

Scoping Summary Report

Supplemental Environmental Impact Statement for the Proposed Kendrick Expansion Project Crook County, Wyoming

October 2016



**U.S. Nuclear Regulatory Commission
Rockville, Maryland**

1 INTRODUCTION

Strata Energy, Inc. (Strata) submitted to the U.S. Nuclear Regulatory Commission (NRC) a license amendment application dated March 20, 2015, supplemented April 24, 2015, to amend its Source and Byproduct Materials License SUA-1601, issued on April 24, 2014, for its Ross In Situ Uranium Recovery (ISR) project (Ross) located in Crook County, Wyoming. This amendment would expand the Ross project to include the Kendrick Expansion Area (Kendrick). The purpose of this report is to provide a concise summary of the determinations and conclusions reached, including the significant issues identified, as a result of the scoping process in the NRC's environmental review of this license amendment request.

The scoping process provides an opportunity for public participation to identify issues to be addressed in the supplemental environmental impact statement (SEIS) and to highlight public concerns. On March 8, 2016, the NRC initiated the 45-day scoping process for Kendrick by issuing a *Federal Register* notice (81 FR 12143). This *Federal Register* notice notified the public of the NRC staff's intent to prepare a SEIS related to the review of the license amendment request for Kendrick. Public comments on the scope of the SEIS were accepted from March 8, 2016, through April 22, 2016. The NRC received 54 pieces of correspondence.

The proposed Federal action is for the NRC to either grant or deny Strata's request for a license amendment to permit uranium recovery at Kendrick through the use of ISR technology and to send the recovered material to the Ross Central Processing Plant (CPP) for further processing.

The scope of the SEIS includes an evaluation of the environmental impacts of constructing, operating, aquifer restoration, and decommissioning Kendrick and of the reasonable alternatives to the proposed action. The "Scoping Comments and Responses" section of this report includes specific issues identified by the comments. The subsequent NRC responses explain whether the issues will be addressed in the SEIS and, if so, where in the report they will likely be addressed.

During the scoping process, the NRC staff received comments that were outside the scope of the environmental review. This report provides responses to comments that were determined to be out of the scope of this environmental review. Comments that are within the scope of the environmental review will be evaluated in detail and documented in the appropriate sections of the Kendrick SEIS.

All documents associated with this scoping process are available for public inspection in the NRC Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, or from the NRC's Agencywide Documents Access and Management System (ADAMS). The ADAMS Public Electronic Reading Room is accessible at <http://www.nrc.gov/reading-rm/adams.html>. Persons who encounter problems in accessing documents in ADAMS should contact the NRC's PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail at pdr.resource@nrc.gov. Table 1 lists the ADAMS accession number for each comment document.

1.1 Scoping Participants

Table 1 identifies the individuals who provided comments and the assigned commenter identification (ID) number. Individuals are listed along with the source document by which the comment was submitted.

Table 1. Individuals Providing Comments During the Scoping Comment Period

Commenter	Affiliation (if stated)	ID	Comment Source	ADAMS No.
Marcia Lane		01	E-mail	ML16096A084
Gena Parkhurst		02	E-mail	ML16096A085
Mark Sattelberg	Fish and Wildlife Service (FWS)	03	E-mail	ML16099A083
Rita Capitan		04	E-mail	ML16106A253
Michael Johnson		05	E-mail	ML16106A254
John Dale		06	E-mail	ML16117A360
Sonja Swift		07	E-mail	ML16117A361
Mark Conrad	Wyoming Department of Environmental Quality (WDEQ)/Water Quality Division (WQD)	08	E-mail	ML16117A364
Jace DeCory	Cheyenne River Sioux Tribe	09	E-mail	ML16117A365
Melody Inchamuk		10	Letter	ML16117A366
Shannon Anderson	Powder River Basin Resource Council	11	E-mail	ML16117A369
Carla Rae Marshall	Cheyenne River Sioux Tribe	12	E-mail	ML16117A372
Philip Strobel	U.S. Environmental Protection Agency (EPA) Region 8	13	Letter	ML16117A375
Christina Engelhaupt		14	E-mail	ML16117A376
Edward Starr	Titunwan band of the Seven Council Fires	15	E-mail	ML16117A377
Matt Winnick		16	E-mail	ML16117A378
Don Kelley		17	E-mail	ML16117A395
Carol Champagne		18	E-mail	ML16117A396
Pam Viviano		19	E-mail	ML16117A398
Lori Bagley		20	E-mail	ML16117A399
Thomas Johnston	Spotted Eagle Surveying	21	E-mail	ML16117A400
Kathy Durrum		22	E-mail	ML16117A402
Aliyah Keuthan		23	E-mail	ML16117A403
Nina Renarve		24	E-mail	ML16117A404
Linda Rose		25	E-mail	ML16117A407
Colin Neary		26	E-mail	ML16117A408
Kathleen Kimberling		27	E-mail	ML16117A410
Joanna Taylor		28	E-mail	ML16117A412
Paul Moss		29	E-mail	ML16117A413
Larry Smith		30	E-mail	ML16117A414
Hervé Loquais		31	E-mail	ML16117A417
Christine Cleobury		32	E-mail	ML16117A418
Val Snyder		33	E-mail	ML16117A419
Marvin and Evelyn Griffin		34	E-mail	ML16117A421
Debra Diegoli		35	E-mail	ML16117A431
Cheryl Waara		36	E-mail	ML16117A432
Cecile Leneman		37	E-mail	ML16117A434
Ryan Mitchell Boch		38	E-mail	ML16117A435

Commenter	Affiliation (if stated)	ID	Comment Source	ADAMS No.
Bob Brister		39	E-mail	ML16117A436
Deanna Rhoades		40	E-mail	ML16117A437
Tantoo Cardinal		41	E-mail	ML16117A438
Jessica Meders (blank)		42	E-mail	ML16117A439
Jessica Meders		43	E-mail	ML16117A440
Jim Jones		44	E-mail	ML16117A442
Scott Waugh		45	E-mail	ML16117A443
Gena Parkhurst		46	E-mail	ML16117A456
Carol Hayse		47	E-mail	ML16117A457
Gardner Gray		48	E-mail	ML16117A458
Mary Helen Pederson		49	E-mail	ML16117A459
Jayme Huff		50	Letter	ML16118A275
Sylvia Lambert		51	E-mail	ML16118A274
Tim Reid	National Park Service (NPS)	52	E-mail	ML16195A508
Lea Foushee	North American Water Office (NAWO)	53	E-mail	ML16195A504
Shayenn Osorio		54	E-mail	ML16195A507

1.2 Scoping Comments

This section discusses the process for addressing the comments and suggestions received as part of the scoping process. Section 2 discusses the disposition of each comment.

The comments received during the scoping period are grouped into the following general categories:

1. NEPA and Scope of Review
2. Purpose and Need
3. Alternatives and Mitigation
4. Land Use
5. Transportation and Traffic
6. Geology
7. Water Resources
8. Ecology
9. Soil
10. Radiological Health
11. Air Quality
12. Visual Impacts
13. Noise
14. Environmental Justice
15. Greenhouse Gas (GHG) Emissions and Climate Change
16. Historical and Cultural Resources
17. Waste Management
18. Cumulative Impacts
19. Reclamation
20. Comments Outside the Scope of the NRC's Review

At the conclusion of the scoping period, the NRC staff reviewed all submissions in order to identify individual comments. Each comment was marked with a unique identifier consisting of the commenter ID (specified in Table 1) and a comment number. This unique identifier allows each comment to be traced back to the letter or e-mail in which the comment was identified. Comments were consolidated and categorized according to the topic within the SEIS or according to the general topic if outside the scope of the SEIS. Once comments were grouped according to subject area, the NRC staff determined the appropriate action for the comment. The action or resolution for each comment is described in the NRC staff's responses within this report.

The preparation of the SEIS will take into account all of the relevant issues raised during the scoping process. The NRC staff expects to issue a draft SEIS for public comment in November 2016. That comment period will be the next opportunity for interested Federal, State, and local government agencies; Native American Tribal governments; local organizations; the applicant; and other members of the public to provide input to the NRC's environmental review process. Comments received on the draft SEIS will be considered in the preparation of the final SEIS. The final SEIS, along with the NRC staff's safety evaluation report, will provide the basis for the agency's decision on Strata's license amendment request to expand its Ross site to include the Kendrick expansion area.

2 SCOPING COMMENTS AND RESPONSES

2.1 NEPA and Scope of Review

Comments:

35-2: Please consider both [sic] the short- and long-term effects that this project would have.

11-3: The Supplemental EIS (SEIS) on the Kendrick Expansion must also consider the full scope of adverse environmental impacts associated with the ISR¹ mining to be conducted in this location, and may not avoid that analysis by tiering to either the Generic EIS or the Ross SEIS, both of which are legally deficient (as explained in the Organizations' filings before the Commission).

¹ ISR and ISL are used interchangeably throughout this document. The two terms are synonymous for the type of uranium processing proposed in the Kendrick project.

11-7: II. The Kendrick Expansion SEIS May Not Ignore Relevant Environmental Impacts By Purporting to "Tier" To Either The Generic Environmental Impact Statement Or The Ross Project SEIS.

The Kendrick SEIS must fully analyze all the relevant impacts associated with the Kendrick Expansion, and may not avoid that analysis by relying on the GEIS or the SEIS for the Ross Project because, as the Organizations have proven through comments and submissions to the Board, the Commission, and its staff, both the GEIS and the SEIS for the Ross Project are legally deficient. These previous EISs are especially deficient in their discussion and disclosure of impacts to water resources, but also in any number of other issues, including impacts to historic and cultural resources, socio-economic resources, and cumulative impacts.

As a threshold matter, the GEIS was never issued as a final NEPA document with an official Record of Decision. See 10 C.F.R. § 51.102(a) ("A Commission decision on any action for which a final environmental impact statement has been prepared shall be accompanied by or include a concise public record of decision."). There is thus no basis for a *supplemental* EIS, rather than an EIS itself, fully addressing all relevant issues and impacts.³

Accordingly, the Commission cannot avoid impacts by claiming they were resolved in the GEIS, such as impacts on water resources. Nor may the SEIS rely on the non-informative terminology from the GEIS, characterizing impacts with generic terminology such as "small" "moderate" or "large." NEPA requires "high quality" information and "[a]ccurate scientific analysis." 40 C.F.R. § 1500.1(b); See also *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). In NEPA, an agency must "insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. § 1502.24. In the case of the GEIS, and subsequent EISs that have "tiered" to it, including the Ross Project SEIS, the Commission's characterization of impacts as "small" "moderate" or "large" is directly contradicted by the weight of scientific evidence.

As documented by the wealth of scientific literature and historical experience, the GEIS's and subsequent Ross Project SEIS's consideration of the adverse impacts of ISL mining does not even begin to meet these basic requirements of NEPA. Rather, the conclusions that ground and surface water impacts from ISL mining will be small to moderate are premised on the assumptions that 1) ISL operations will implement and enforce "best management practices" (BMPs) and these BMPs will be effective in avoiding and minimizing impacts from excursions,

spills and leaks; 2) groundwater restoration will be successful ; 3) groundwater contaminated with radioactive elements and heavy metals will be contained within the production zone during operations and after restoration; 4) mining and restoration activities will not contribute to aquifer drawdown or depletion of water supplies; and (5) that proper background characterization of the aquifer was carried out in the first place. As fully discussed in the Organization’s filings before the Board and the Commission, available data and scientific research demonstrate that none of these assumptions are reasonable.

The Kendrick SEIS also may not lawfully rely on the Ross Project SEIS as a basis for the environmental review to be conducted here. Indeed, the basic premise of the Organizations’ rejected contention in the Ross Project was that the impacts of these two (and the other) phases of the planned SEI ISR mining in the Lance District are sufficiently similar—and likely to occur—that the impacts should all be considered in the same SEIS. Truncating the environmental analysis in this SEIS by relying on the Ross Project SEIS would fly in the face of the Commission’s refusal to consider these impacts collectively when the Ross Project was first approved, and the Board’s ratification of that segmented approach. In short, having refused to incorporate the Kendrick Expansion (or the rest of the inevitable Lance District uranium ISL mining to come) into the Ross Project SEIS, the Commission must independently consider the adverse environmental consequences of the Kendrick Expansion without simply referring back to the inadequate analysis completed for the Ross Project.

³ From a legal standpoint, NRC’s use of the word “supplemental” is misplaced. A SEIS is required if “[t]here are substantial changes in the proposed action that are relevant to environmental concerns.” 10 C.F.R. § 51.72. However, the GEIS did not propose any actions and instead analyzed uranium mining in the abstract.

11-12: As we noted at the outset, the Kendrick Expansion SEIS must comply with well established NEPA requirements of taking a “hard look” at the environmental impacts of a clearly defined major federal action, and may not further exacerbate the fundamental deficiencies in the Ross Project SEIS by considering only a set of quantitatively baseless environmental conclusions (that impacts will be SMALL) about an arbitrarily truncated section of a project that is simply the next step in a much larger plan for mining uranium eastern Wyoming. Thoroughly addressing the matters covered in these comments would commence the process of creating a lawful agency record, but rather than attempt to patch the holes of a leaking ship that has not even defined a destination or, in NEPA terms, the scope of the major federal action under review, we urge NRC Staff to begin anew, requiring SEI to file a new license application, and prepare a new EIS that finally addresses SEI’s uranium mining project in the manner NEPA requires.

13-1: (1) Plan or Operational adjustments based on the Ross ISR Project

The Ross ISR Project began operations in early December 2015. Although currently it has not been operating for a long period, lessons learned from the plans and operation of this facility should be considered in the Kendrick Expansion NEPA process. In addition, any common issues from ISR operations across Wyoming should be considered when assessing the impacts and mitigation measures for this project.

Response: *The Kendrick SEIS will be prepared in accordance with the NRC’s regulations for implementing the National Environmental Policy Act (NEPA) at Title 10 of the Code of Federal Regulations (10 CFR) Part 51, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” and consistent with the NRC’s guidance for environmental*

reviews as found in NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," issued August 2003.

This SEIS is a supplement to NUREG-1910, "Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities," issued May 2009 (ISR GEIS). The regulations in 10 CFR 51.102(a) require that a Commission decision on any action for which a final EIS has been prepared shall be accompanied by, or include, a concise public record of decision. Actions subject to this regulatory requirement include NRC decisions on specific applications to issue, renew or amend an NRC license. Issuance of the ISR GEIS was not a binding decision on any action, and for that reason it did not trigger the requirement under 10 CFR 51.102(a) to prepare a public record of decision.

