



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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Denver, CO 80202-1129  
Phone 800-227-8917  
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MAY - 5 2015

Ref: 8P-AR

Mr. Michael Griffin  
Strata Energy, Inc.  
PO Box 2318  
1900 Warlow Drive, Bldg. A  
Gillette, Wyoming 82717

Re: Approval to Construct Ross In-Situ Recovery Uranium Project Holding Ponds for Uranium Byproduct Material in Crook County, Wyoming

Dear Mr. Griffin:

The U.S. Environmental Protection Agency is granting approval to Strata Energy, Inc. (Strata) in accordance with provisions of the Clean Air Act, as amended (42 U.S.C. § 7401 *et seq.*), to construct two holding ponds for the Ross In-Situ Recovery (ISR) Uranium Project in Crook County, Wyoming.

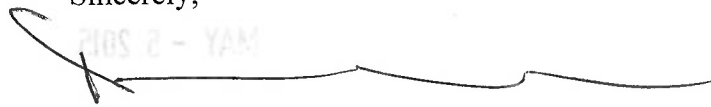
This approval is based on the Application that WWC Engineering submitted on November 4, 2014, on behalf of Strata, to the EPA pursuant to 40 CFR § 61.07, entitled "Design Report for the Ross ISR Project, Application for the Approval to Construct Lined Retention Ponds." The November 4, 2014 submittal is a revision to the original application submitted on May 12, 2013; both submittals along with supplementation information (including the January 19, 2015 document entitled "Response to RCRA Review of Ross ISR Project Application for Approval to Construct Lined Retention Ponds) submitted to EPA will collectively be considered the "Application."

The EPA has determined that the holding ponds will be in compliance with 40 CFR § 192.32(a). Based on the information you provided to us, the EPA approves the construction of two holding ponds, as described in the Application. This Approval, which is enclosed, contains conditions to ensure that the ISR facility is in compliance with the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subparts A (General Provisions) and W (National Emission Standards for Radon Emissions from Operating Mill Tailings). Failure to comply with any condition or term set forth in this approval or in the regulations, or failure to meet this standard, will be considered grounds for enforcement action pursuant to Section 113 of the Clean Air Act.



This Approval shall become effective immediately upon Strata's receipt of the original signed hard copy Approval to Construct. If you have any questions, or for further discussion, please contact Scott Jackson of my staff at (303) 312-6107 or [jackson.scott@epa.gov](mailto:jackson.scott@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Darcy O'Connor", with a long horizontal flourish extending to the right. The signature is positioned above the typed name and title.

Darcy O'Connor  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

Enclosure: Ross In-Situ Recovery Uranium Project Approval to Construct, with Conditions

cc: Benjamin Schiffer, WCC Engineering  
Tanner Shatto, Wyoming Department of Environmental Quality/Air Quality Division  
Bill Maier, Nuclear Regulatory Commission

**Strata Energy Ross In-Situ Recovery Project Holding Ponds  
Construction Approval  
40 C.F.R. Part 61, Subpart W  
Background Information for Construction Approval**

EPA Region 8 reviewed the Application for Construction Approval for the Ross In Situ Recovery facility (“Ross”) submitted by WWC Engineering on behalf of Strata Energy, Inc. (“Strata”), to EPA pursuant to 40 CFR § 61.07 “for approval of construction or modification,” entitled “Ross ISR, Application for Approval to Construct Lined Retention Ponds.” The November 4, 2014 submittal is a revision to the original application submitted on May 12, 2013; both submittals along with supplemental information (including the January 19, 2015 document entitled “Response to RCRA Review of Ross ISR Project Application for Approval to Construct Lined Retention Ponds) submitted to the EPA will collectively be considered the “Application.”

**Facility Location**

Ross is located in the northeast quarter of the southeast quarter of Section 18, Township 53 North, Range 67 West, Crook County, in northeastern Wyoming, approximately 24 miles north of the town of Moorcroft.

**Company Contact**

Michael Griffin, Vice President of Permitting, Regulatory and Environmental Compliance  
Strata Energy, Inc.  
PO Box 2318  
1900 Warlow Dr., Bldg. A  
Gillette, WY 82717

**Regulatory Authority**

EPA Region 8’s authority over Ross is derived from the Clean Air Act (“CAA”), as amended at 42 U.S.C. § 7401 *et seq.* The holding ponds at Ross are regulated pursuant to 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subpart A – General Provisions (“Subpart A”); and Subpart W – National Emissions Standards for Radon Emissions from Operating Mill Tailings (“Subpart W”).

