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Mail Stop TWB 5B01M  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
Submitted via email to: [ross\\_project\\_scoping@nrc.gov](mailto:ross_project_scoping@nrc.gov)

RE: Scoping Comments for Ross Project EIS, Docket No. 40-9079

To whom it may concern:

Thank you for the opportunity to submit comments about the scope of NRC's anticipated environmental impact statement (EIS) for Strata Energy's Ross Uranium Project. These comments are submitted on behalf of the Powder River Basin Resource Council and Natural Resources Defense Council. Our organizations appreciate the ability to be involved in the public process, and we hope our comments will be useful to the NRC as it prepares the EIS.

Our organizations and our members have serious and long-standing concerns about in-situ leach (ISL)<sup>1</sup> uranium operations, including the inability of ISL operators to restore groundwater to pre-mining conditions, the number of leaks, spills, and excursions of injection and production fluids at ISL mines, the presence of contamination pathways caused by improperly abandoned drill holes, and the temporary and permanent impacts to land resources. Given the track record of ISL mining and milling operations in Wyoming and elsewhere in the region, it is likely that Strata Energy's ISL operations will have the same sort of problems. We encourage NRC to consider the impacts of these ISL mining problems during its review of Strata's project and during the NEPA analysis for this project.

**I. The timing of NRC's NEPA analysis is critical to ensure that it is a meaningful part of NRC's license review process**

Before we address what the substance of the NRC's NEPA analysis should include, it is important to discuss the procedural timing of this analysis. As you know, NRC has already started the technical and environmental review of Strata's license application. Our organizations have petitioned to intervene in that process and have already raised significant concerns with the applicant's environmental report (discussed below).

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<sup>1</sup> These facilities are also referred to as "In-situ Recovery (ISR)" facilities. The two phrases are synonymous.

Meanwhile, NRC's NEPA process for the project is just beginning. It is critical that this NEPA analysis occurs concurrently with the license review, not after the fact. Otherwise, the NEPA analysis becomes merely "a foreordained formality." *City of New York v. Dep't of Transp.*, 715 F.2d 732, 743 (2nd Cir. 1983); *See also Davis v. Mineta*, 302 F.3d 1104 (10th Cir. 2002). NEPA analysis is designed to be pre-decisional so it will inform decisions, not justify ones already made. *See, e.g. Metcalf v. Daley*, 214 F.3d 1145, 1142 (9<sup>th</sup> Cir. 2000)(NEPA analysis cannot be "an exercise in form over substance...a subterfuge designed to rationalize a decision already made.") If NRC continues to move forward with the approval of a license prior to completion of the NEPA process, NRC will be locked into an irretrievable commitment of resources to a decision that has not yet been completely reviewed and analyzed, in violation of NEPA. *See, e.g., Mass. v. Watt*, 716 F.2d 946 (1st Cir. 1983)("Once large bureaucracies are committed to a course of action, it is difficult to change that course-even if new, or more thorough, NEPA statements are prepared and the agency is told to 'redecide.'")

Pre-decisional NEPA analysis is also important to allow NRC to fulfill the requirement to "[r]igorously explore and objectively evaluate all reasonable alternatives... [i]nclud[ing] appropriate mitigation measures not already included in the proposed action or alternatives." 40 C.F.R. § 1502.14. Alternatives include those identified by the agency but also those identified by the public through the public comment process, which in this case is a public comment process that has yet to occur.

## **II. NRC cannot legally rely upon its Generic EIS for ISL uranium projects**

It is time for NRC to once and for all abandon its ill-fated Generic EIS. As described in our organizations' extensive comments on the draft Generic EIS, the Generic EIS has substantial legal and substantive flaws. Specifically, it dramatically underestimates environmental impacts of ISL uranium projects and is not easily applied at the site-specific level. It also fails to meet a number of important legal requirements under NEPA and NEPA's implementing regulations.

The Generic EIS has a number of systematic flaws, including:

- Failure to include a purpose and need statement compliant with NEPA;
- Failure to include a range of reasonable alternatives;
- Failure to consider mitigation measures and their effectiveness and enforceability;
- Failure to consider the *significance* of impacts in a manner compliant with NEPA;<sup>2</sup>
- Failure to include cumulative impacts of coalbed methane, oil & gas facilities, and abandoned uranium mines, as required by NEPA;
- Failure to look at cumulative impacts of multiple uranium projects planned in a close geographic area;
- Failure to appropriately consult with tribal representatives and wildlife management agencies as required by NEPA;
- Failure to seriously consider impacts at existing mines and how those impacts will continue at new mines, including long-standing environmental compliance issues, such as surface spills of injection and production fluids, underground excursions of contaminated

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<sup>2</sup> NRC's Generic EIS referred to impacts as "small" "moderate" or "large" without defining or disclosing what impacts were determined to be significant.

fluids beyond the production zone, wells that have failed mechanical integrity tests, and evaporation pond leaks;

- Failure to accurately account for differences in site-specific impacts, including land use, water, and wildlife impacts;
- Failure to consider climate change impacts; and
- Inclusion of numerous errors related to the assessment of the local environment in Wyoming.