The ISR GEIS evaluates environmental impacts associated with uranium mining in several districts, including the Nebraska-South Dakota-Wyoming Uranium Milling Region. The ISR GEIS provides a starting point for all of the NRC's NEPA analyses for site-specific license applications for new ISR facilities. The ISR GEIS provides criteria for each environmental resource area to help determine the significance level for potential impacts (i.e., SMALL, MODERATE, or LARGE). This SEIS tiers from the ISR GEIS and incorporates by reference NUREG-1910, Supplement 5, "Environmental Impact Statement for Ross in Crook County, Wyoming," issued February 2014 (Ross SEIS). The techniques of tiering and incorporation by reference are described in 40 CFR 1502.20 and 40 CFR 1508.28, and 40 CFR 1502.21, respectively, of the Council on Environmental Quality's (CEQ's) NEPA regulations. As such, the Kendrick SEIS relies on information and analyses in the ISR GEIS and Ross SEIS where appropriate and focuses its more detailed discussions on the issues specific to Kendrick. The Kendrick SEIS will also draw upon the NRC staff's independent evaluation of the site-specific information provided in Strata's license amendment application, the information developed during the NRC staff's visit to the Kendrick site, information provided as a result of the scoping process, and any materials collected through the NRC staff's own independent assessment.

Chapter 3 of the SEIS will describe the current and local conditions at the Kendrick site, Chapter 4 will address the potential environmental impacts from uranium recovery at Kendrick, both direct and indirect as well as short and long term. The analysis of impacts in Chapter 4 will also include mitigation. Chapter 5 will include the NRC's analysis of cumulative impacts from past, present, and reasonably foreseeable actions, including those of other Strata projects. Chapter 8 will include an analysis of the unavoidable, irreversible, and irretrievable impacts, as well as the relationship between local short-term uses of the land and the maintenance and enhancement of long-term productivity.

The NRC will take into consideration applicable and available information and data from operations at Ross when evaluating the impacts associated with Kendrick. The NRC will also take into account its own historical experience in licensing ISR facilities when evaluating the environmental impacts and mitigation measures.

In LBP-13-10 and a subsequent unpublished order, the Atomic Safety and Licensing Board (ASLB) declined to admit a contention asserting that the NRC staff's NEPA analysis for Ross should consider the development of the entire Lance District as the Federal action. In CLI-16-13, the Commission declined to grant a review of ASLB's decisions. In its decision, the Commission took notice of the commenter's scoping comments for the Kendrick SEIS that the entire Lance District should be considered in a single EIS. The Commission stated that the staff's Ross SEIS considered the cumulative impacts of the construction of possible satellite facilities such as Kendrick, including impacts to geology and soils and surface and ground water

impacts. The Commission also declined to review ASLB's rulings on contentions related to the ground water and cumulative impact analyses performed for the Ross SEIS.

2.2 Purpose and Need

Comments:

11-9: In any event, both the GEIS's and the Ross Project SEIS's definitions of the NRC's purpose and need for action, and the resulting consideration of reasonable alternatives, are incoherent, inadequate, and unacceptable. In sum, in order to proceed with a searching and thorough NEPA process, the NRC must, in full consultation with other involved federal agencies (and in light of EPA's pending revisions to 40 CFR 192, go back to the drawing board and craft a statement of "Purpose and Need for Agency Action" that relates whatever uranium recovery program it eventually defines to broad national objectives that are within the NRC's purview, including for example, such goals as "improving remediation of land and water impacts from the recovery of source or byproduct materials," or "ensuring the long-term isolation from the human and natural environment of harmful radionuclides and chemical toxins produced in the nuclear fuel cycle." As we've noted, we do not believe that the uranium recovery industry (at least how it has been operated in the past) will be effective in addressing any of these goals, but this prospect is present, at least in theory. We do note, however, that other concrete policy and program alternatives exist that address practical solutions to each of the challenges presented by these objectives, and therefore merit detailed consideration in any NEPA scoping and supplemental document.

26-3: The need for more uranium is minimal, and Fukushima revealed how unstable reactors can be pending a severe ecological disaster. Also the stockpile of nuclear weapons will inevitably be dismantled soon.

Response: *The purpose and need for the proposed action, which will be addressed in Chapter 1 of the Kendrick SEIS, is to provide an option that allows the licensee to recover uranium at Kendrick and transfer it via pipeline to the Ross CPP for further processing. This definition of purpose and need recognizes that the NRC bases its ultimate licensing decision on its findings in the NRC's safety review, as required by the Atomic Energy Act of 1954, as amended, and its environmental review under NEPA. The NRC does not consider the reason an applicant submits a licensing application, nor does it consider market conditions, beyond that considered in the environmental and safety reviews.*

2.3 Alternatives and Mitigation

Comments:

11-4: It must also consider a full range of reasonable alternatives and mitigation approaches.

11-8: III. The Kendrick Expansion SEIS Must Meaningfully Consider Reasonable Mitigation Alternatives

According to the scoping notice, the Kendrick Expansion SEIS will only consider an alternative in which the CPP is located on site, in addition to the no action and proposed alternatives. In addition, the Kendrick Expansion SEIS must consider reasonable alternatives that would actually *mitigate* the inevitable adverse environmental consequences of ISL mining in this area.

For example, as the U.S. Environmental Protection Agency (EPA) urged in commenting on the Ross Project, the SEIS should consider reasonable alternatives to address the large quantities of liquid byproduct waste that will be generated, including deep well injection, solar evaporation ponds, land application, and surface water discharge. See EPA Ross Project Scoping Comments (Dec. 29, 2011) (EPA Ross Comments), attached.

The SEIS should also consider a discussion of alternatives considered that the Organizations have urged on the agency (to no avail) since our 2007 comments on the scoping for the GEIS. That initial scoping was inadequate and the agency's treatment of purpose, need, alternatives and associated mitigation alternatives has remained inadequate to this day. There is a lengthy and tragic history associated with uranium recovery, and since that time NRC has failed to identify a broad national purpose, and no overarching need for a dimly defined proposed action is stated, or weighed against alternative means of accomplishing the agency's purpose and need for action.⁴ Since the purpose and need for agency action is so ill-defined, it is by no means clear whether a GEIS is even appropriate or warranted. If, as we suggested long ago, the agency's purpose and need for action is "to increase the future supply of uranium to meet increased demand for nuclear fuel," this SEIS requires an analysis of alternatives for increasing this supply that could avoid the environmental impacts of uranium recovery in the identified areas, by examining, for example, the feasibility of increasing imports to cover the increment of supply that would otherwise have come from increased ISL mining in those areas, and the possibility of substituting increased energy efficiency for an increased supply of nuclear generated electricity.

On the other hand, if the agency's purpose and need is essentially procedural (see note 4 above for the Final GEIS's statement of purpose and need)—to streamline its consideration and approval of license applications for uranium recovery—then the agency is in the peculiar position of using NEPA to revise its own rules without a proposal for rulemaking being presented. And the agency has made no showing that its current rules are inadequate or overly burdensome to industry (indeed, all history suggests a conclusion must be made to the contrary), or that streamlining them would provide a higher level of environmental analysis for decision makers and better environmental protection to the public.

Response: *These comments address the consideration of alternatives to the proposed action, including mitigation alternatives. Chapter 2 of the Kendrick SEIS will discuss the alternatives to the proposed action. The only alternative to the Federal action to approve the licensing amendment proposed by Strata is not to approve the amendment. This option constitutes the project's no-action alternative, which must be considered in accordance with 10 CFR Part 51. In the ISR GEIS (Section 2.13) and the Ross SEIS (Section 2.2), the NRC staff considered a number of alternatives, including alternate technologies for uranium extraction, such as conventional mining and milling; alternate lixiviant chemistry; and alternate waste management methodologies. Because of the potential for greater environmental impacts associated with these alternatives, they were eliminated from further analysis. Because the Kendrick SEIS is tiering from the ISR GEIS, these alternatives need not be reevaluated, since there is nothing specific to the Kendrick site that would change the analysis. Kendrick SEIS Chapter 5 will consider two specific study areas for the selected alternative of deep well injection when evaluating cumulative impacts. Chapter 2 will present ISR processing alternatives considered but eliminated from detailed review and the basis for their elimination. When determining impacts for the expansion, the NRC will review and evaluate mitigation measures, both those proposed and those already required under the Ross license. The NRC will propose new mitigation measures if it is determined that new mitigation measures are required to reduce moderate or large impacts, or otherwise would have significant benefit.*

2.4 Land Use

Comments:

7-11, 9-8, 12-8, 15-8, 18-7, 23-7, 25-7, 27-6, 31-7, 34-5, 43-7, 49-2, 54-8: Minimize impacts to livestock grazing and recreation in the area.

14-1: As Agricultural land, Natural Habitats, and Water Resources continue to diminish in the United States of America, I humbly ask you to please protect what remains. Especially, somewhere that draws hundreds of foreign tourists every year. We can't afford to loose [sic] these precious resources just to benefit a few. It also doesn't reflect well to those that visit us each year in regards to our public relations. America has a reputation began with Teddy Roosevelt for taking care of what matters. Let's keep it that way!

19-7: Consider that this large expansion will have further negative impacts to livestock grazing and recreation in the area.

29-7: There is a need to minimize impacts to livestock grazing and recreation in the area.

30-7: No impacts to livestock grazing and recreation in the area.

44-6: Consider that negative impacts to livestock grazing and recreation in the area will be amplified by this proposed expansion.

50-7: Please re-evaluate this proposed uranium project and consider how to minimize the "light" pollution and other industrial impacts to Devil's Tower National Monument and to the property owners in the Oshoto area; how to minimize impacts to livestock grazing and recreation in the area; and how to minimize impacts from truck traffic, dust and noise.

Response: *These comments request that the NRC consider livestock grazing and recreation when considering the environmental impacts from Kendrick. Chapter 3 of the Kendrick SEIS will describe the current land use. Chapter 4 will address the potential impacts of the Kendrick expansion on land use, including impacts to grazing and recreation. Chapter 5 will discuss the cumulative impacts of past, present, and reasonably foreseeable future actions on land use. Sections 2.5 and 2.12 of this scoping summary discuss the SEIS's consideration of traffic-related impacts and visual impacts (including light pollution), respectively.*

2.5 Transportation and Traffic

Comments:

7-12, 9-9, 12-9, 15-9, 18-8, 23-8, 25-8, 27-7, 31-8, 34-6, 43-8, 49-3, 54-9: Minimize impacts from truck traffic, dust, and noise.

19-8: Consider that this further expansion will have increased negative impacts from truck traffic, dust, and noise.

29-8: There is a need to minimize impacts from truck traffic, dust, and noise.

30-8: No impacts from truck traffic, dust, and noise.

44-7: Consider that increasing the size of the mining area will amplify other negative impacts, such as truck traffic, dust, and noise.

Response: *These comments discuss potential impacts of the Kendrick expansion from truck traffic, dust, and noise. Kendrick SEIS Chapter 3 will describe the current transportation and traffic in the area. Chapter 4 will address the potential impacts of the Kendrick expansion on transportation and traffic, including accidents. Chapter 5 will address the cumulative impacts of past, present, and reasonably foreseeable future actions on transportation and traffic. Similarly, noise, including that from truck traffic, as well as air quality impacts including dust from increased traffic, will be addressed in Chapters 3, 4, and 5.*

2.6 Geology

Comments:

7-5, 12-2, 15-2, 18-1, 23-1, 24-2, 25-1, 30-1, 31-1, 32-1, 43-1, 54-2: Consider that the proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration. Thanks to our efforts, the NRC has been requiring Strata to locate and plug these old exploration wells prior to mining, but there are still concerns. This license condition **MUST** be applied to the expansion project because old wells in the area could serve as conduits for water contamination from Strata's project. NRC has identified that water contamination could result from "improperly plugged previous exploration drillholes that have not yet been properly abandoned." NRC needs to do a better job at analyzing the risk that these old drillholes—both inside and immediately adjacent to Strata's project area—represent.

9-2: Proposed uranium mining and processing area has over 5,000 abandoned drill holes from early days of uranium exploration. Although some have been plugged, there are still concerns. This license condition **MUST** be applied to the expansion project because old wells in the area could serve as conduits for water contamination from Strata's project. NRC has identified that water contamination could result from "improperly plugged previous exploration drill holes that have not yet been properly abandoned." NRC needs to do a better job at analyzing the risk that these old drill holes—both inside and immediately adjacent to Strata's project area—represent.

10-1: The proposed uranium mining processing area has over 5,000 abandoned drill holes from the early days of uranium exploration.

10-3: Thanks to Shannon Anderson, the NRC has been requiring Strata to locate and plug the old exploration wells, and there are still concerns because old wells in the area could become conduits for water contamination from Strata's previous exploration drill holes that have not been properly abandoned, and the NRC needs to do a better job of analyzing the risks these old drill holes represent.

19-2: Consider that the proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration. Location of these old wells and proper plugging prior to mining **MUST** be applied to the expansion project because old wells in the area could serve as conduits for water contamination from Strata's project. NRC needs to do a better job at analyzing the risk that these old drill holes represent—both inside and immediately adjacent to Strata's project area.

22-1: This license condition **MUST** be applied to the expansion project because old wells in the area could serve as conduits for water contamination from Strata's project. NRC has identified that water contamination could result from "improperly plugged previous exploration drillholes that have not yet been properly abandoned." NRC needs to do a better job at analyzing the risk that these old drillholes—both inside and immediately adjacent to Strata's project area—represent.

28-1: The proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration. NRC has been requiring Strata to locate and plug these old exploration wells prior to mining, but there are still concerns. This license condition must be applied to the expansion project because old wells in the area could serve as conduits for water contamination from Strata's project

29-1: NRC should consider that the proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration. Strata must be required to locate and plug these old exploration wells prior to mining. Old wells in the area could serve as conduits for water contamination from Strata's project. NRC has identified that water contamination could result from "improperly plugged previous exploration drillholes that have not yet been properly abandoned." NRC needs to do a better job at analyzing the risk that these old drillholes—both inside and immediately adjacent to Strata's project area—represent.

33-1: I urge your agency to be diligent concerning the plugging of not only existing drill holes but of all drill holes to prevent the risk of water contamination, Wyoming relies heavily on our subsurface water for not only our lively hood but for life itself, pollutions of our water sources or waste of our water resources imperils the habitability of our region.

34-1: We request the NRC to consider that the proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration. Thanks to the efforts of the Powder River Basin Organization and others, the NRC has been requiring Strata to locate and plug these old exploration wells prior to mining, but there are still concerns. This license condition **MUST** be applied to the expansion project because old wells in the area could serve as conduits for water contamination from Strata's project. NRC has identified that water contamination could result from "improperly plugged previous exploration drill holes that have not yet been properly abandoned." NRC needs to do a better job at analyzing the risk that these old drill holes—both inside and immediately adjacent to Strata's project area—represent.