Subpart W applies to “owners or operators of facilities licensed to manage uranium byproduct material during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings.” (40 CFR § 61.250). Subpart W defines “uranium byproduct material or tailings” as “the waste produced by the extraction or concentration of uranium from any ore processed primarily for its source material content.” (40 CFR § 61.251(g)). Thus, any type of uranium recovery facility that is managing uranium byproduct material or tailings is subject to Subpart W. The requirements of Subpart W specifically apply to the structures at the uranium recovery facility that are used to “manage” or contain the uranium byproduct or tailings. At Ross, these facilities are the holding ponds.

In addition to the requirements of Subpart W, the requirements in 40 CFR Part 61 Subpart A apply to Subpart W regulated structures. Subpart A requires owners or operators to submit to EPA an

application for approval for either construction or modification of Subpart W regulated structures (i.e., holding ponds) before the construction or modification is planned to commence. (40 CFR § 61.07). WWC Engineering submitted the Application for Construction Approval, on behalf of Strata, in accordance with Subpart A, 40 CFR § 61.07.

Subpart W requires that owners and operators meet either the numeric standard in 40 CFR § 61.252(a) for those facilities in existence prior to 1989, or choose one of two work practice standards in 40 CFR § 61.252(b) for facilities constructed after 1989. Strata has opted for the work practice standard found in 40 CFR § 61.252(b)(1), which allows for “phased disposal in lined tailings impoundments that are no more than 40 acres in area and meet the requirements of 40 CFR § 192.32(a).” In accordance with § 61.252(b)(1), “the owner or operator shall have no more than two impoundments, including existing impoundments, in operation at any one time.” The two Ross holding ponds will be each less than 40 acres in surface area.

Subpart W also requires compliance with 40 CFR § 192.32(a). (40 CFR § 61.252(c)). The provisions in 40 CFR § 192.32(a) are implemented and enforced by the Nuclear Regulatory Commission (“NRC”) at Ross. The NRC has regulations comparable to 40 CFR § 192.32(a) and Ross was reviewed for compliance with those regulations prior to the issuance of a radioactive materials license by the NRC. The NRC issued a radioactive materials license to Strata for Ross on April 24, 2014. Based on our review, EPA has determined that the Ross holding ponds will be in compliance with 40 CFR § 192.32(a).<sup>1,2</sup>

### **In Situ Recovery Operations and Proposed Facility for Approval**

Uranium milling is the process of extracting uranium from uranium ore and processing it into uranium oxide (i.e., yellowcake) to be further processed into fuel rods for nuclear power. Strata proposes to construct and operate Ross to process uranium into uranium oxide through an in situ recovery process (aka solution mining) with the resulting processing wastes (i.e., uranium byproduct) being both temporarily stored in holding ponds and injected permanently underground into permitted wells. EPA is approving construction of the two holding ponds with this action. EPA’s determination is that both holding ponds will be in compliance with 40 CFR § 192.32(a), as required by 40 CFR § 61.252(c). EPA’s determination is based on information found in the Application.

During the in situ recovery process, mineral uranium present in a saturated aquifer is dissolved using a solution (“lixiviant”) of native groundwater with an added oxidant, such as oxygen or hydrogen peroxide, as well as either carbon dioxide or sodium bicarbonate/carbonate. The uranium containing solution is pumped to the surface where it is recovered and processed into yellowcake. The waste stream from the process will be injected into the subsurface, with the holding ponds upstream to provide operational flexibility.

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<sup>1</sup> Memorandum, RCRA to Air 2/17/2015

<sup>2</sup> RCRA Checklist to Air - Uranium Recovery - Review of Application for Approval to Construct Lined Retention Ponds Under the Current Regulations

## **Effective Date of Approval**

EPA's approval of the construction of the two holding ponds shall be effective immediately upon receipt of the original signed Approval to Construct by the applicant.

## **Paperwork Reduction Act**

Any requirements established by this Approval for the gathering and reporting of information are not subject to review by the Office of Management and Budget ("OMB") under the Paperwork Reduction Act, because this Approval is not an "information collection request" within the meaning of 44 U.S.C. §§ 3502(4), 3502(11), 3507, 3512 and 3518. Furthermore, this Approval and any information-gathering and reporting requirements established by this Approval are exempt from OMB review under the Paperwork Reduction Act because it is directed to fewer than ten persons, 44 U.S.C. §§ 3502(4) and 3502(11); 5 CFR § 1320.5(a).

## **Environmental Justice Considerations**

On February 11, 1994, the President issued Executive Order 12898, entitled "Federal Actions to Address Environmental Justice ("EJ") in Minority Populations and Low-Income Populations." The Executive Order calls on each federal agency to make EJ a part of its mission by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations."

