

[ORAL ARGUMENT NOT YET SCHEDULED]

No. 16-1298

**IN THE UNITED STATES COURT OF APPEALS FOR THE
DISTRICT OF COLUMBIA CIRCUIT**

**NATURAL RESOURCES DEFENSE COUNCIL, INC. AND
POWDER RIVER BASIN RESOURCE COUNCIL,**

Petitioners,

v.

**UNITED STATES OF AMERICA AND
NUCLEAR REGULATORY COMMISSION**

Respondents.

**PETITION FOR REVIEW OF FINAL ORDER OF THE UNITED
STATES NUCLEAR REGULATORY COMMISSION**

BRIEF OF INTERVENOR-RESPONDENT STRATA ENERGY INC.

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ORAL ARGUMENT IS REQUESTED**RULE 26.1 CORPORATE DISCLOSURE STATEMENT**

Pursuant to D.C. Circuit Rule 26.1, Intervenor-Respondent Strata Energy, Inc. is a wholly owned subsidiary of Peninsula Energy, Ltd. which is a publicly traded company. Strata Energy, Inc. is currently the holding of United States Nuclear Regulatory Commission

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

While not required by rule, in accordance with Circuit Rule 28(a)(1), intervenor-respondent Strata Energy, Inc. submit this certificate as to parties, rulings, and related cases. Strata Energy, Inc. hereby concurs with each of the certifications provided by the United States Nuclear Regulatory Commission and the United States of America pursuant to this Circuit Rule.

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STATEMENT OF JURISDICTION

Intervenor-Respondent Strata Energy, Inc. (Strata) hereby accepts the Jurisdictional Statement provided by Federal Respondents the United States Nuclear Regulatory Commission (NRC) and the United States of America (USA). Strata concurs that the Hobbs Act confers jurisdiction upon this Court for purposes of challenging an order of the NRC by an “aggrieved party” within the timeframe prescribed by law. Petitioners Natural Resources Defense Council and Powder River Basin Resource Council challenge the determination of the United States Nuclear Regulatory Commission (NRC), an independent regulatory agency of the USA, to grant Strata an NRC source and 11e.(2) byproduct material license to recover uranium using *in situ* leach uranium recovery (ISR) processes at the Ross project site in the State of Wyoming. Federal Respondents determined that Strata’s application was adequately protective of public health and safety and the environment and was compliant with the Atomic Energy Act of 1954 (AEA), as amended by the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), and NRC’s implementing regulations at 10 CFR Parts 20, 40, including Appendix A Criteria, and 51.

STATEMENT OF THE ISSUES

Intervenor-Respondent Strata hereby accepts the Statement of Issues and Glossary offered by Federal Respondents NRC and the USA.

STATEMENT OF FACTS

Intervenor-Respondent Strata hereby accepts the Statement of Facts offered by Federal Respondents NRC and the USA with the following additions.

In order to understand the manner in which NRC regulates licensed ISR operations, it is important to understand the nature of the ISR process. As a general proposition, there are two *primary* types of uranium recovery processes used by NRC uranium recovery licensees: (1) conventional mills processing ores from surface or underground mines and (2) ISR uranium recovery operations. Conventional mining involves the removal of uranium bearing ores from surface or underground mines, the breakdown of such ores at conventional mills (e.g., grinding, crushing, roasting, beneficiating), and chemical treatment to extract uranium. The conventional milling process results in the production of uranium (yellowcake) for sale and large volumes of mill tailings and other wastes that must be disposed of in licensed mill tailings impoundments.

The second form of primary production, ISR uranium recovery, leaves the underground ore body in place and continuously re-circulates native groundwater

from the aquifer in which the ore body resides fortified with oxygen and/or carbon dioxide through the ore body. ISR uranium recovery was first tried on an experimental basis in the early 1960s with the first commercial facility commencing operations in 1974. Uranium deposits amenable to ISR uranium recovery occur in permeable sand or sandstones that are confined above and below by impermeable strata. These formations may either be flat or “roll-front” in cross-section, C-shaped deposits within a permeable sedimentary layer. These uranium-bearing formations were formed by the downgradient movement of groundwater bearing minute amounts of oxidized uranium in solution through the aquifer with precipitation of the uranium occurring when the oxygen content decreases along extensive oxidation-reduction interfaces under the conditions noted above. *Uranium roll front deposition is ongoing on a regional basis today.* Regional roll fronts require broad areas of upgradient oxidation to keep uranium mobile until the oxidized water moves downgradient far enough to encounter a zone of abundant reductant. It is at this regional *reduction-oxidation interface* where the oxygenated water is reduced and uranium is deposited in what is known as a *redistributed* ore body that ISR uranium recovery operations are conducted.