37-1: With reference to Strata Energy's license application, i urge the NRC to consider that the proposed uranium mining and processing area has over 5000 abandoned drill holes from early days of U exploration. The expansion project may compromise old wells that might serve as conduits for water contamination. The NRC needs to analyze the risk that such old drillholes represent.

44-1: Consider that the proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration, that have been improperly abandoned, and therefore could definitely serve as conduits for water contamination between adjacent aquifers. Thankfully the NRC has been requiring Strata to locate and plug these old exploration wells prior to mining the Ross area, but it will be impossible to do this in such a large area of expansion. At the very least, this license condition **MUST** be applied to the expansion project in some effort to contain the contaminated water from the project.

46-1: When reviewing Strata's application to expand their mining operation please consider that the proposed uranium mining and processing area has over 5,000 abandoned drill holes from the early days of uranium exploration. I would suggest that Strata be required to locate and plug these old exploration wells because NRC has identified that water contamination could result from "improperly plugged previous exploration drillholes that have not yet been properly abandoned."

50-2: The proposed uranium mining and processing area has 5,000 abandoned drill holes, which could serve as conduits for water contamination from the Strata project. Please

re-evaluate the risk that these old drill holes, which are inside and immediately adjacent to Strata's project area, would represent to the sacred lands and the water and all living things.

Response: *These comments address the potential for improperly plugged drillholes to provide potential migration pathways for ground water contamination. Kendrick SEIS Chapter 4 will address the potential impacts of improperly abandoned drillholes, including historical wells, on ground water quality.*

2.7 Water Resources

2.7.1 Water Quality—General

Comments:

7-4: CLEAN WATER IS WORTH MORE THAN URANIUM. Radiation, contamination, that will outlive our great grand children.

41-1: Please understand that we must stand up for the Life Force of Mother Earth and ourselves—Please put this finite source of essential Life into the “endangered” column. We usher our children and grandchildren to the edge of oblivion with our refusal to see the danger, the folly of endangering our water.

45-1: I do not think it is safe and also very afraid of what is going to happen to our water. We have limited water here and can not afford to be gambling with it.

51-1: My concern is for the diligent protection of our water. This should be the utmost concern regarding the regulation of any and all uranium mining.

51-4: I am asking the NRC to be very concerned about protecting both the quality and quantity of water in light of the noticeable decrease in available water, and in light of all the present and future needs for life-sustaining uses of our water. I feel a dread and hopelessness about the callous disregard for the preciousness of water that prevails nowadays, and ask you to vigorously exercise your responsibility regarding the enforcement of clean water regulations, and to vigilantly examine all conditions and aspects of present uranium mining and any expansion requests.

Response: *These comments express general concern about ground water quality as a result of uranium mining. Kendrick SEIS Chapter 3 will address the current condition of ground water and surface water at Kendrick. Chapter 4 will address the potential impacts to ground water and surface water from all phases of uranium recovery (construction, operation, restoration, and decommissioning). Chapter 5 will address the cumulative impacts to ground water and surface water from past, present, and reasonably foreseeable future actions.*

2.7.2 Ground Water Quality

Comments:

11-10: First and foremost, the SEIS should be based on a complete and accurate baseline analysis of groundwater in this area, obtained with monitoring wells that use non-oxidizing drilling fluids and gases to ensure that the uranium ore zone remains under reducing conditions. Absent such a baseline, the Commission will have no basis to even predict the extent to which the ISL mining will degrade the aquifer. Indeed, as the Organizations demonstrated in the Ross

Project proceeding, by failing to collect baseline data, SEI undermined the environmental analysis because the baseline data collected much later was inevitably tainted by the drilling that had already occurred.

13-3: Groundwater Resources

Groundwater Resource Characterization

It is important to characterize both the existing and potential groundwater drinking water resources in the proposed project area. We recommend the Draft SEIS include the following information:

- A description of all aquifers in the proposed project area, noting which aquifers are Underground Sources of Drinking Water (USDWs). Federal Safe Drinking Water Act regulations define a USDW as an aquifer or portion thereof: (a)(1) which supplies any public water system; or (2) which contains a sufficient quantity of groundwater to supply a public water system; and (i) currently supplies drinking water for human consumption; or (ii) contains fewer than 10,000 mg/l total dissolved solids; and (b) which is not an exempted aquifer (See 40 CFR Section 144.3);
- Available water quality and water yield information from each aquifer;
- A stratigraphic column of the onsite geology indicating each of the aquifers down to and including the Madison;
- Legible maps depicting the location of sensitive groundwater resources such as municipal watersheds, source water protection zones, and recharge areas;
- Descriptions and locations of groundwater use (e.g., public water supply wells, domestic wells, springs, and agricultural and stock wells and all monitoring wells); and
- A map and discussion of proposed wells, existing wells, and nonproducing wells in the area including their status (e.g., idle, shut-in, plugged, and abandoned), if available.

The maps should be readable in black and white printable formats.

Response: *Kendrick SEIS Chapter 3 will include a discussion of the information requested, including a description of all aquifers in Kendrick, water quality and yield information, a description of the site geology, identification of any sensitive groundwater resources, surface water and ground water uses, and maps depicting current and proposed wells.*

Comments:

8-1: The scoping notice states that there are potential significant impacts to groundwater with this project. The WQD recognizes there are potential significant impacts to groundwater with all ISR operations; however, it is unclear if there are any site specific geologic or other conditions at the Kendrick location that would increase the inherent potential for significant impacts. If so, the WQD would like to participate as a cooperating agency to help develop an alternative which minimizes those risks and the SEIS should clearly describe them.

13-4: Groundwater Impacts, Monitoring and Mitigation

The EPA recommends that the Draft SEIS provide information about the potential impacts from the proposed project expansion to groundwater quality and quantity. Potential impacts include those associated with both operation and restoration (e.g., production and disposal of waste water, consumptive groundwater use, migration of contaminants outside of the production zone/exempted aquifer).

The EPA recommends that the Draft SEIS include discussion of groundwater protection, monitoring and mitigation measures. Specifically:

- Pump tests for each production zone, demonstrating confinement prior to any commencement of production, as required by the underground injection control permitting process;
- A general well schematic for production and injection wells that depicts the following: casing strings; cement outside and between the various casing strings; and the relationship of the well casing design to potentially important hydro-geological features such as confining zones and aquifers or aquifer systems that meet the definition of a USDW. Discuss how the generalized design will achieve effective isolation of USDWs from production activities and prevent migration of fluids of poorer quality into zones with better water quality;
- Abandonment procedures for sealing wells no longer in use in order to reduce the potential for inactive wells to serve as the conduits for fluid movement between production zone(s) and aquifer(s). This is particularly important where existing wells do not have surface casing set into the base of USDWs and lack sufficient production casing cement;
- Plans for action in the event of an excursion; and
- Assurances and measures that will be in place should the project activities temporarily cease due to economic or other reasons.

17-1: I'm dismayed by the prospect of renewed uranium ISL mining in Crook County, WY. I live in the Black Hills of SD, where we have had similar experience with the devastating effects of past mining exploitation, including uranium production. In this quite arid part of the world, the idea of changing the chemical composition of aquifers, with the possibility of cross-contamination of underground water bodies, seems quite foolhardy, particularly in light of questionable social benefit from the uranium which might be harvested. Authoritative sources now make it clear that nuclear power will remain the most expensive and rapidly outmoded means of electricity generation, and that solar+wind+storage has been shown to provide ample peak- and base-load energy for the electrical grid. Thus, to be using precious water resources prospecting for uranium in areas of great natural beauty seems ironic, as well as extremely unwise. I urge you to oppose this project.

52-4: Groundwater Quality

The proposed expansion project would result in additional liquid placed in deepwater injection wells, which could impact groundwater resources of Devils Tower National Monument. Devils Tower recommends that the draft SEIS including specific analysis regarding the proposed

addition of any new injection wells, the amount of liquid to be injected over the proposed lifespan of the mine, and potential impacts to groundwater.

47-1: Deny Stata Energy's application to expand mining in Crook County Wyo!. Every year the aquafer [sic] becomes smaller and smaller. Every year the aquafer receives more pollution from exploration holes and other incursions.

Response: *Kendrick SEIS Chapter 4 will evaluate the impacts of Kendrick on ground water, including the potentially impacted aquifers and their extent, and mitigation measures to reduce impacts. Chapter 4 will also describe plugging and abandonment procedures. The Ross SEIS describes the well design that would also be used at Kendrick; therefore, the Kendrick SEIS will not reanalyze the performance and adequacy of the well design. Instead, it will incorporate by reference pertinent information from the Ross SEIS. Chapter 4 will address the actions to be taken in the event of an excursion, as incorporated by reference from the Ross SEIS. Chapter 4 will also address measures to be taken should operations temporarily cease. Cumulative impacts of Kendrick and other actions on the aquifers will be addressed in Chapter 5. Business-related decisions, such as the cost of nuclear power, are not within the NRC's jurisdiction.*

2.7.3 Aquifer Restoration

Comments:

7-7, 12-4, 15-4, 18-3, 23-3, 24-4, 25-3, 27-2 31-3, 34-3, 43-3, 46-3, 54-4: Consider the track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. There is no indication that Strata's operations will prevent these impacts.

9-4: track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. There is no indication that Strata's operations will prevent these impacts.

10-4: Impacts of previous mines in WY, NE, and Tx have been significant, and to date none of uranium projects have fully restored an acquifer [sic] to pre-mining water quality.

19-4: Consider the track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. Therefore, expansion of the existing project is not in the best interest of adjacent landowners.

28-3: The track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas have been significant with routine spills, leaks, and excursions of chemicals into adjacent aquifers To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. There is no indication that Strata's operations will prevent these impacts.

29-3: NRC should consider the track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. There is no indication that Strata's operations will prevent these impacts.

30-3: The following has been factored into process: The track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. There is no indication that Strata's operations will prevent these impacts.

32-3: Consider the track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. To date, not a single uranium project has fully restored an aquifer to pre-mining water quality. There is no indication that Strata's operations will prevent these impacts.

The pollution of water should concern all people!

33-2: To date no previous uranium project has fully restored an aquifer to pre mining water quality—why has this not been a requirement?

36-2: Compromising our aquifer is a major concern. Water is sacred to us also. We have had a major oil spill due to a leak in a Canadian oil pipeline in Eastern South Dakota which is under scrutiny because of possible contamination of land, the aquifer and the Missouri watersheds. Supposedly the pipeline was being monitored by the Canadian company. We have been told the leak was discovered by the farmer who owned the land.

These are the reasons for our concerns. How are they cleaning up the spill. Who is monitoring the clean up of the spill? How are we to believe they will get it cleaned up safely?

Now you want to let hem digup [sic] more minerals close to watersheds and sacred sites.

44-3: Consider the track record of spills, excursions, pond leaks, and failed aquifer restoration at previous uranium mines in Wyoming, Nebraska, and Texas. Impacts of past uranium projects have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. Increasing the area of mining will only increase the potential for more spills, excursions, pond leaks, and failed aquifer restoration.

49-5: To date, not a single uranium project has fully restored an aquifer to pre-mining water quality

49-6: Have been significant—with routine spills, leaks, and excursions of chemicals into adjacent aquifers. This is why I object to expantion [sic].

50-4: In the past there have been spills, excursions, pond leaks and failed aquifer restoration at previous Uranium mines in Wyoming, Nebraska and Texas and these spills, leaks and excursions of chemicals have negatively impacted the adjacent aquifer. To date not a single uranium project has fully restored an aquifer to premining water quality and there is no indication that Strata's operations will prevent these impacts.

51-3: [Please do a thorough environmental impact review regarding:]—the impact of excursions of contaminated water from old abandoned wells, and from present uranium mining projects, into various adjacent aquifers as well as surface water sources, as already observed at various uranium mining sites in other states.

Response: *Kendrick SEIS Chapter 4 will evaluate the impact on water resources during all phases of the project, including potential impacts from spills, leaks, and excursions. Modeling of the shallow monitoring and ore zone aquifers will be evaluated to determine impacts associated with water quantity, including impacts from drawdown. Chapter 2 will describe the aquifer restoration process and goals. The analysis will take into account the site conditions (i.e., geology, hydrology) and how they may influence the effectiveness of aquifer restoration. The analysis will also take into account any available data and operational experience derived from operations currently ongoing at Ross associated with protecting water resources. The SEIS will describe best management practices that would be carried over from Ross to prevent and mitigate spills and leaks in terms of impact on soil and water resources in Chapter 4. As noted in that chapter, the standard operating procedures and best management practices required under License Condition 10.4 will also apply to Kendrick.*

In Kendrick SEIS Chapter 4, the NRC will consider its historical experience in licensing ISR facilities when evaluating the environmental impacts and mitigation measures. The staff will incorporate into the Kendrick impacts evaluation insights from the agency's prior experience with aquifer restoration at ISR facilities such as Crow Butte, Smith Ranch, Irigaray, and Christensen Ranch.

2.7.4 Consumptive Use of Water

Comments:

7-6, 12-3, 15-3, 18-2, 23-2, 24-3, 25-2, 27-1, 31-2, 32-2, 34-2, 43-2, 54-3: Consider that the proposed mining and processing process has an extremely high consumptive use of water, which has the potential to draw down the aquifers that provide drinking water and water for livestock.

9-3: proposed mining/processing process has an extremely high consumptive use of water and the potential to draw down the aquifers that provide drinking water and water for livestock.

10-2: The proposed mining and processing has an extremely high consumption of water and could potentially draw down the aquifers for human use as well as for wild life and livestock.

19-1: I would like to begin by saying that I know of landowners near the Ross project who have had springs go dry since the start up of Strata's project. Although it would be impossible to prove that this project is already depleting water aquifers in the area, it is highly suspect and probably not a coincidence. This alone should be cause to reconsider allowing a 7,800 acre expansion of this project.

19-3: Consider that the proposed mining and processing process has an extremely high consumptive use of water, which has the potential to draw down the aquifers that provide drinking water and water for livestock, and possibly already has.

28-2: The proposed mining and processing process has an extremely high consumptive use of water, which has the potential to draw down the aquifers that provide drinking water and water for livestock.

29-2: NRC should consider that the proposed mining and processing process has an extremely high consumptive use of water, which has the potential to draw down the aquifers that provide drinking water and water for livestock.

30-2: the proposed mining and processing process has an extremely high consumptive use of water, which has the potential to draw down the aquifers that provide drinking water and water for livestock.

37-2: As well, it needs to consider that the proposed mining and processing process has an extremely high consumptive use of water which might potentially draw down and contaminate the aquifers presently used for human and livestock drinking water, and the track record of so-called “spills.”