According to the EJ analysis conducted by the NRC, "no minority or low-income populations, as defined by EO 12898, have been identified in the Ross Project area."<sup>3</sup>

## **Tribal Interests**

The Environmental Impact Statement (EIS) prepared by the NRC (referenced in footnote three) contemplated the construction of the two holding ponds that are authorized by this approval. In some instances the NRC referred to these structures as "ponds." *See* FN #3 at 2-16 and Figure 4.2. More commonly the NRC referred to these structures as "surface impoundments." *See Id.* Table 1.2 at 1-11 (listing a "Permit Application to Construct Surface Impoundments (40 CFR Part 61.07)" as one of many environmental approvals for the Ross project).

The EIS prepared by the NRC includes a summary of the activities that the NRC conducted regarding tribal interests. *Id.* at Section 1.7.3.8 (Interactions with Tribal Governments). The NRC initiated discussions with potentially affected Native American Tribes. As a result of their outreach, various consultations, site visits, and surveys were conducted. As such, tribal interests associated with the construction of the ponds approved by EPA's approval were elicited and considered by the NRC in conjunction with the EIS. EPA has sent courtesy copies of this approval to each tribe that

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<sup>3</sup> NUREG 1910 Supplement 5, Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming, Supplement to the Generic Environmental Impact Statement for *In-Situ* Leach Uranium Milling Facilities, February 2014 (<http://pbadupws.nrc.gov/docs/ML1405/ML14056A096.pdf>) at 4-98 and 5-49.

was contacted by the NRC. *See Id.* at 10-1 through 10-4 (Distribution List for Tribal Government Officials).

**Administrative Record**

EPA has prepared an index to the Administrative Record.

Ross In-Situ Recovery (ISR) Uranium Project  
Approval to Construct  
Two Holding Ponds under  
40 CFR Part 61 Subpart W  
National Emission Standards for Radon Emissions from Operating Mill Tailings

In compliance with the provisions of the Clean Air Act, as amended (42 U.S.C. § 7401 *et seq.*), Strata Energy, Inc., P.O. Box 2318, 1900 Warlow Dr., Bldg. A, Gillette, Wyoming is granted approval to construct two holding ponds, as described in the Application, at the proposed Ross In-Situ Recovery Uranium Project. The project is located in Section 18, Township 53 North, Range 67 West in Crook County, Wyoming, in accordance with the plans submitted with the Application and with the Federal regulations governing the National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 61) and any conditions attached to this document and made part of this approval. The Application indicates that the size of proposed Holding Pond 1 is 3 acres and Holding Pond 2 is 9.6 acres. This Approval is to construct two holding ponds, as described in the Application.

This approval does not prevent the Administrator from implementing or enforcing applicable provisions in 40 CFR Part 61 Subparts A and W. This Approval to Construct grants no relief to the owner or operator from the legal responsibility for compliance with any applicable provisions of 40 CFR Part 61 Subparts A and W, or any other applicable Federal, State or local requirement. This approval shall be effective immediately upon receipt of the original signed Approval to Construct by the applicant.

Date

5/5/15



Darcy O'Connor  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance



## CONDITIONS

### I. General Approval

- a. The facility is approved to construct two holding ponds, as described in the Application.
- b. The owner or operator shall have no more than two impoundments in operation at any one time. (40 CFR § 61.252(b)(1)).
- c. The owner or operator shall comply with the provisions in 40 CFR § 192.32(a) and shall submit a statement certifying that they are in compliance with 40 CFR § 192.32(a) within 30 days of completion of construction. (40 CFR § 61.252(c)).
- d. The owner or operator of the In-Situ Recovery (ISR) facility must maintain a record of certifications (I.c. and III.c.) documenting compliance with 40 CFR § 61.252(b)(1) and 40 CFR § 192.32(a). Such records shall be kept at the ISR facility for at least five years and upon request be made available for inspection by the Administrator, or his/her authorized representative. (40 CFR § 61.255).

### II. Approval Limitations

- a. This Approval will remain in effect as long as the Ross In-Situ Recovery Uranium Project holding ponds approved herein are being used for the continued placement of uranium byproduct material or are in standby status for such placement. An impoundment is in operation from the day that tailings/uranium byproduct are first placed in the impoundment until the day that final closure begins. In the event that ownership of the ISR facility is transferred from Strata Energy to a new company, this Approval to Construct will be transferred to the new owner only if operation continues as approved by EPA. Any change made at the ISR by the new owner that constitutes a modification or construction requires the submittal of a Modification/Construction Approval request to EPA and prior approval by the EPA as required by 40 CFR § 61.07.
- b. The owner or operator may submit to the Administrator a written application for determination of whether an action intended to be taken by the owner or operator constitutes a modification or construction of a source subject to 40 CFR Part 61 Subpart W, pursuant to 40 CFR § 61.06. The Administrator will notify the owner or operator of his/her determination of whether the intended action constitutes modification or construction, requiring a supplemental Application for Construction or Modification, within 30 days after receiving sufficient information to evaluate the application. (40 CFR § 61.06).
- c. If an intended action to be taken by the owner or operator is determined by the Administrator to constitute construction or modification which affects an existing source, the new approval and conditions shall supersede and/or amend the existing Approval.
- d. Updates in notification and phone contacts will not affect the conditions of this Approval.