The Generic EIS contained overly generalized conclusions that do not accurately consider potential impacts to the environment and public health. Many of these impacts can only be properly analyzed at a site-specific level given the complex geological and environmental conditions present in a local area. Therefore, the Generic EIS is irrelevant to site-specific analysis and should not be used as a basis for this EIS. NRC should conduct a new EIS for the Strata Energy project, as opposed to supplementing to an illegal and highly deficient generic EIS.

### **III. NRC should consider issues raised by our organizations through our petition to intervene and request a hearing regarding Strata's proposed Ross project**

We hereby incorporate by reference into these scoping comments our petition to intervene and request a hearing regarding Strata Energy's proposed license and our reply brief.

#### **A. NRC must fully consider cumulative impacts related to this project**

NRC needs to fully consider impacts that "result[] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Strata's Ross Project is being proposed in the context of the much-larger foreseeable expansion of the Lance Project, past uranium exploration and activity, including the Nu-Beth test project, oil and gas operations, and other mineral and non-mineral activity in the area. More broadly, Strata's project is proposed adjacent to other proposed uranium projects in Crook County and the Powder River Basin. NRC's NEPA review must fully consider cumulative impacts in relation to these other activities.

#### **B. NRC must fully assess impacts to water quality and the track record of ISL sites in Wyoming, Texas, and Nebraska**

Water has intrinsic value, especially in an arid state like Wyoming. Most of Wyoming is technically classified as a desert because of limited rainfall and dry, windy conditions. Thus, most of our members in the state rely on groundwater for their homes and livelihoods and they are especially concerned about impacts to groundwater resources.

According to a study by the National Research Council, "The primary risk associated with *in situ* uranium mining is the potential for contamination of adjacent groundwater." The study identified that

If the system of injection and production wells is not properly designed and constructed, the pregnant lixiviant may escape into the sandstone aquifer, carrying with it dissolved uranium and radium. Small amounts of several trace metals are also present in the lixiviant, including lead, selenium, molybdenum, and arsenic.<sup>3</sup>

To date, all ISL projects have had “excursions” and “spills” and other events that could threaten waters resources during operations. The track record of the Smith Ranch-Highland site is a good indication of what can happen during an ISL project:

Over the years there have been an inordinate number of spills, leaks and other releases at this operation. Some 80 spills have been reported, in addition to numerous pond leaks, well casing failures and excursions. Unfortunately, it appears that such occurrences have become routine. (DEQ) currently has two large three-ring binders full of spill reports from the Smith Ranch-Highland operations.<sup>4</sup>

Because of the frequency of spills and excursions, significant impacts have occurred: “Some of the spills may have little impact individually, but cumulatively they might have a significant effect on soils and/or groundwater.”<sup>5</sup>

Additionally, ISL projects leave water resources threatened after operations. To date, no ISL project has returned groundwater quality to baseline conditions. In fact, it is doubtful that some wellfields may ever be returned to restored conditions. For instance, the Wyoming DEQ noted that one wellfield at the Smith Ranch-Highland site has not made restoration progress even after ten years: “Wellfield C has now been in restoration for ten years. The 2007 Annual Report states that the ground water quality is similar to ‘*end of mining*’ wellfield conditions.”<sup>6</sup>

Elevated levels of arsenic, molybdenum, selenium, vanadium, and uranium are often present at higher levels than baseline even after groundwater restoration. Additionally because of the mining solution, elevated levels of sodium, carbonate, or sulfate are present. Mining may also increase total dissolved solids and change pH levels.

### **C. NRC must fully assess potential impacts to water resources from the presence of abandoned wells and other contamination pathways**

As discussed in our petition, the applicant’s ER fails to assess thousands of abandoned uranium and oil and gas wells in the area and how those wells may contribute to water contamination both inside and outside of the project site. NRC’s EIS must fully disclose and assess environmental impacts related to the location of wells from past, present, and reasonably foreseeable future operations and exploration. This would include uranium, oil and gas, and other wells present in the area. The EIS should detail whether casing and capping requirements are sufficient to prevent migration of fluids. Past exploration activities and improperly abandoned

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<sup>3</sup> National Research Council, *Hardrock Mining on Federal Lands*, National Academy Press, 1999 at 146.