44-2: Consider that the proposed mining and processing process has an extremely high consumptive use of water which has the potential to draw down the aquifers that provide drinking water and water for livestock. There have been adjacent landowners who have mentioned that they already have springs that have dried up since the Ross project started, so there is a good possibility that the mining process could have had something to do with this.

46-2: Also, please consider that the proposed mining and processing process has an extremely high consumptive use of water, which has the potential to draw down the aquifers that provide drinking water and water for livestock.

50-3: Further, the proposed mining and processing of uranium would require an extremely high water useage [sic], which would severely [sic] deplete water from the aquifers that provide drinking water for people and livestock.

51-2: [Please do a thorough environmental impact review regarding:]—the impact of excursions of contaminated water from old abandoned wells, and from present uranium mining projects, into various adjacent aquifers as well as surface water sources, as already observed at various uranium mining sites in other states.

Response: *These comments address the potential consumptive use of water for the uranium extraction process. Kendrick SEIS Chapter 4 will address the consumptive use of water from Kendrick activities. Chapter 5 will address the cumulative consumptive use impacts.*

2.7.5 Drinking Water Quality

Comments:

13-6: (4) Public Drinking Water Supply Sources

Public Drinking Water Supply Source Characterization

The EPA recommends that groundwater and surface water sources of public drinking water supplies, and the associated source water assessments and source water protection zones, be identified in the Draft SEIS. This will help ensure that public drinking water supply sources (e.g., surface water sources, including groundwater under the direct influence of surface water (GWUDISW) sources, and groundwater sources) are protected from potential impacts associated with project area activities.

To assist you with this effort, the EPA Region 8 can develop a map showing the generalized areas of the source water assessments and protection zones in/near the project area. Such a map may be used in public documents; therefore, we recommend including it in the Draft SEIS.

Public Drinking Water Supply Source Mitigation

In order to ensure public drinking water supply sources are protected from potential impacts associated with resource extraction; the EPA recommends the following no surface occupancy (NSO) protections for Municipal Supply Watersheds¹—NSO within any of the following areas, as deemed appropriate by the NRC:

- The entire watershed; or
- Local Source Water Protection Planning Areas where delineated in a Source Water Protection Plan; or
- Surface Water Spill Response Region or Groundwater Inventory Region defined by Source Water Assessments that have been delineated or evaluated by the state.

¹ Forest Service Manual (FSM2542) defines Municipal Supply Watersheds to include: “surface supply watersheds, sole source aquifers and the protection zones around wells and springs.”

26-2: Drinking water remains permanently damaged from uranium mining between the Powder River Basin, Black Hills, and Nebraska. For instance, the U.S. Government has determined the water on the Pine Ridge Indian Reservation undrinkable, a result of U-238 contamination from the mines in Crawford. As you know, there remain more than 5,000 unclosed uranium mining holes, which continue to pollute.

Response: *These comments address drinking water specifically. Kendrick SEIS Chapter 3 will address the characterization of drinking water sources (both surface and ground water) within the project boundary and nearby vicinity. Chapter 4 will address the potential impacts to drinking water, as well as the subject of aquifer exemption and mitigation measures, from each phase of the project. Chapter 5 will address the cumulative impacts from past, present, and reasonably foreseeable future actions on drinking water.*

Regarding the offer by EPA Region 8 to develop a map, upon further investigation by the NRC staff, it was determined that such a map would need to be requested from WDEQ. The NRC has done so and will include any such information provided by WDEQ. Kendrick SEIS Chapter 3 will address the identification of water resources where the water quality is impacted or threatened, as defined in Clean Water Act (CWA) Section 303(d), and any surface watersheds that may supply drinking water.

2.7.6 Surface Water Quality

Comment:

13-5: (3) Surface Water Resources

Surface Water Characterization

The EPA recommends the Draft SEIS describe the current water quality conditions for surface water bodies within the project area, including intermittent, perennial, and ephemeral streams,

rivers, lakes, reservoirs, and surface water drinking water resources. We recommend comparing existing conditions to existing water quality standards or other reference conditions and presenting associated water quality status and trends. The EPA also recommends that potential impacts to the surface waters bodies in the project area be analyzed.

The EPA recommends the Draft SEIS include the following information:

- A map of water bodies within and/or downstream of the proposed project area that includes perennial, intermittent and ephemeral water bodies; water body segments classified as water quality impaired or threatened under the Clean Water Act (CWA) Section 303(d); water bodies considered not impaired by, and water bodies that have not yet been assessed for impairment status. We also recommend that a table be provided to identify the designated uses of water bodies and the specific pollutants of concern, where applicable; and
- Maps and descriptions of topography and soils, specifically steep slopes and fragile or erodible soils, especially near surface waters and intermittent/ephemeral channels.

The maps should be readable in black and white printable formats.

Surface Water Impacts

We recommend that the Draft SEIS analyze potential impacts to surface waters related to erosion and sedimentation from land disturbance and stream crossings. We also recommend that the NRC analyze potential impacts to impaired water bodies within and/or downstream of the planning area, including water bodies listed on the most recent EPA-approved CWA § 303(d) list. Additionally, we suggest coordinating with WDEQ if there are identified potential impacts to impaired water bodies in order to avoid causing or contributing to the exceedance of water quality standards).

Surface Water Mitigation

Contaminants from surface events such as spills have the potential to enter and impact surface water resources if these events occur in close proximity to water bodies. If surface activities are set back from the immediate vicinity of surface water, wetlands, and designated source water protection zones, this provides an opportunity for accidental releases to be detected and remediated before impacts reach water resources. If accidental releases are not detected the setback provides a safety factor and some possibility of natural attenuation occurring. Setbacks also help prevent nonpoint source pollutants such as sediments from impacting surface waters. Accordingly, the EPA recommends that the NRC evaluate setback distances for surface water resources, including perennial waters, intermittent and ephemeral streams, and impaired waters within the project area.

Response: *Kendrick SEIS Chapter 3 will address surface water characterization. Chapter 4 will address the potential impacts to surface water quality from Kendrick for each phase of the project. Setbacks are not necessary because Strata commits to sufficient mitigation and placement requirements. License Condition 9.2 of SUA-1601 states that the licensee shall conduct operations in accordance with commitments, representations, and statements within the license application. Therefore, if the NRC approves the license amendment for Kendrick, the licensee must follow the commitments set forth in the application documents. The Kendrick SEIS will analyze impaired waters if any are identified within the project area.*

2.7.7 Water Quality—Permits

Comments:

8-3: There are several WQD permits and other requirements that may apply to the project, depending on the eventual scope of the project.

- Storm Water Associated with Construction Activities. This permit is required any time a project results in clearing, grading, or otherwise disturbing one or more acres. The disturbed area does not need to be contiguous. The permit is required for surface disturbances associated with construction of the project, access roads, construction of wetland mitigation sites, borrow and stockpiling areas, equipment staging and maintenance areas and any other disturbed areas associated with construction. A general permit has been established for this purpose and either the project sponsor or general contractor is responsible for filing a Notice of Intent (NOI) and complying with the provisions of the general permit. The NOI should be filed no later than 30 days prior to the start of construction activity. Please contact Barb Sahl at 307-777-7570, or John Gorman at 777-5622 for additional information.
- Discharge Permit. Any discharges to “waters of the state”, including discharges from cofferdam dewatering, discharges from hydrostatic pipeline testing, or discharge of other waste waters must be permitted under the Wyoming Pollutant Discharge Elimination System (WYPDES) program. This program is part of the federal Clean Water Act, but is administered by the WQD. For clarification, waters of the state include rivers, streams, dry draws, wetlands, lakes, reservoirs and even stock ponds. This permit will require some sampling and will incorporate effluent limits for any constituents of concern. Roland Peterson (307-777-7090) can provide additional information.
- Land Application or Road Application Permit. Water from hydrostatic pipeline testing may be applied to roads or land surfaces if it will not reach a water of the state, meets certain water quality standards and a permit is obtained from the WQD. Please contact Seth Tourney (307-777-7088) for land application information, or Dennis Lamb (307-473-3452) for road application information.
- Temporary Turbidity Variance. Wyoming has turbidity criteria for waters designated as fisheries or drinking water supplies. Any type of construction activity within these streams is likely to result in exceedances of these criteria. However, in accordance with Section 23(c)(2) of the Chapter 1 Surface Water Quality Standards, the administrator of the Water Quality Division may authorize temporary increases in turbidity above the numeric criteria in Section 23 (a) of the Standards in response to an individual application for a specific activity. While it is not required to get this authorization, this project has the potential to exceed the turbidity criteria and a variance is recommended. An application must be submitted and a variance approved by the administrator before any temporary increase in turbidity above the numeric limits takes place. This process generally takes about 45 days. Please contact Cathy Norris at 307-777-6372 for more information
- Spill Reporting. Chapter 4 of the WDEQ Water Quality Rules and Regulations requires that the WQD be notified of spills or releases of chemicals and petroleum products. The SEIS should reiterate this and explain how soils, groundwater and surface will be protected from releases of chemicals, petroleum products and produced water.

- Septic System Permit. This permit is required for installation of a septic tank and leachfield, or for any major repair or replacement of a septic system. Please contact Karen Farley (307-473-3478) for more information regarding septic systems in Crook County.

Permits/Authorizations from other Agencies:

- Water Supply Wells. The Wyoming State Engineer (SEO) has regulations governing the sanitary construction of water supply wells.

8-5: Section 404. While not a state permit, this project may require a section 404 permit from the US Army Corps of Engineers. Any time work occurs within waters of the US a 404 permit may be required. Additionally, a number of activities such as dam construction will require section 401 certification from the state. Please contact the Corps (307-772-2300) for specific information regarding jurisdiction and requirements.

Response: *Kendrick SEIS Chapter 1 will address other necessary permits and approvals from other Federal and State agencies. WYPDES permits will be described in SEIS Chapter 3. The impacts analysis in Chapter 4 also refers to relevant permits, as permit requirements and limits often provide mitigation.*

2.7.8 Wastewater Management

Comment:

13-8: (6) Water and Wastewater Management

Water demand and wastewater production associated with the proposed expansion activities is an important consideration that will benefit from analysis and disclosure. We recommend that the Draft SEIS include a general discussion of the following:

- (1) Potential impacts of the water withdrawals (e.g., drawdown of aquifer water levels, reductions in stream flow, impacts on aquatic life, wetlands, and other aquatic resources);
- (2) Options and potential locations for managing wastewater (i.e., UIC wells, evaporation ponds, and surface discharges);
- (3) Target injection formations, formation characteristics and depth of any UIC wells;
- (4) Potential impacts of wastewater management; and
- (5) Options for water reuse and recycling within the project.

EPA recommends that the Draft SEIS address how water quality monitoring, including private well monitoring, will occur at the project level prior to, during, and after the anticipated expansion development in order to detect any impacts to both surface water and groundwater resources.

Response: *Kendrick SEIS Chapter 3 will address monitoring conducted for the characterization of surface water and ground water. Chapter 4 will address the consumptive use of water. Chapter 4 will also address potential impacts on ecology, though aquatic life is limited within Kendrick. The target injection formation for deep well injection, the Deadwood*

Formation, is identified and potential impacts are discussed in Chapter 4. Chapter 4 will address potential impacts from waste water and liquid waste management from Kendrick. Chapter 6 will address monitoring activities, including those for surface water and ground water.

2.7.9 Wetlands, Riparian Areas, Floodplains

Comment:

13-7: (5) Wetlands, Riparian Areas and Floodplains

We recommend that the Draft SEIS present inventories and maps of existing wetlands and waters of the U.S. within the project area, including waters that are regulated under Section 404 of the CWA and wetlands and waters that are protected under Executive Order 11990—Protection of Wetlands (May 24, 1977). We suggest providing information on acreages and channel lengths, habitat types, values, and functions of these waters.

We suggest that the NRC describe potential direct, indirect, and cumulative impacts to wetlands and riparian areas that could occur at the project level due to impacts on the following:

- Stream structure and channel stability;
- Streambed substrate, including spawning habitats; and
- Stream bank vegetation, riparian habitats, and aquatic biota.

Project activities have the potential to cause changes in hydrology due to surface disturbance, compaction and increased run-off. These changes in hydrology may result in stream structure failure and additional sediment loading of wetlands and riparian areas.

We recommend that the Draft SEIS analyze methods to protect wetlands, riparian area and floodplains, including the following:

- Application of minimum setback requirements such as NSO for wetlands and riparian areas. The EPA recommends NSO within the footprint of wetland and riparian areas, as well as a 500 foot NSO setback from wetland and riparian areas;
- Stipulations to protect floodplains, such as NSO within the 100-year floodplain; and
- Delineation of perennial seeps, springs and wetlands on maps and on the ground prior to project development to ensure identification and protection of these resources.

Response: *Kendrick SEIS Chapter 3 will discuss the identification of aquatic resources, including wetlands, at Kendrick. Chapter 4 will assess the potential for impacts to aquatic resources, including wetlands, riparian areas, and floodplains. Chapter 4 will also discuss potential impacts to streams and channels, and will address potential impacts on ecology, though aquatic life is limited within Kendrick. Chapter 5 will address the cumulative impacts to aquatic resources from past, present, and reasonably foreseeable future actions. As noted above, setbacks are not necessary because Strata commits to sufficient mitigation and placement requirements, and this is in an area with few surface water features. No perennial seeps or springs are known to exist within Kendrick and are not shown on topographic maps. Therefore, an NSO with respect to these features is not applicable.*

2.8 Ecology

Comments:

3-1: In response to your request, the Service is providing recommendations for protective measures for threatened and endangered species in accordance with the ESA. We are also providing recommendations concerning migratory birds in accordance with the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, and the Bald and Golden Eagle Protection Act (Eagle Act), 16 U.S.C. 668. Wetlands are afforded protection under Executive Orders 11990 (wetland protection) and 11988 (floodplain management), as well as section 404 of the Clean Water Act. Other fish and wildlife resources are considered under the Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661 *et seq.*, and the Fish and Wildlife Act of 1956, as amended, 16 U.S.C. 742a-742j.

The Service has transitioned to a new online program to deliver species lists: the Information, Planning, and Conservation (IPaC) system. To obtain a current list of endangered, threatened, proposes, and candidate species and their designated and proposed critical habitat that occur in or may be affected by actions associated with your proposed project, please visit our website at <http://ecos.fws.gov/ipac/>. This website will provide you with an immediate response to your species list request. The response will also include information regarding other Service trust authorities.

In accordance with section 7(c) of the ESA, we have determined that the following species or their designated habitat may be present in the proposed project area. We would appreciate receiving information as to the current status of each of these species within the proposed project area.