### III. Notification of Commencement of Construction and Startup

- a. The owner or operator shall furnish the Administrator with written notification as follows:



1. A notification of the anticipated date of initial startup of the source not more than 60 days nor less than 30 days before that date. (40 CFR § 61.09(a)(1))
  2. A notification of the actual date of initial startup of the source within 15 days after that date. (40 CFR § 61.09(a)(2))
- b. If any State or local agency requires a notice which contains all the information required in the notifications in paragraph III (a), sending the Administrator a copy of that notification will satisfy paragraph III (a).
  - c. A certification by the owner or operator of the surface area (acreage) of the holding ponds must be sent to the EPA Administrator no less than 30 days prior to startup.

#### **IV. Severability**

The provisions of this Approval to Construct are severable, and, if any provision of this approval to construct is held invalid, the remainder of this Approval to Construct shall not be affected thereby.

#### **V. Other Applicable Regulations**

This approval does not prevent the Administrator from implementing or enforcing all applicable provisions in 40 CFR Part 61, Subparts A and W, and any other applicable regulation.

#### **VI. Agency Correspondence**

All correspondence and notifications as required by this Approval to Construct shall be sent to:

Director, Air and Toxics Technical Enforcement Program  
Office of Enforcement, Compliance and Environmental Justice  
Mail Code 8ENF-AT  
U.S. Environmental Protection Agency, Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129

A courtesy copy shall be sent to:

Director, Air Program  
Office of Partnerships and Regulatory Assistance  
Mail Code 8P-AR  
U.S. Environmental Protection Agency, Region 8  
1595 Wynkoop St.  
Denver, CO 80202-1129

## **VII. Effective Date of Approval**

EPA's Approval of Construction for the two holding ponds discussed in Section I., above, in accordance with 40 CFR § 61.08 for the Ross In-Situ Recovery Uranium Project located in Crook County, Wyoming shall be effective immediately upon receipt of the original signed Approval to Construct by the Applicant.

## **VIII. Paperwork Reduction Act**

Any requirements established by this Approval for the gathering and reporting of information are not subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act because this Approval is not an "information collection request" within the meaning of 44 U.S.C. §§ 3502(4), 3502(11), 3507, 3512 and 3518. Furthermore, this Approval and any information-gathering and reporting requirements established by this Approval are exempt from OMB review under the Paperwork Reduction Act because it is directed to fewer than ten persons, 44 U.S.C. §§ 3502(4) and 3502(11); 5 CFR § 1320.5(a).

**INDEX  
 ADMINISTRATIVE RECORD  
 ROSS IN-SITU RECOVERY PROJECT (Strata Energy, Inc. (Strata))  
 APPLICATION FOR CONSTRUCTION APPROVAL  
 UNDER 40 CFR PART 61 SUBPART W  
 PROPOSED APPROVAL**

<b>DOCUMENT #</b>	<b>DATE</b>	<b>DESCRIPTION</b>
EPA-ROSS 001	May 12, 2013	Ross ISR Project, Application for Approval to Construct Lined Retention Ponds. Addressed to Mike Gaydosh
EPA-ROSS 002	November 4, 2014	Response to Comments for Application for Approval to Construct Lined Retention Ponds at the Ross ISR Facility. Addressed to Angelique D. Diaz, Ph. D
EPA-ROSS 003	February 2014	Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming: Supplement to the Generic Environmental Impact Statement for <i>In-Situ</i> Leach Uranium Milling Facilities, Final Report
EPA-ROSS 004	April 24, 2014	U.S. NUCLEAR REGULATORY COMMISSION MATERIALS LICENSE, License Number SUA-1601, Issued to Strata Energy, Inc.
EPA-ROSS 005	January 19, 2015	Response to RCRA Review of Ross ISR Project Application for Approval to Construct Lined Retention Ponds
EPA-ROSS 006	February 17, 2015	Ross ISR Project: Application for Approval to Construct Lined Retention Ponds Prepared for: Strata Energy, Inc. May 2014, revised November 2014 and January 2015. Memo from Nancy Morlock to Carl Daly
EPA-ROSS 007		RCRA Checklist to Air - Uranium Recovery – Review of Application for Approval to Construct Lined Retention Ponds Under the Current Regulations