<sup>4</sup> Wyoming Department of Environmental Quality Land Quality Division Settlement Agreement and related Investigation Report, *available at* <http://deq.state.wy.us/out/LQenforcementactions.htm>.

<sup>5</sup> *Id.*

<sup>6</sup> *Id.* (emphasis in original)

wells in the area could create significant impacts not contemplated or discussed in the applicant's ER.

#### **D. NRC must assess impacts to groundwater quantity**

Strata's ER fails to properly disclose impacts related to the depletion of groundwater resources that will result from its proposed project. These impacts will be significant and must be fully discussed in the NRC's EIS. NRC should also consider alternatives and mitigation measures to reduce the significance of these impacts.

#### **E. NRC must assess environmental impacts related to decommissioning and financial assurance**

NRC must include in its environmental analysis an assessment of the financial assurance requirements for the Ross project and how those financial assurance requirements will or will not cover the likely foreseeable costs of reclamation and groundwater cleanup. As our petition discusses, most – if not all – previous ISL sites have taken much longer to restore groundwater, even if only to alternative concentration limits established by NRC. In most cases, financial assurance assessments did not consider the difficulty companies had in restoration. Therefore, in the case of a company default, the public would have been left at risk for the unconsidered costs of cleanup. This results in environmental and socio-economic impacts that must be considered in the NRC's NEPA analysis.

Additionally, NRC must disclose and assess where 11e2 byproduct material will be disposed during decommissioning. NRC must identify possible disposal locations and analyze impacts related to disposal at those locations. Additionally, NRC must disclose any impacts that could be realized from the failure to have an 11e2 disposal facility available for Strata's decommissioning.

#### **F. NRC must fully assess visual and other impacts to Devil's Tower National Monument**

Strata's ER does not adequately address potential impacts to visual or aesthetic resources at the nearby Devils Tower National Monument. Devil's Tower is an important cultural and aesthetic icon of northeast Wyoming. Additionally, it is our nation's first national monument and is a source of significant revenue to Crook County from tourism and recreation. The EIS must fully assess all impacts to Devil's Tower and its environs.

### **IV. NRC's EIS must meet the requirements of NEPA's implementing regulations**

NRC has historically contended that it is not subject to the CEQ's regulations implementing NEPA.<sup>7</sup> However, in this case, NRC must comply with these regulations.

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<sup>7</sup> This issue has not been decided by the U.S. Supreme Court. *See Balt. Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 100 (1983) (“[W]e do not decide whether they [CEQ guidelines] have binding effect on an independent agency such as

First, BLM will be a cooperating agency on the EIS and will be using this EIS as a substitute for its own NEPA analysis. BLM is subject to compliance with CEQ regulations and therefore any EIS that is used by BLM must comply with these regulations. More importantly, NRC itself has a duty to functionally comply with NEPA and CEQ's implementing regulations. *See Sierra Club v. Sigler*, 695 F.2d 957, 967 (5th Cir. Tex. 1983). While NRC has its own regulations implementing NEPA, those regulations are only able to take the place of CEQ's regulations if they amount to the functional equivalent of CEQ's regulations. In most cases, including consideration of alternatives, mitigation measures and cumulative impacts, NRC's regulations are not a sufficient substitute for the CEQ regulations.

#### **V. NRC needs to include a range of reasonable alternatives for this project**

NEPA requires agencies to consider, evaluate and disclose to the public "alternatives" to the proposed action. 42 U.S.C. §§ 4332(2)(C)(iii) & (E). CEQ regulations require an agency to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. 40 C.F.R. §1502.14. Additionally, the evaluation of alternatives must constitute a "substantial treatment," presenting the impacts of the alternatives in comparative form "sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and public." *Id.*

The alternatives cannot be limited to (1) no action (2) permit as planned and (3) mining options that are not economically or technically feasible and not even analyzed in detail as we have seen in past NRC documents and the applicant's environmental report.

Additionally, we urge NRC to re-visit and significantly revise the purpose and need statement that was included in EISs for previously licensed projects, including Moore Ranch, Nichols Ranch, and Lost Creek. Our organizations and others submitted detailed comments outlining why the purpose and need statements for the EISs for those projects did not comply with NEPA mandates. Having a legally sufficient public purpose and need statement is the first step in meeting NEPA's mandates to include a range of reasonable alternatives.