Endangered, Threatened, Proposed, and Candidate Species And Their Designated and Proposed Critical Habitat That Occur In or May Be Affected by Actions in the Proposed Project Area

April 2016

<u>Species</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Habitat</u>
Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened	Seasonally moist soils and wet meadows of drainages below 7,000 ft. elevation
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Threatened	Under bark, in cracks, crevices, and cavities of trees in upland forests; also in buildings and under bridges

Ute Ladies'-tresses: Ute ladies'-tresses (*Spiranthes diluvialis*) is a perennial orchid, 8 to 20 inches tall, with white or ivory flowers clustered into a spike arrangement at the top of the stem. Ute ladies'-tresses typically blooms from late July through August. However, it may bloom

in early July or still be in flower as late as early October, depending on location and climatic and perennial streams where it colonizes early successional point bars or sandy edges. The elevation range of known occurrences is 4,200 to 7,000 feet (although no known populations in Wyoming occur above 5,500 feet). Soils where Ute ladies'-tresses have been found typically range from fine silt/sand, to gravels and cobbles, as well as to highly organic and peaty soil types. Ute ladies'-tresses is not found in heavy or tight clay soils or in extremely saline or alkaline soils. Ute ladies'-tresses typically occurs in small, scattered groups found primarily in areas where vegetation is relatively open.

Many orchid species take 5 to 10 years to reach reproductive maturity; this appears to be true for Ute ladies'-tresses (FR 57 2048) [sic]. Furthermore, reproductively mature plants do not flower every year. For these reasons, 2 to 3 years of surveys are necessary to determine presence or absence of Ute ladies'-tresses. Surveys should be conducted by knowledgeable botanists trained in conducting rare plant surveys.

Northern Long-Eared Bat: The northern long-eared bat (*Myotis septentrionalis*) is listed under the ESA as a threatened species (80 FR 17974; April 2, 2015). The listing decision included an interim special rule under section 4(d) of the ESA, which was finalized on January 14, 2016. This 4(d) rule provides flexibility to landowners, land managers, government agencies and others as they conduct activities in areas that could be northern long-eared bat habitat. In areas of the northern long-eared bat's range that have not yet been affected by white-nose syndrome (WNS), defined as outside the WNS zone in the final 4(d) rule, such as in Wyoming, incidental take (unintentional harm to bats incidental to otherwise lawful activities) is not prohibited. Even though the final 4(d) rule exempts incidental take, federal agencies still have an obligation to consult on may affect determinations. This obligation may be covered if the federal agency complies with measures outlined in the framework for the Service's January 5, 2016, programmatic biological opinion on the final 4(d) rule. In addition, purposeful take, other than for human safety or removal of bats from dwellings, is prohibited. Critical habitat is not proposed at this time. More information about the final 4(d) rule, programmatic biological opinion, and a current WNS zone map are available at <http://www.fws.gov/midwest/endangered/mammals/nleb/>.

This bat is a medium-sized bat, distinguished from other *Myotis* species by its characteristically large ears and long, pointed tragus (projection of skin in front of the external ear). Northern long-eared bats are found throughout eastern and central North America and occur in the extreme northeastern portions of Wyoming. Northern long-eared bats emerge at dusk to fly through the understory of forested hillsides and ridges feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch in flight using echolocation, or by gleaning (picking) from vegetation. In the summer, male and reproductive female bats roost singly or in colonies in cracks, crevices, cavities, and under the bark of live and dead trees, while other males and non-reproductive females roost in cooler places like caves and mines. Northern long-eared bats can also be found roosting in buildings and under bridges. Maternity habitat for the northern long-eared bat is summer habitat used by juveniles and reproductive (pregnant, lactating, or post-lactating) females. Breeding occurs in late summer and fall when bats swarm at entrances of hibernacula; however, females delay fertilization until spring when they emerge from hibernation.

The primary threat to the northern long-eared bat is WNS, a disease caused by the cold-loving fungus, *Pseudogymnoascus (Geomyces) destructans*. First observed in New York in 2006, WNS has spread rapidly across the Northeast and into the Midwest and Southeast. Throughout the range of WNS, up to 100 percent of infected bats die from the disease. Although there is

uncertainty about the spread of WNS, expert agree that the fungus will likely spread throughout the United States. The northern long-eared bat is also threatened by the loss and degradation of summer habitat, by collision with or barotrauma (injury to the lungs due to a change in air pressure) caused by wind turbines, and mine closures and vandalism of winter roosts and hibernacula. In areas that may provide potential habitat for the northern long-eared bat, we recommend tree-clearing and controlled burns be avoided during the maternity roosting season (approximately June 1 through July 31) unless an emergence or other survey developed in coordination with the Service determines that no northern long-eared bats are using the area. Actions to benefit the northern long-eared bat include installing bat boxes in a safe, sunny location (<http://www.fws.gov/midwest/endangered/mammals/inba/pdf/BatBoxPlanForIN.pdf>),

MIGRATORY BIRDS

Under the MBTA, the Eagle Act, and Executive Order 13186 (66 FR 3853; January 17, 2001), federal agencies have an obligation to protect all species of migratory birds, including eagles and other raptors, which may occur on lands under their jurisdiction. Of particular focus are the species identified in the Service's Birds of Conservation Concern 2008. In accordance with the Fish and Wildlife Conservation Act (16 USC 2912 (a)(3)), this report identifies "species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing" under the ESA. This report is intended to stimulate coordinated and proactive conservation actions among federal, state, and private partners and is available at <https://www.fws.gov/migratorybirds/pdf/management/BCC2008.pdf>.

The Migratory Bird Treaty Act (MBTA), enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs, except as permitted by regulations, and does not require intent to be proven. Section 703 of the MBTA states, "Unless and except as permitted by regulations...it shall be unlawful at any time, by any means or in any manner, to...take, capture, kill, attempt to take capture, or kill, or possess...any migratory bird, any part, nest, or eggs of any such bird..." The Bald and Golden Eagle Protection Act (Eagle Act) prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, and bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing.

Removal or destruction of such nests, or causing abandonment of a nest, could constitute violation of one or both of the above statutes. Removal of any active migratory bird nest or nest tree is prohibited. For golden eagles, inactive nest permits are limited to activities involving resource extraction or human health and safety. Mitigation, as determined by the local Service field office, may be required for loss of these nests. No permits will be issued for an active nest of any migratory bird species, unless removal of an active nest is necessary for reasons of human health and safety. Therefore, if nesting migratory birds are present on or near the project area, timing is a significant consideration and needs to be addressed in project planning.

Work that could lead to the take of a migratory bird or eagle, their young, eggs, or nests (e.g., if you are going to erect new roads, or power lines in the vicinity of a nest), should be coordinated with our office before any actions are taken. If nest manipulation is proposed for this project, the project proponent should contact the Service's Migratory Bird Office in Denver at 303-236-8171 to see if a permit can be issued for this project. No nest manipulation is allowed without a permit. If a permit cannot be issued, the project may need to be modified to ensure take of a migratory bird or eagle, their young, eggs or nest will not occur.

We appreciate your efforts to ensure the conservation of endangered, threatened, and candidate species and migratory birds. If you have any questions regarding this letter or your

responsibilities under the ESA, the MBTA, and/or other authorities, please contact Kim Dickerson of my office at the letterhead address or phone (307) 772-2374, extension 230.

23-9: I urge you to go above and beyond and do what it takes to preserve our national heritage of special Native American and important ecological sites.

Response: *Kendrick SEIS Chapter 3 will identify the species of flora and fauna that are present or could occur at Kendrick and in its vicinity, including any endangered, threatened, or candidate species. Chapter 4 will address the potential impacts from activities at Kendrick on these species and any mitigating actions to lessen impacts on these species.*

Comment:

8-4: Aquatic Invasive Species (AIS). Preventing the spread of aquatic invasive species (AIS) such as zebra/quagga mussels is a priority for the State of Wyoming; in many cases, the intentional or unintentional spread of organisms from one body of water to another would be considered a violation of State statute and Wyoming Game and Fish Commission Regulation. To prevent the spread of AIS, there are several inspection and transportation requirements for equipment entering the state, operating in the waters of the state and/or used to transport surface water. Further information on AIS regulations and requirements can be found at wgfd.wyo.gov/AIS.

Response: *The Kendrick site has minimal aquatic resources. Thus, the spread of aquatic invasive species would be highly unlikely given the minimal amount of contact that the proposed project would have with actual aquatic features. Therefore, the Kendrick SEIS will not address aquatic invasive species.*

2.9 Soil

Comments:

8-2: ISR methodology significantly reduces the surface disturbance compared with conventional uranium mining. However, surface disturbance, and consequently reclamation costs and potential for erosion and invasive species infestations, can be reduced further by using portable tanks rather than earthen pits to contain drilling fluids. The SEIS should consider an alternative which does not use pits for drilling fluids.

13-10: Data on background radiological conditions for soil should be collected to establish a reliable baseline data set.

Response: *These comments are about surface soil disturbance and background radiation levels in the soils. Kendrick SEIS Chapter 3 will describe the soils at Kendrick. Chapter 4 will address the potential impacts from Kendrick on soils, and Chapter 5 will address the cumulative impacts of past, present, and reasonably foreseeable future actions on soils. Chapter 3 will address the radiological baseline monitoring program, which includes soils. The use of mudpits for liquid waste management and possible alternatives for managing this liquid waste will be addressed in Chapter 4. The management of drilling fluids must meet requirements set forth by the WDEQ Land Quality Division.*

2.10 Radiological Health

Comment:

13-9: (7) Background Radiological Conditions in the Proposed Project Area

Understanding the preoperational radiological conditions in the project expansion area is important in determining impacts that may result from the proposed action. The EPA recommends that both the background radionuclide concentrations, and the development of a data set demonstrating variations in local background over the entire proposed project area be established.

Response: *Kendrick SEIS Chapter 3 will address background radiation characterization and the radiological baseline monitoring program. The background radiological characterization data set provided by the applicant includes data from air, soil, and sediment sampling performed at multiple locations in and around Kendrick.*

2.11 Air Quality

Comment:

13-2: (2) Air Resources

Air Quality

The EPA recommends that the Draft SEIS include an evaluation of the current air quality conditions and trends as well as the direct, indirect, and cumulative impacts from potential activities for:

- Each of the criteria pollutants and their appropriate National Ambient Air Quality Standards (NAAQS), i.e., ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead;
- AQRVs in potentially impacted Class I areas and sensitive Class II areas;
- Prevention of Significant Deterioration increment at potentially impacted Class I and Sensitive Class II areas;
- HAPs and relevant health-based risk thresholds for HAPs including acetaldehyde, benzene, ethyl benzene, formaldehyde, n-hexane, toluene, xylene (mixture), and any other compounds that the NRC identifies as potential hazardous air pollutants resulting from the Kendrick expansion project; and
- Existing sources associated with the Ross ISR project.

We recommend that the EPA be invited early in the process to provide input on the air quality analyses conducted prior to the Draft SEIS being published. The EPA recommends that the NRC identify in the Draft SEIS the mitigation measures it would apply to the project in the event that potential adverse impacts to air quality or AQRVs are predicted. These measures could include equipment type or design requirements, best management practices (BMPs), and dust suppression measures.

40 CFR Part 61, Subpart W

On May 2, 2014, the EPA issued a Notice of Proposed Rulemaking with proposed revisions to Subpart W. The EPA is not evaluating the comments and information received to prepare the Final Rule for the Subpart W standards. Please reference our April 4, 2014, letter on the Ross ISR Final SEIS for more information about the current rule and EPA's role in approval of impoundment construction. We are hoping the revised rule will be finalized this year. Any surface impoundment expansions, modifications or additions under the Kendrick SEIS should consider the applicable rule at the time of the SEIS development.

Response: *Kendrick SEIS Chapter 3 will address the current air quality conditions at Kendrick and in the region and will identify the criteria pollutants and their NAAQS, and nearby Class I and sensitive Class II areas. Chapter 4 will address the potential impacts to air quality from Kendrick and address Class I and Class II areas. Chapter 5 will address the cumulative impacts of past, present (including Ross), and reasonably foreseeable future actions on air quality. Throughout Chapter 4, mitigation measures will be discussed that have the potential to reduce impacts to air quality.*

2.12 Visual Impacts

Comments:

7-10, 9-7, 12-7, 15-7, 18-6, 23-6, 25-6, 27-5, 31-6, 34-4, 43-6, 49-1, 54-7: Minimize light pollution and other industrial impacts to landowners in the Oshoto area and to Devil's Tower National Monument.

29-6: There is a need to minimize light pollution and other industrial impacts to landowners in the Oshoto area and to Devil's Tower National Monument.

30-6: No light pollution and other industrial impacts to landowners in the Oshoto area and to Devil's Tower National Monument are permitted.

38-1: Im [sic] writing to oppose the proposed uranium mining near the Devils tower. Please protect this beautiful place.

50-7: Please re-evaluate this proposed uranium project and consider how to minimize the "light" pollution and other industrial impacts to Devil's Tower National Monument and to the property owners in the Oshoto area; how to minimize impacts to livestock grazing and recreation in the area; and how to minimize impacts from truck traffic, dust and noise.

52-1: Dark Night Skies

Lighting associated with implementation of the proposed expansion has the potential to adversely impact the naturally dark skies of Devils Tower National Monument. Sky glow, also known as artificial sky glow, light domes, or fugitive light, is the brightening of the night sky from human-caused light scattered in the atmosphere. This glow can greatly detract from the overall darkness of the night sky and can inhibit people's ability to view celestial objects in the night sky. This sort of degradation can also impact wildlife habitat, wildlife behavior, scientific discovery, and cultural resources that relate to celestial objects.

The National Park Service (NPS) Night Skies Program collected baseline data at Devils Tower National Monument in 2006. This data showed an anthropogenic light ratio (ALR) of 0.13, which

translates to a night sky that is only 13% brighter than a natural sky (free of artificial light). With a sky this dark, any additional artificial light added to the environment has the potential to adversely affect the cultural and biological resources of the park, as well as the visitor experience. Twenty-six American Indian tribes hold ethnographic affiliation with Devils Tower (Bear Lodge) and consider it to be a landscape level Traditional Cultural Property (TCP). In the American Indian community, sky gods or spirits serve an important role, and many significant oral traditions relate to the night sky at Devils Tower. The protection of dark night skies is integral to the preservation of natural resources and cultural values at Devils Tower National Monument.

The National Park Service therefore recommends the following best management practices (BMPs) to reduce impacts to dark night skies:

- Light only where needed
- Light only when it is needed
- Shield lights and direct them downward
- Select lamps with warmer colors (less blue light)
- Use the minimum amount of light necessary
- Select the most energy efficient lamps and fixtures

To insure that the naturally dark night skies of Devils Tower are protected, we request the proponent conduct or sponsor light pollution and night sky monitoring at Devils Tower National Monument. The applicant or NRC can contact the park to identify optimum monitoring locations and protocols to monitor for potential impacts to the night sky and the visitor experience.

