR Project, numeric modeling results for licensing the Ross ISR Project, and the most recent surety updates (e.g., Strata, 2015, 2016a), Strata stated that a flare factor of 1.58 is applicable to the Ross ISR Project. The licensee did not provide justification for revising the flare factor other than it is “applied at other ISR facilities.”

Basis for the Request

Requirements in Title 10 of the *Code of Federal Regulations* Part 40, Appendix A, Criterion 9, specify that the amount of surety liability include adjustments to recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs.

Guidance in NUREG-1569 (NRC, 2003), Appendix C, Section (II)(B) indicates that a surety is to include the aquifer volume to be restored. The aquifer volume is estimated using a flare factor. Therefore, changing the flare factor will affect ground water restoration costs.

Enclosure

License Condition 9.5 (NRC, 2018) states, in part, “Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for site closure.”

Request for Additional Information

Please provide a detailed basis for the adjustment in flare factor. Alternatively, please revise the surety calculations to use the previously approved flare factor of 1.58 for the Ross ISR Project.

RAI 2

Description of the Deficiency

The 2018 surety estimate (Strata, 2017a) does not include a line item with detailed information or an explanation of estimated costs for remediation of radioactive contamination in onsite subsurface material. Since operations were initiated, Strata has experienced several reportable unplanned releases, based on Wyoming criteria for reportable spills (for example, see Strata, 2016b, 2016c, 2016d, 2017b, 2017c; for purposes of this RAI, an unplanned release is referred to as a “spill”). At this time, Strata has not reported whether or not soils affected by a spill require remediation. The regulations permit Strata to defer cleanup of the soils until decommissioning, provided adequate financial surety is set aside for the cost of the cleanup (see 76 FR 35532).

Basis for Request

Criterion 9(b)(2) of 10 CFR Part 40, Appendix A, states that each cost estimate must contain “[a]n estimate of the amount of radioactive contamination in onsite subsurface material.”

Request for Additional Information

The surety estimate should provide costs for cleanup of the subsurface radioactive contamination. For the historical spills, please provide, at a minimum, the area of impacted soils, the soil sampling results, estimated background soil levels for that spill area, the depth of the impacted soils, and, unit and totals costs for any cleanup. If a historical spill does not warrant remediation, then please list the cost for that unplanned release as “\$0.0”.

RAI 3

Description of Deficiency

As currently presented, the 2018 surety estimate (Strata, 2017a) does not include sufficient information for the NRC staff to verify that the well abandonment unit costs are derived from an independent source not financially affiliated with Strata.

Basis for the Request

The requirements in 10 CFR 40, Appendix A, Criterion 9, specify that cost estimates are to be based on the cost of an independent contractor to perform decontamination, decommissioning, and reclamation activities.

In addition, the guidance in Appendix C of NUREG-1569 (NRC, 2003) states that “a third party is an independent contractor or operator who is not financially affiliated with the licensee.”

The licensee states that the unit costs for well abandonment “are based on actual contract, material, and labor rates from the Ross Project.” The actual unit cost for well abandonment states \$1.56 per foot. However, in the previous surety update (Strata, 2016a), Strata’s “Well Abandonment Unit Cost” was stated as \$2.50 per foot, based on standardized rates found in Wyoming’s Department of Environmental Quality’s Guideline 12, Appendix L.

Request for Additional Information

Please provide support for the actual costs that demonstrates these costs were derived from an independent source not financially affiliated with Strata or revise the well abandonment surety calculations to reflect costs of an independent contractor for the Ross Project.

References

NRC, 2018. Materials License SUA-1601. Washington, DC, ADAMS Accession No. ML17284A160.

NRC, 2003. NUREG-1569, “Standard Review Plan for In Situ Leach Uranium Extraction License Applications—Final Report,” June 2003, ADAMS Accession No. ML032250177.

Strata, 2017a. Letter from R. Pond, Strata Energy, Inc., to U.S. NRC, Annual Revised Bond Estimate, November 20, 2017, ADAMS Accession No. ML17345A159.

Strata, 2017b. Letter from R. Pond, Strata Energy, Inc., to BJ Kristiansen, Wyoming Department of Environmental Quality - Land Quality Division and D. Lowman, U.S. NRC, Spill Report, WDEQ -LQD Permit to Mine No. 802, August 14, 2017, ADAMS Accession No. ML17264B087.

Strata, 2017c. Letter from R. Pond, Strata Energy, Inc., to BJ Kristiansen, Wyoming Department of Environmental Quality - Land Quality Division and D. Lowman, U.S. NRC, Spill Report, WDEQ -LQD Permit to Mine No. 802, July 28, 2017, ADAMS Accession No. ML17264B080.

Strata, 2016a. Letter from M. Griffin, Strata Energy, Inc., to U.S. NRC, Annual Revised Surety Estimate and Restoration Action Plan, November 30, 2016, ADAMS Accession No. ML16342C556.

Strata, 2016b. Letter from M. Griffin, Strata Energy, Inc., to D. Schellinger, Wyoming Department of Environmental Quality - Land Quality Division, Spill Report, WDEQ -LQD Permit to Mine No. 802, March 8, 2016, ADAMS Accession No. ML16082A149.

Strata, 2016c. Letter from M. Griffin, Strata Energy, Inc., to D. Schellinger, Wyoming Department of Environmental Quality - Land Quality Division, Spill Report, WDEQ -LQD Permit to Mine No. 802, June 6, 2016, ADAMS Accession No. ML16165A418.

Strata, 2016d. Letter from M. Griffin, Strata Energy, Inc., to D. Schellinger, Wyoming Department of Environmental Quality - Land Quality Division, Spill Report, WDEQ -LQD Permit to Mine No. 802, July 25, 2016, ADAMS Accession No. ML16211A135.

Strata, 2015. Letter from M. Griffin, Strata Energy, Inc., to U.S. NRC, December 4, 2015, Annual Revised Surety Estimate, ADAMS Accession No. ML15344A022.