#### **VI. NRC should consider its rulemaking efforts and consider whether new regulations are needed**

NRC is currently engaged in a rulemaking initiative that would clarify the requirements for groundwater protection at ISL facilities. This rulemaking has the potential to significantly impact how NRC will regulate Strata's proposed project. The EIS should fully discuss this rulemaking and explain how the rulemaking is or is not considered by NRC in its NEPA analysis.

In addition to the groundwater rules, NRC needs to take a hard look at the adequacy of all of its existing regulations. ISL facilities have been licensed for over twenty years in what often appears as an ad-hoc manner. It is now time to determine whether new regulations are needed

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the [Nuclear Regulatory] Commission."); *see also, Deukmejian v. Nuclear Regulatory Com.*, 751 F.2d 1287, 1302 (D.C. Cir. 1984).

given past history and environmental impacts. Much of Appendix A to 10 CFR Part 40 is couched in non-mandatory terms – merely goals, objectives, or criteria. NRC needs to consider new enforceable regulations that will prevent or mitigate environmental impacts. Please see our comments on the draft Generic EIS for some examples of new rules that are needed to protect public health, safety, and the environment.

#### **VII. NRC should consider its ability to inspect and enforce uranium operations**

The vast majority of new ISL projects are proposed in Wyoming, yet NRC does not have a field office in the state. The nearest field office is in Texas and the few ISL field inspectors that are at that office are mostly focused on health and safety related to radiation releases. Individuals who have the necessary qualifications to monitor and inspect ISL facilities related to water contamination are located at NRC headquarters. This situation is unacceptable and results in a situation where industry is self-enforcing its own violations. The EIS should fully discuss NRC personnel available for inspection and enforcement duties at Strata's proposed project and whether environmental impacts will result from NRC's lack of inspection and enforcement.

#### **VIII. NRC should consider impacts to land use and wildlife**

NRC's EIS should include a full analysis of the overlapping impacts to landowners, livestock and wildlife of proposed uranium mining and other adjacent mining activities and how those impacts will be addressed and mitigated. Please fully discuss reclamation standards and how those standards will be monitored and enforced.

The EIS should also include an analysis of habitat fragmentation impacts and impacts to sage grouse, deer, antelope, raptors, migratory birds, and other species of concern from proposed uranium operations. Impacts to wildlife resources result from new roads and power lines in the area, increased traffic, noise, and other human activities, and by waste disposal methods such as evaporation ponds, land application of waste, or discharge of wastes into ephemeral streams. Please thoroughly discuss all of these impacts in the EIS.

In doing this analysis, please remember that NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth short- and long-term effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added), *see also State ex rel. Guste v. Lee*, 635 F.Supp. 1107, 1121 (E.D.La. 1986) ("environmental impacts...are not reduced below the significance threshold merely because of the fact that the effects are temporary") (emphasis added).

#### **IX. NRC should consider the foreign ownership of Strata Energy and likelihood of uranium export**

Strata Energy is a wholly-owned subsidiary of Peninsula Minerals, which is an Australian company. NRC should consider the likelihood that uranium from this project will be exported and how this export will impact energy or national security interests. This discussion is particularly relevant in the context of assessing the purpose and need of this project.

The foreign ownership discussion is also particularly important in the context of financial assurance and oversight. NRC regulations prevent the agency from giving a license if the corporation “is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government” 10 CFR § 40.38. How do these rules apply to companies like Strata? What financial documents are considered for financial assurance? In order to protect the public, financial assurance must only be satisfied by cash-equivalents held in FDIC insured U.S. banks.

**X. NRC should consider the effect of lack of royalties generated from the development of federal minerals in any socio-economic or cost-benefit analyses related to this project**

Federal uranium minerals are developed pursuant to the General Mining Law of 1872, also called the “1872 Hardrock Mining Law.” This law does not allow the federal government to collect royalties for the development of federal minerals. It is incumbent upon NRC to consider this loss of revenue and resulting socio-economic impacts during its NEPA review or any cost-benefit analysis of the Ross Uranium Project.

Additionally, NRC’s EIS should include a disclosure and analysis of how uranium leases are acquired and the specific rights of surface landowners where uranium mining has taken place and is proposed.

NRC should consider socio-economic impacts to communities including an analysis of the cumulative impacts on those communities already overburdened by impacts from booming oil and gas and coal development resulting in overtaxed county services for roads, police, crime, drug abuse, emergency response, affordable housing and labor shortages.

Thank you for your time and consideration of these comments. Please keep us on your mailing list and notify us of future developments related to the Ross Uranium Project.

Sincerely,



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