52-3: Viewsheds

Visual impact of the proposed expansion project is also a concern for Devils Tower National Monument. Devils Tower is an 867-foot-high rock monolith, which is sacred to many American Indian tribes, and is climbed by approximately 5,000 rock climbers each year. The view from the summit is expansive, largely undeveloped, and natural. Natural viewsheds are a key component of the visitor experience at Devils Tower; therefore, viewshed impact analysis should be conducted to determine what portions of the proposed expansion area are visible from the summit. Additionally, cumulative viewshed impacts from all development activities surrounding Devils Tower should be analyzed and incorporated into the draft SEIS.

The NPS recommends mitigations to reduce viewshed impacts, including painting infrastructure to match the surrounding environment, using colored building materials (including roofing), planting trees, and using the topography and landscape to create a visual buffer. In addition, nighttime activity and lighting should be reduced to the minimal amount possible during the typical climbing season of May–October.

Fugitive dust during construction is also a concern for both air quality and visual resources. Given dry, windy conditions, windblown fugitive dust could reach a 50-mile radius of the project site, including Devils Tower National Monument. The NPS recommends monitoring and adaptive management of fugitive dust minimization measures to ensure minimal impacts on local and regional air quality and visual resources.

Response: *These comments are about light pollution and impacts to the viewsheds around the Kendrick area, including Devils Tower, and to wildlife. Kendrick SEIS Chapter 3 will address the current status of visual and scenic resources in the Kendrick area. Chapter 4 will address the*

potential impacts on visual resources, including those from fugitive dust, as well as mitigation measures to reduce those impacts. Chapter 5 will address the cumulative impacts to visual and scenic resources from past, present, and reasonably foreseeable future actions. Chapters 3, 4, and 5 will address air quality and fugitive dust. Chapter 4 will address light pollution impacts on wildlife.

2.13 Noise

Comments:

52-2: Natural Sounds

Anthropogenic noise from construction equipment, machinery and traffic can affect human environments, visitor experience and wildlife species. There are ample studies that show increases in noise can negatively affect mating, nesting, predation and other behaviors in a variety of wildlife species. Other studies show noise levels can affect the experience of park visitors and lead to a variety of social, psychological, and physiological changes. The proposed expansion project could create significant noise from construction, mining operations, and traffic. Low frequency sounds (those typical of a trucks, industrial equipment and machinery) travel further from the site of origin than other sounds.

Efforts to reduce noise from operation of the facility and ancillary equipment (e.g. power tools, construction equipment, and other machinery associated with the facility) should be implemented and noise reducing treatments (barriers, curtains, enclosures, silencers, mufflers, etc.) should be used where appropriate. Please refer to the National Park Service Acoustical Toolbox for recommendations for reducing noise impacts during these activities. This document recommends tools and technology for construction, maintenance and operation that reduce noise outputs.

Response: *Kendrick SEIS Chapter 3 will address existing noise levels. Chapter 4 will address impacts from Kendrick related to noise and mitigation measures to reduce those impacts. Chapter 5 will address cumulative noise impacts from past, present, and reasonably foreseeable future actions.*

2.14 Environmental Justice

Comment:

13-12: (9) Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," applies to federal agencies that conduct activities that substantially affect human health or the environment. Consistent with this order, the EPA recommends the NEPA analysis for the Kendrick Expansion Draft SEIS include the following:

- Identification of any minority, low-income and tribal communities within the geographic scope of the impact area, including the sources of data and a description of the methodology and criteria utilized. The EPA recommends comparing census block group percentages (if available, or, at a minimum, census tract data) for below poverty and minority populations with the state average, and conducting the following steps if a block group percentage is greater than the state average. The EPA does not recommend use of higher thresholds.

- A detailed assessment of environmental justice and other socioeconomic concerns for any environmental justice communities, to the extent information is available, including:
 - A discussion of the potential direct, indirect and cumulative environmental impacts of potential NRC-authorized project activities on the health of these communities, including air quality and water quality and quantity impacts
 - An evaluation of the socio-economic impacts to the local communities, including the potential for any additional loading placed on local communities' abilities to provide necessary public services and amenities.
 - A determination of whether there may be disproportionately high and adverse impacts, including cumulative impacts, on the identified communities.
- Mitigation measures to reduce any disproportionate adverse impacts. We recommend involving the affected communities in developing the measures. The EPA recognizes the need for early involvement of the local communities, and supports the meaningful participation of community representatives in the NEPA process.

Response: *Kendrick SEIS Chapter 3 will examine the potential for minority or low-income populations as defined by Executive Order 12898 and NRC guidance within the Kendrick study area.*

2.15 Greenhouse Gas Emissions and Climate Change

Comments:

13-11: (8) Greenhouse Gas Emissions and Climate Change

The EPA recommends that NRC include in the Draft SEIS an estimate of the GHG emissions associated with the project during construction and operation, a qualitative description of relevant climate change impacts, and practicable mitigation measures to reduce project-related GHG emissions. In addition, we recommend that the analysis include GHG emissions from reasonably foreseeable downstream emissions such as coal transportation and electrical power generation. We suggest the following approach:

“Affected Environment” Section

We recommend that the Draft SEIS describe potential changes to the affected environment that may result from climate change. Including future climate scenarios in the Draft SEIS would help decision makers and the public consider whether the environmental impacts of the alternatives would be exacerbated by climate change. If impacts may be exacerbated by climate change, additional mitigation measures may be warranted.

For example, impacts could be exacerbated in a case where a project draws water from or injects wastewater into an area that may support underground sources of drinking water. If future climate scenarios predict declining precipitation to a level at or below aquifer recharge rates, drawdown due to the project could impact important drinking water resources while an increased injection of wastewater may cause unintended impacts to an aquifer with reduced recharge rates. Alternatively, in some scenarios predicted changes in climate could potentially reduce project related impacts. One such example could be a reduction of pollutants and

erosion caused by stormwater runoff volumes in areas where precipitation is expected to decrease.

“Environmental Consequences” Section

The EPA recommends that the Draft SEIS estimate the GHG emissions associated with the proposal and its alternatives. Example tools for estimating and quantifying GHG emissions can be found on CEQ’s website². These emissions levels can serve as a reasonable proxy for climate change impacts when comparing the alternatives and mitigation.

“Cumulative Impacts and Reasonably Foreseeable Actions”

Since this is an expansion of the Ross ISR project the Draft SEIS should discuss the cumulative impacts for these two projects. Additionally, we recommend that this Draft SEIS address the potential cumulative impacts from all reasonable foreseeable actions in the area including oil and gas and other mining projects.

Mitigation

The EPA recommends that the Draft SEIS describe measures to reduce GHG emissions associated with the project, including reasonable alternatives or other practicable mitigation opportunities, and disclose the estimated GHG reductions associated with such measures. The EPA further recommends that the Draft SEIS provides commitment to implementing reasonable mitigation measures that would reduce or eliminate project-related GHG emissions.

Climate Change Adaptation

The EPA recommends that NRC discuss how future climate scenarios addressed in the “Affected Environment” section may impact the proposal. Changing climate conditions can affect a proposed project, as well as the project’s ability to meet the purpose and need presented in the SEIS. In addition to considering the resilience and preparedness of a facility itself, in some cases adaptation measures could avoid potentially significant environmental impacts.

² https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html

54-1: We should all know by now the negative impacts it WILL have on our future climate, not letting the uranium stay in the ground where it belong [sic]. Please, consider the well-being of this planet instead of a temporary economical profit! And ask yourself; is money really worth it in the long run?

Response: *Kendrick SEIS Chapter 5 will address greenhouse gas emissions (including estimated quantities), potential future climate change, and cumulative impacts. The mitigation measures presented in the Ross SEIS to minimize the emissions of GHGs would also be applicable to Kendrick operations; therefore, their analysis will be incorporated by reference in the Kendrick SEIS. The Kendrick SEIS will not address potential climate change impacts associated with changing the availability of drinking water because of the lack of near-surface drinking water sources in and near Kendrick.*

2.16 Historic and Cultural Resources

Comments:

2-1: I understand that there are 24 cultural properties recorded in the study area, and 23 are prehistoric sites and one is a historic homestead site. Experts note that 15 prehistoric sites are eligible for the National Register of Historic Places, because they are likely to yield information about the occupations of the headwaters of the Little Missouri River. In addition, a very large prehistoric camp site is situated on a high terrace from which Mato Tipila is visible to the east.

I urge you to deny this application to keep these important cultural resources undisturbed.

7-1: Concerning Docket ID NRC-2011-0148 Strata Energy Lance/Ross proposed **in situ leach uranium mining** near **Mato Tipila**, Bear Lodge (Devil's Tower) a **sacred site and national park** I write as a concerned citizen and land owner in the region to ask for your common sense and land ethic in NOT approving this mine.

9-1: I am submitting letter of concern regarding the proposed in situ leach uranium mine near Mato Tipila, Bear Lodge, one of my peoples most sacred sites on earth.

12-1: This mining is in direct violation of the 1869 Ft. Laramie Treaty. Matho [sic] Tipila, which was named Devil's Tower is a sacred site of many Tribal Nations in an around the area of this site. Under mandate by the United States Government a complete Tribal consultation is required.

15-1: I am submitting comment on the Devil Tower National Monument. I am a Native American, of the Titunwan band of the Seven Council Fires (composed of Dakota, Lakota, and Nakota bands). We have lived here in the area Mato Tipila (Devil Tower) for time immemorial as we came from the seven stars known as Pleiades which is the head of the white buffalo constellation of which Devils Tower is one of its horns. There have been three worlds before that were destroyed technology by first the black people by fire, then the technology of the yellow people by ice, then the technology of the red people by flood, and now this world is now ruled by the white people and it has now reached that point of technology and mining for fossil fuels, uranium exploration, nuclear waste, this world will surely be destroyed, and the beginning will arrive sooner than it should. Please do not issue any licenses to the powers that control this world.

23-9: I urge you to go above and beyond and do what it takes to preserve our national heritage of special Native American and important ecological sites.

25-9: Furthermore, that entire land area is sacred Lakota territory.

30-9: Indigenous peoples and their respective First Nations' free, prior and informed consent have been met.

- All treaties have been respected in their entirety.
- No desecration of any sacred site will be either directly or indirectly harmed.
- There will be no adverse effects to the cultural integrity of Indigenous peoples traditional lands, treaty lands, and sacred sites.

- All aspects of the United Nations Declaration of Rights of Indigenous Peoples have been factor into this process and every human right accorded to Native Americans has been respected.

32-4: The desecration of a Sacred Site should also concern All people and it is disrespectful to even consider.

36-1: Please consider the impact to our Mother Earth and our sacred sites due to uranium and other mineral mining in and around these areas in and around Devils tower known to us as Mato Tipila and the Bear Lodge Mountains close to Sundance Wyoming.

50-8: P.S. I want to be sure that you understand how significant this land is near Devil's Tower. It is sacred and has been a place or prayer for American Indians for countless generations. Please do not destroy this sacred place or the land and waters nearby. NO MORE DESTRUCTION of the sacred!!!

53-1: I am deeply concerned about the proposed uranium mining so very close to sacred lands in the Lakota Treaty Territories. There is no such thing as a safe dose of radiation and Indigenous Peoples have been targeted far too often with this most poisonous of industries.

Response: *These comments are about historical and cultural resources in general. Kendrick SEIS Chapter 3 will discuss the cultural background of the Kendrick area and the NRC's consultation efforts under Section 106 of the National Historic Preservation Act. Chapter 4 will discuss the potential impacts from Kendrick on historic and cultural resources, including the licensee's plans for avoiding such sites. Chapter 5 will address the cumulative impacts from past, present, and reasonably foreseeable future actions on historical and cultural resources. Chapter 4 will discuss the potential impacts from radiation to the public and occupational workers from Kendrick activities.*

2.17 Waste Management

Comment:

26-4: Then there is the concern about containment, and what is the NRC's contingency plan for the nuclear waste a Strata mining expansion will produce? Your efforts to use concrete for containment have failed miserably and forever polluted deep aquifers, as you continue moving the waste around. To curb this problem, do you plan on forcing Natives to give up their mineral rights to xylite, since non-Native communities are now being affected by uranium mining pollution? No amount of "containment" can stop the damage already done, yet the NRC continues to accept more proposals, when there is neither the capacity or technology to clean up what has already been disturbed.

Response: *Kendrick SEIS Chapter 3 will address Strata's solid and liquid waste management plans, facilities, and operations. Chapter 4 will address potential impacts from waste management activities associated with Kendrick. There are no plans to remove mineral rights from Tribes, nor does the NRC have this authority to do so. Chapter 5 will address cumulative impacts to waste management from past, present, and reasonably foreseeable future actions.*

2.18 Cumulative Impacts

Comments:

7-8, 12-5, 15-5, 18-4, 19-5, 23-4, 24-5, 25-4, 27-3, 28-4, 30-4, 31-4, 34-7, 43-4, 46-4, 54-5: Consider the cumulative impacts to water quality and quantity from the full scope of Strata's whole project, which includes this first permitted site of the Ross Project with an anticipated four additional projects in the approximately twenty mile area of the "Lance District" in Crook County.

9-5: the cumulative impacts to water quality and quantity from the full scope of Strata's whole project, which includes this first permitted site of the Ross Project with an anticipated four additional projects in the approximately twenty mile area of the "Lance District" in Crook County.

29-4: NRC should consider the cumulative impacts to water quality and quantity from the full scope of Strata's whole project, which includes this first permitted site of the Ross Project with an anticipated four additional projects in the approximately twenty mile area of the "Lance District" in Crook County.

44-4: Consider the cumulative impacts to water quality and quantity from the full scope of Strata's whole project.

50-5: The overall water quality and quantity from the Strata project, (which includes the Ross project and four additional projects in a 20 mile area of the "Lance District" in Crook County. [sic])

Response: *These comments state that the NRC should consider the cumulative impacts to water quality and quantity from all of Strata's projects, not just Kendrick. Kendrick SEIS Chapter 5 will address the cumulative impacts of all of Strata's projects, as well as other past, present, and reasonably foreseeable actions on the quality and quantity of surface and ground waters.*

Comments:

11-1: As we have argued in the pending Ross proceeding, the Commission has unlawfully segmented the environmental analysis for the various components of the Ross Project by separately considering the environmental impacts of the initial Ross Project, the Kendrick Expansion, and the additional planned expansions of the project in the Lance District, all of which should have been disclosed and analyzed *before* the Ross Project was approved. That defect cannot be remedied here by undertaking a *post-hoc* analysis of impacts at this late stage.

11-6: I. The Scope Of The SEIS Must Include The Entire Ross Project, Which Includes Not Only The Ross Project And Kendrick Expansion, But Also The Further Expansions That Will Inevitably Occur In The Lance District.

As the Organizations explained in challenging the segmented scope of the Ross Project SEIS, the Commission was required by NEPA and implementing regulations to prepare a single, comprehensive EIS that considers the environmental impacts of SEI's plans for ISL mining throughout the Lance District, including not only the initial Ross Project and the Kendrick Expansion, but also Richards and Barber areas. Indeed, it has long been evident from Peninsula Energy public documents and statements that SEI will inevitably be developing *all* of these areas. See, e.g. Figure 1 below.

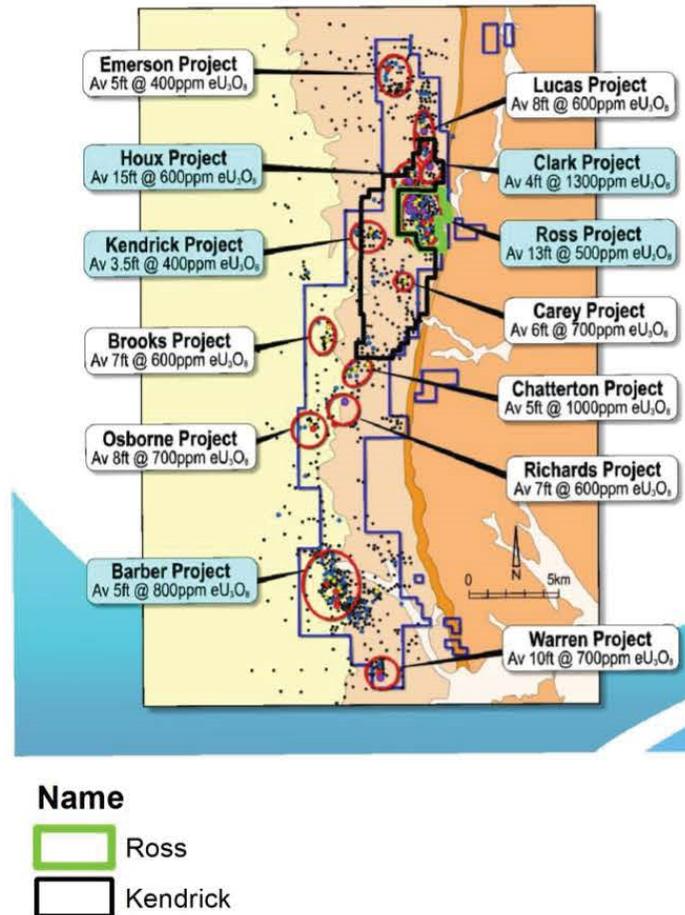


Figure 1: SEI Proposed future Lance District expansion locations (Blue Line), proposed Kendrick boundary (Black Line), and the Ross ISL permit boundary (Green Line). Future Lance District boundary figure was modified according to information presented by a Peninsula Energy presentation at BMO Capital Markets 2016 Global Metals and Mining Conference in Miami, Florida, USA (<http://www.pel.net.au/images/peninsul---bahziixaeef.pdf>; page 15).

All of the projects depicted in Figure 1 are reasonably foreseeable and have been proposed by SEI as expansions of its original Ross Project. They are adjacent to each other in geography and connected via a central processing facility. They are also connected via watersheds, aquifer systems, mineral-bearing formations, ingress and egress roads, and any number of areas whose connection directly bears on the full scope of the impacts.

NEPA requires a *single* environmental review document for “connected actions,” “cumulative actions,” and “similar actions.” 10 C.F.R. § 2.309(f). Otherwise, an agency may ignore the full adverse impacts of a project by segmenting it into smaller pieces. Segmentation also violates NEPA’s twin purpose of informing the public about the scope of environmental impacts of a project.

This is precisely what the Commission is permitting here, where it prepared one SEIS for the Ross Project, is preparing a *separate*, second EIS for the Kendrick Expansion, and no doubt will prepare further, separate environmental review documents for the inevitable further expansions

of the ISL mining conducted in the Lance District. As a result, the Commission will allow the slow and steady degradation of groundwater and other resources in this area without ever comprehensively considering—and *disclosing to the public*—the full extent to which SEI is engaging in this degradation. NEPA exists precisely to prevent such an outcome.

Moreover, given that the ASLB *refused* to consider the environmental impacts associated with the Kendrick and other expansions of the Ross Project within the scope of the earlier SEIS on the grounds that the projects lacked sufficient similarity, the agency should require SEI to obtain an entirely *new* license for the Kendrick Expansion rather than allowing the company to simply *amend* its existing license. The Commission's 2009 Guidance on its licensing approach for ISL mining facilities provides that the agency will only permit a license amendment where there is a close connection between the two sites, either due to their hydrological connection or the fact that one site is not viable without the other. See NRC RIS 2009-14 at 2 (discussing whether one site can be "functional" without the other).

Here, in the Ross Project proceeding, the Atomic Safety & Licensing Board took the position that the Kendrick Expansion need not be considered because the sites are independent and unconnected, and that it was therefore appropriate to limit the analysis to the Ross Project alone. Accordingly, in accordance with the 2009 Guidance, the Commission must require SEI to either obtain a *new* license for the purportedly independent Kendrick Expansion, rather than allowing a simply license Amendment, or send the entire process back to do the full EIS the Organizations argued for in the first instance—an EIS that includes all of the proposed projects within its scope.

Response: *As the commenter recognized, in LBP-13-10 and a subsequent unpublished order, ASLB declined to admit a contention asserting that the staff's NEPA analysis for Ross should consider the development of the entire Lance District as the Federal action. In CLI-16-13, the Commission declined to grant a review of ASLB's decisions. In its decision, the Commission took notice of the commenter's scoping comments for the Kendrick SEIS that the entire Lance District should be considered in a single EIS. The Commission stated that the staff's SEIS for Ross considered the cumulative impacts of the construction of possible satellite facilities such as Kendrick, including impacts to geology and soils, and surface and ground water impacts. Kendrick SEIS Chapter 5 will address the cumulative impacts of all past, present, and reasonably foreseeable future actions, including Strata's current and future activities within the Lance District.*

The NRC's regulations (10 CFR Part 40, "Domestic Licensing of Source Material") allow a licensee to amend its source material operating license for uranium recovery activities to include an expansion area. Accordingly, Strata is not required to obtain a new license for the Kendrick expansion area.

2.19 Reclamation

Comment:

33-3: Wyoming has been host to many energy projects, and while there is great effort with little expense spared at the start of these projects, the developers all seem to be out of money for reclamation when they leave, sticking the citizens with the cost of cleanup and an environmental hazard. Please insure that this does not happen again this time.

Response: *Kendrick SEIS Chapter 2 will address the issue of financial surety and the requirement for Strata to provide assurance that sufficient funds would be available to cover decontamination, dismantling, and decommissioning at Kendrick.*

2.20 Comments Outside the Scope of the NRC's Review

2.20.1 General Opposition to Uranium Recovery

Comments:

1-1: I found the proposal to expand a uranium mine over archeological sites, especially near water sources to be too ridiculous and dangerous to even consider!! What is wrong with government officials who have no common sense as to the health of the people, environment not to mention historical places of great value that will be ultimately destroyed forever. This proposal must not be approved!! Have we all not seen enough permanent damage done by these mines near our native reservations ? Destruction of drinking water, air pollution, soil contaminants [sic] and incurable diseases to those who live in the area? I have!?

7-2: PROTECT LAND AND PEOPLE *NOT* private interests and corporate greed.

4-1: I cannot believe the ongoing damaging affects [sic] that these companies want to do, with no care of humans, land and water. No, to the license they want to apply for.

5-1: Strata Energy has submitted a license application asking the NRC to let the company expand their uranium mining and processing site in Crook County near Devil's Tower and Oshoto Reservoir.

I was born and raised in Wyoming. Uranium mining in Wyoming has the potential to destroy a good portion of the Western watershed. The effects of the uranium industry are too great to our beloved state. There's already been massive damage from the mining industry in Wyoming to the ecology on many levels and to human communities on others. We have to move away from extraction industries in our state. It's being destroyed by extraction.

Please do not help these companies destroy our most precious ecology.

6-1: Please do not allow this mining. I live just down wind of that area, and share water resources. This would endanger my family and our ability to have reasonably livelihood at our home in Spearfish, SD.

Please do not allow uranium mining in our area..there [sic] is much damage to be repaired already, and we've seen time and again radioactive and other harmful materials making excursions from the point source of mining.

7-3: Please. We have seen enough of this kind of reckless mining/oil drilling/fracking = severe pollution already.

12-10: I write today to ask that you reject the Strata Energy license application on this expansion the uranium mining and processing site in Crook Count near Devil's Tower and Oshoto Reservoir.

20-1: The NRC, owes it to all Americans, to discontinue uranium mining' s toxic legacy by opposing any new mining and cleaning up the decades of radioactive damage in all states that have suffered this!

I know, because I live in one of these states, New Mexico! My state is a nuclear wasteland, just ask the Navajo and acknowledge the suffering of generations of them, the damage to their environment, including, their water sources!!!

The Animas river spill, is only one of countless spills, that, [sic] add to the deadly legacies of [sic] past uranium mining!

The companies who mine uranium, are to this very day, untrustworthy! Just look at all of the abandoned uranium mines, not just here in New Mexico, but in South Dakota, Wyoming, etc.! The people who live anywhere near these abandoned mines experience much greater rates of cancers and other major diseases due to elevated radiation!

What is wrong with you, in government positions, that you could allow this to go on?

Please oppose further uranium mining, even your lives depend on doing so!

Please allow your humanity to shine in this opposition, otherwise, you are sentencing us all, to an even worse fate, now and into the future!!!

21-1: Please understand that this place has been sacred to our people for as long as anyone knows and indeed all of this earth is a living thing. Let us not destroy everything in our own generation.

Even if it is not special to you- what if your descendants want these resources and they are gone because you took them.

The word is SUSTAINABILITY.

24-1: I think by now most of us know that it is best to leave the uranium in the ground. Please think further than of gaining money and creating jobs here and now: remember that there are generations to follow in our footsteps; we should leave them an earth as clean and beautiful as possible.

25-10: Thank you for making the right decision and banning any further expansion.

26-1: Do not expand uranium mining for the Strata corporation. There is no way to perform uranium extraction safely.

32-5: Putting corporation monetary gain before clean water and good health for people, should NEVER be an option to consider either! It is time for people to look towards cleaner ways to live.

35-1: I was alarmed to learn that Strata energy has submitted a license application to expand their uranium mining and processing near Devil's Tower and Oshoto Reservoir.

I oppose this proposed project because of the adverse impact it will have on the water supply, the long legacy of spills and leaks caused by uranium extraction and processing, the negative effect it will have on animals, people and the environment in general.

36-3: Please say no to any more mining.

39-1: I am appalled at the proposal to expand uranium mining and processing near Devil's Tower. Please deny this application. Keep uranium in the ground. Protect ground water.

40-1: Please no Uranium Mines near Devils Tower. Especially near Sacred sites! Cleaning up these toxins is so difficult!

44-8: I do not feel that this expansion is in the best interest of our county. The negative impacts cannot be overlooked in making this decision.

45-2: I would not like to see any mining take place.

48-1: I am appalled by the continuing efforts by Uranium mining outfits to risk contamination of land and air and especially water sources. Nuclear power is on the wane, existing supplies are ample of [sic] decades, there still is no safe storage of spent rods, water sources near existing uranium mines remain contaminated and available bonds for remediation are too inanequate [sic] to be takes [sic] seriously.

There are many strikes against this kind of mining. Please take these detrimental aspects of uranium mining to heart when making your decision.

50-1: In reference to Docket ID NRC-2011-0148, please do not let any more destruction happen near Devil's Tower in Wyoming.

Response: *Issues raised with uranium recovery include potential damage to the environment and public health, as well as the overall safety of uranium recovery operations. These comments are general in nature and are outside the scope of this review; therefore, they will not be addressed further in the development of the Kendrick SEIS.*

Comments:

16-1: I have lived in Northern Colorado for many years and recreate in the Black Hills. I have a degree in hydrology and plan to start law school this fall. Strata Energy's proposal does not hold water in regard to protecting the land for the enjoyment of future generations. The uranium isn't going anywhere, just like the hundreds of open shafts I have explored in Colorado and Utah still remain littered among public lands. I am involved with utilities-scale solar projects in the Front Range and can say with certainty that nuclear is a bridge fuel just like natural gas is clean. The monied [sic] interests can only promulgate their development if our NRC disregards the citizen's voice. I will say loud and clear: This proposal is an insult to me, to the First Nations, and to countless unborn potential humans.

26-5: Your organization has completely and utterly failed the American people, instead serving corporate interests that prioritize profits over people.

47-2: Deny all such applications, and support legislation for renewable sources of energy. Uranium is used for nuclear bombs and nuclear electricity production. All efforts to dispose of nuclear waste have failed. Previous efforts to dispose of waste in Nevada produced pollution of drinking sources. Stop now!

53-2: We do not need more weapons of war, and the nuclear power industry cannot compete economically with renewable energy technologies. Do not permit this atrocity, to do so would be one more step on the genocidal nuclear chain.

Response: *These comments deal with nuclear energy and the NRC generally, but they provide no substantive information relevant to the Kendrick environmental review. Therefore, these comments are outside the scope of the review and will not be addressed further in the development of the Kendrick SEIS.*

2.20.2 Licensing

Comments:

7-9, 9-6, 12-6, 15-6, 18-5, 23-5, 24-6, 25-5, 27-4, 28-5, 29-5, 30-5, 31-5, 34-8, 43-5, 46-5, 50-6, 54-6: Strata should not be allowed to expand until Powder River Basin Resource Council's appeal for the Ross Project is settled.

11-5: As noted, the Organizations are parties to the proceeding that led to the initial license for the Ross Project. In that proceeding, the Organizations presented a contention concerning the fact that the Ross SEIS only addressed the Ross Project itself, even though it was evident that it was only a small part of a much larger area in which SEI intends to conduct ISL mining—including the area now covered by the proposed Kendrick Expansion. The contention raised a genuine issue of material fact, per 10 C.F.R. § 2.309(f), whether SEI's plans to conduct mining in the Kendrick, Richards, and Barber "Satellite" Areas were sufficiently similar and connected to the Ross Project that the entire project should be considered in a single EIS. See *also* 40 C.F.R. § 1505.25(a)(2) (requiring single impact statement for "connected actions," "cumulative actions," and "similar actions"). The Organizations' declarant provided detailed evidence showing that, contrary to the "proposed action," SEI had *concrete plans* to mine these additional areas. Declaration of Christopher Paine, ¶¶ 23-56, attached.

The Atomic Safety Licensing Board (Board) acknowledged the "strong likelihood that [SEI] intend[s] that eventually all the Lance District ISR sites will be licensed and operating," LBP-13-10 at 29, and that the mere fact that SEI had only applied for an initial license for the limited Ross Project was "hardly definitive" of whether plans for the entire Lance District should be considered in a single EIS. LBP-13-10 at 26. However, the Board refused to permit the contention on the ground that the Organizations had failed to establish—at the contention admissibility stage—"that the Ross facility lacks any independent utility in the absence of the completion of the other Lance District ISR sites." *Id.* at 29-30; May 23, 2014 Order 14-16 (FSEIS Order).

The Board did permit three contentions to proceed to an evidentiary hearing: (1) the failure to collect and disclose adequate baseline water quality data; (2) the failure to evaluate and disclose the degradation of water quality likely to remain at the conclusion of the project; and (3) the failure to consider and disclose the likelihood that groundwater contamination will move beyond project boundaries. As to baseline water quality, while the Board purported to recognize SEI must "establish a *pre-licensing* monitoring program that is used to provide 'complete baseline data' on the ISR site and its environs," LBP-15-13 [sic] (Jan. 23, 2015) ¶ 4.16 (citing Criterion 7), the Board concluded "NEPA does not require the adoption of best practices," and found the data used for the FSEIS was not "so facially deficient" that more data collection is necessary, because the license requires the collection of *adequate* data to establish a post-license" (*i.e.*, post-NEPA) baseline. *Id.* ¶ 4.22. As to water quality degradation, while the Board agreed that, "based on the historical record," it was likely that Strata would seek an Alternative Concentration Limit (ACL), *id.* ¶ 4.81, and that the SEIS failed to include information necessary to evaluate those impacts, the Board "supplemented" the SEIS with data included in Staff's prefiled testimony, *id.* ¶¶ 4.89-4.96, and deemed the SEIS's "one-page discussion" of results at other ISL sites to be all that NEPA requires. *Id.* ¶ 4.72. Finally, as to fluid excursions

beyond project boundaries—of particular concern given the many pre-existing boreholes in and near the project site—the Board rejected the argument that the monitoring well system fully addressed the concern, and recognized that filling the boreholes “presents a daunting challenge,” *id.* ¶ 4.127, but concluded that SEI has sufficient “incentive” to insure these holes are filled.

Nonetheless, recognizing the importance of filling boreholes, in its decision the Board strengthened one of the licensing conditions (License Condition 10.12), requiring SEI to endeavor to locate and fill additional boreholes located downgradient of each wellfield and between the perimeter well ring and the aquifer exemption boundary.

The Organizations have appealed the Board’s ruling to the Commission, which remains pending.²

² In December 2015, SEI sought to water down this amended License Condition, even though it is relying on that same condition to defend the Board’s ruling before the Commission. Intervenors have formally objected to this proposal. See Int. Letter of Feb. 17, 2016.

19-6: Consider that there is an appeal in place against the Ross Project by PRBRC and NRDC which has not been settled as of this date. Strata should not be allowed to expand until this appeal against the Ross Project is settled.

44-5: Consider that Strata should not be allowed to expand until Powder River Basin Resource Council’s appeal for the Ross Project is settled.

49-4: Should not be allowed to expand until Powder River Basin Resource Council’s appeal for the Ross Project is settled.

Response: *The NRC Commission issued Memorandum and Order CLI-16-13 on June 29, 2016, denying the petition for review.*

Comment:

11-2: To the contrary, the Commission must require an entirely *new* license for this project.

Response: *The NRC’s regulations in 10 CFR Part 40 allow a licensee to amend its source material operating license for uranium recovery activities to include an expansion area. Accordingly, Strata is not required to obtain a new license for the Kendrick expansion area.*

3 REFERENCES

- 10 CFR Part 2 *U.S. Code of Federal Regulations*, “Agency Rules of Practice and Procedure,” Part 2, U.S. Nuclear Regulatory Commission, Title 10, “Energy.”
<http://www.nrc.gov/reading-rm/doc-collections/cfr/part002/>
- 10 CFR Part 40 *U.S. Code of Federal Regulations*, “Domestic Licensing of Source Material,” Part 40, U.S. Nuclear Regulatory Commission, Title 10, “Energy.”
<http://www.nrc.gov/reading-rm/doc-collections/cfr/part040/>
- 10 CFR Part 51 *U.S. Code of Federal Regulations*, “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” Part 51, Chapter I, U.S. Nuclear Regulatory Commission, Title 10, “Energy.” <http://www.nrc.gov/reading-rm/doc-collections/cfr/part051/>
- 40 CFR Part 144 *U.S. Code of Federal Regulations*, “Underground Injection Control Program,” Part 144, Chapter I, Environmental Protection Agency, Title 40, “Protection of Environment.” http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr144_main_02.tpl
- 40 CFR Part 192 *U.S. Code of Federal Regulations*, “Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings,” Part 192, Chapter I, Environmental Protection Agency, Title 40, “Protection of Environment.” <http://www.ecfr.gov/cgi-bin/text-idx?SID=51507713391110464a178d6053702edb&mc=true&node=pt40.27.192&rgn=div5>
- 40 CFR Part 1500 *U.S. Code of Federal Regulations*, “Purpose, Policy, and Mandate,” Part 1500, Chapter V, Council on Environmental Quality, Title 40, “Protection of Environment.”
<http://www.ecfr.gov/cgi-bin/text-idx?SID=51507713391110464a178d6053702edb&mc=true&node=pt40.37.1500&rgn=div5>
- 40 CFR Part 1502 *U.S. Code of Federal Regulations*, Part 1502, “Environmental Impact Statement,” Chapter V, Council on Environmental Quality, Title 40, “Protection of Environment.”
http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr1502_main_02.tpl
- 40 CFR Part 1508 *U.S. Code of Federal Regulations*, Part 1508, “Terminology and Index,” Chapter V, Council on Environmental Quality, Title 40, “Protection of Environment.”
http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr1508_main_02.tpl
- Atomic Energy Act of 1954, as amended, Public Law 83-703, 42 USC § 2011.
<http://pbadupws.nrc.gov/docs/ML1327/ML13274A489.pdf#page=23>
- Bald and Golden Eagle Protection Act, as amended, Public Law 86-70, 16 U.S.C. § 668 et seq.
<https://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/pdf/USCODE-2010-title16-chap5A-subchapII-sec668.pdf>.
- Endangered Species Act of 1973, as amended, Public Law 93-205, 16 U.S.C. § 1531 et seq.
<https://www.fws.gov/endangered/esa-library/pdf/ESAall.pdf>
- Executive Order 11988, Floodplain Management,” May 24, 1977, Executive Office of the President, *Federal Register*, Volume 42, page 26951.

Executive Order 11990, "Protection of Wetlands," May 24, 1977, Executive Office of the President, *Federal Register*, Volume 42, page 26961.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations," February 11, 1994, Executive Office of the President, *Federal Register*, Volume 59, page 7629, February 16, 1994. ADAMS Accession No. ML13023A255.

Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," January 10, 2001, Executive Office of the President, *Federal Register*, Volume 66, page 3853, January 17, 2001. <https://www.gpo.gov/fdsys/pkg/FR-2001-01-17/pdf/01-1387.pdf>

Federal Water Pollution Control Act (Clean Water Act), as amended through Public Law 107-303, November 27, 2002, 33 U.S.C. 1251 et seq. <http://www.epw.senate.gov/water.pdf>

Fish and Wildlife Act of 1956, as amended, 16 U.S.C. 742a–742j. <https://www.fws.gov/laws/lawsdigest/fwact.html>

Fish and Wildlife Conservation Act, as amended, Public Law 96-366, 16 U.S.C. 2901–2911. <https://www.fws.gov/laws/lawsdigest/fwcon.html>

Fish and Wildlife Coordination Act, as amended, Public Law 85-624, 16 U.S.C. 661 et seq. <https://www.usbr.gov/power/legislation/fwca.pdf>

Meyer Glitzenstein & Eubanks LLP, "Strata Energy's December 23, 2105 [sic] Request To Amend Source Materials License SUA-1601," February 17, 2016. ADAMS Accession No. ML16048A348.

Migratory Bird Treaty Act of 1918, as amended, 16 U.S.C. § 703 et seq. <http://law2.house.gov/view.xhtml?req=granuleid%3AU5C-prelim-title16-chapter7-subchapter2&saved=|MTYqdXNj|dHJIZXNvcnQ=|dHJ1ZQ==|5302|true|prelim&edition=prelim>

National Environmental Policy Act of 1969, as amended, Public Law 91-190, 42 USC § 4321. <https://www.gpo.gov/fdsys/granule/CRI-2002/CRI-2002-NATIONAL-ENVIRONMENTAL-POLICY-ACT/content-detail.html>

Peninsula Energy Limited, presentation for the BMO Capital Markets 2016 Global Metals & Mining Conference, Miami, Florida, February 29, 2016. <http://www.pel.net.au/images/peninsul--bahziixae.pdf>

Robertson v. Methow Valley Citizens Council, No. 87-1703, 490 U.S. 332, 349 (1989). <http://caselaw.findlaw.com/us-supreme-court/490/332.html>

Strata Energy Inc., "Application for Amendment of USNRC Source Materials License SUA-1601, Ross ISR Project, Kendrick Expansion Area, Crook County, Wyoming, Docket No. 40-9091, Environmental Report," March 2015. ADAMS Accession Nos. ML15096A181, ML15096A174, ML15096A177, ML15096A178, ML15096A179, and ML15096A180.

Strata Energy Inc., "Application for Amendment of USNRC Source Materials License SUA-1601, Ross ISR Project, Kendrick Expansion Area, Crook County, Wyoming, Docket No. 40-9091, Technical Report," March 2015. ADAMS Accession Nos. ML15096A142, ML15096A157, ML15096A158, ML15096A159, ML15096A161, and ML15096A162.

Strata Energy, Inc., “Kendrick Expansion Area—Supplemental Information to Expansion Application” (package), April 24, 2015. ADAMS Accession No. ML15152A154; includes ML15138A247, ML15138A249, ML15138A250, and ML15138A254.

United Nations Declaration on the Rights of Indigenous Peoples, September 13, 2007. http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

U.S. Environmental Protection Agency, “Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings,” Notice of Proposed Rulemaking, *Federal Register*, Volume 79, page 25388, May 2, 2014. <https://www.gpo.gov/fdsys/pkg/FR-2014-05-02/pdf/2014-09728.pdf>

U.S. Environmental Protection Agency, Region 8, “EPA Scoping Comments for Proposed Ross Uranium In-Situ Recovery Project, Crook County, WY,” December 29, 2011. ADAMS Accession No. ML12018A377.

U.S. Environmental Protection Agency, Region 8, “Ross In-Situ Leach Recovery (ISR) Project Final Supplemental Environmental Impact Statement (Final SEIS), CEQ #20140059, April 4, 2014. ADAMS Accession No. ML14099A037.

U.S. Fish and Wildlife Service, “Birds of Conservation Concern 2008,” Division of Migratory Bird Management, December 2008. <https://www.fws.gov/migratorybirds/pdf/grants/BirdsofConservationConcern2008.pdf>

U.S. Fish and Wildlife Service, “Endangered and Threatened Wildlife and Plants; 4(d) Rule for the Northern Long-Eared Bat,” *Federal Register*, Volume 81, page 1900, January 14, 2016. <https://www.fws.gov/Midwest/endangered/mammals/nleb/pdf/FRnlebFinal4dRule14Jan2016.pdf>

U.S. Fish and Wildlife Service, “Endangered and Threatened Wildlife and Plants; Final Rule To List the Plant *Spiranthes Diluvialis* (Ute Ladies’-Tresses) as a Threatened Species,” *Federal Register*, Volume 57, page 2048, January 17, 1992. http://ecos.fws.gov/docs/federal_register/fr2009.pdf

U.S. Fish and Wildlife Service, “Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Northern Long-Eared Bat with 4(d) Rule; Final Rule and Interim Rule,” *Federal Register*, Volume 80, page 17974, April 2, 2015. <https://www.gpo.gov/fdsys/pkg/FR-2015-04-02/html/2015-07069.htm>

U.S. Fish and Wildlife Service, Regions 2, 3, 4, 5, and 6, “Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions,” January 5, 2016. https://www.fws.gov/midwest/endangered/mammals/nleb/bos/16_NLEBRange_Final4d01052016.pdf

U.S. Nuclear Regulatory Commission, NUREG-1748, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs,” August 2003. <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1748/>

U.S. Nuclear Regulatory Commission, NUREG-1910, “Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities,” May 2009. <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1910/v1/>

U.S. Nuclear Regulatory Commission, Regulatory Issue Summary 2009-14, "Licensing Approach for Uranium In Situ Recovery Facility Applications," November 5, 2009. ADAMS Accession No. ML090290197.

U.S. Nuclear Regulatory Commission, Atomic Safety and Licensing Board Panel, "LBP-13-10: Memorandum and Order (Ruling on Motion to Resubmit Contentions and to Admit a New Contention)," in the matter of Strata Energy, Inc. (Ross In Situ Recovery Uranium Project), Docket No. 40-9091-MLA, July 26, 2013. ADAMS Accession No. ML13207A237.

U.S. Nuclear Regulatory Commission, NUREG-1910, Supplement 5, "Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming, Supplement to the Generic Impact Statement for *In-Situ* Leach Uranium Milling Facilities, Final Report," issued February 2014 with errata from April 23, 2014. ADAMS Accession No. ML14056A096.

U.S. Nuclear Regulatory Commission, Atomic Safety and Licensing Board Panel, "LBP-15-3: Initial Decision (Ruling on Joint Intervenors' Environmental Contentions 1-3)," in the matter of Strata Energy, Inc. (Ross In Situ Recovery Uranium Project), Docket No. 40-9091-MLA, January 23, 2015. ADAMS Accession No. ML15023A566.

U.S. Nuclear Regulatory Commission, NRC Source and Byproduct Materials License SUA-1601, issued to Strata Energy, Inc., for the Ross Project in Crook County, Wyoming, April 24, 2014, latest amended October 19, 2015. ADAMS Accession No. ML15202A175.

U.S. Nuclear Regulatory Commission, "Strata Energy, Inc., Kendrick Expansion Area In Situ Uranium Recovery Project," *Federal Register*, Volume 81, pages 12143–12146, March 8, 2016.

U.S. Nuclear Regulatory Commission, "CLI-16-13: Memorandum and Order," in the matter of Strata Energy, Inc. (Ross In Situ Uranium Recovery Project), Docket No. 40-9091, June 29, 2016. ADAMS Accession No. ML16181A107.

Wyoming Department of Environmental Quality, Water Quality Division, Rules and Regulations, Chapter 1, "Wyoming Surface Water Quality Standards," effective September 24, 2013. <http://soswy.state.wy.us/Rules/RULES/9176.pdf>