Uranium mineralization leaves a distinct radiochemical footprint in rock and water. The basis for geophysical logging is the presence of radioactive materials which allow the discovery and delineation of ore. Where the uranium ore zone is

saturated by groundwater, the footprint extends itself into water. Given natural erosion processes, uranium and uranium progeny accumulated in the rock will manifest themselves in surrounding media. For a uranium ore body to be amenable to ISR uranium recovery using the type of recovery chemistry proposed for the Strata Ross project, the ore zone must be saturated with relatively fresh water and the rock must have enough transmissivity for water to flow from injection to extraction wells. In other words, for ISR uranium recovery to work, the ore must be situated in an aquifer. *There are no ISR uranium recovery operations in ore bodies that are not in aquifers.*

Techniques for ISR uranium recovery have evolved to the point where it is a controlled, safe, and, indeed, an occupationally and environmentally *benign* method of uranium recovery that does not result in any significant, adverse impacts to workers, the surface (lands) or the subsurface (groundwater), including *underground* sources of drinking water (USDWs). After an ore body that is amenable to ISR uranium recovery is identified, the licensee develops well-field designs that progressively remove uranium from the identified ore body. Well-field design is based on grids with alternating extraction and injection wells and a ring of monitoring wells surrounding the entire recovery area to detect any potential *excursions* of solubilized uranium and other minerals from the uranium recovery production zone. The definition of an excursion is when mobile, early-warning

constituents of concern (COC) indicators reach a monitor well and not at an adjacent, non-exempt aquifer.

The sequential development of ISR uranium recovery well-fields is an example of the iterative, “phased” nature of ISR uranium recovery projects. The development of these well-fields and the accumulation of a complete sampling database cannot take place until a project operator installs baseline, production, and monitor wells. Engineers and geologists must revisit the previous day’s analysis before the next well is drilled, so new information becomes available every day. Prior to placing monitor wells, additional exploration and delineation has to be conducted to assure the wells are properly placed. As well-fields are developed, all wells, including monitor wells, are subject to mechanical integrity tests (MIT) to assure that they are functional prior to being sampled. Sampling establishes water quality within and outside the ore zone (i.e., at the monitor wells) enabling the licensee to readily determine if an excursion has occurred. The results in one well-field may cause the site engineer or geologist to change design in the next. This process is both progressive and iterative, as each well-field is developed and tested with the mineral being progressively depleted from different parts of the ore body.

During active operations, native groundwater from the recovery zone in the aquifer is pumped to the surface for fortification with oxygen and carbon dioxide. This fortified water (i.e., lixiviant) is then returned to the recovery zone through a

series of *injection* wells in varying patterns in the well-fields. Water withdrawn from *extraction wells* in these patterns exceeds the water injected into the patterns creating a “cone of depression” that assures a net inflow of water into the recovery zone of the aquifer so that adjacent, non-exempt USDWs will not be impacted by excursions of mining solutions. It also brings fresh water into the recovery zone to inhibit the build-up of contaminants that could reduce the efficiency of the operation.

The extraction pumping causes the injected lixiviant to move through the uranium ore body oxidizing and solubilizing the uranium present in the host sandstone. The water from the extraction wells is then run through ion-exchange (IX) columns containing synthetic resins, which remove the uranium in a process essentially identical to that used to remove minerals from drinking water in a conventional home water softener. The uranium is first stripped from the IX resins using a brine solution (again similar to a water softener) and precipitated chemically. This product is then dewatered and dried to produce saleable *yellowcake*.

After uranium removal in the IX column, the water in the circuit is re-fortified and re-injected as part of a continuous process until the uranium in the ore zone is exhausted. Since water from the ore body, already containing naturally occurring uranium and its progeny, is continuously re-fortified with oxygen and re-circulated through the sandstone to enhance uranium values removed in the IX columns, injection is “locked” to extraction (i.e., without extracting at least as much water as

is injected, the surface plant will run dry and re-circulation will stop). Injection cannot proceed without an equal or greater amount of extraction; therefore, over-injection across the area cannot take place. In order to keep the continuously operating system in balance, the extra water that is extracted is removed from the circuit as a “bleed.” The “bleed,” normally one (1) to three (3) percent of flow that contains elevated levels of radioactive uranium progeny and some heavy metals may be treated and is then disposed using permitted land application, deep well injection, solar evaporation or some combination of these methods.

After uranium recovery ceases, the groundwater in the recovery zone is restored *consistent with baseline* or other water quality criteria that are approved by NRC prior to the commencement of active production operations. Upon completion of groundwater restoration, wells are sealed and capped below the soil surface using approved plugging methods. Surface process facilities are decontaminated, if necessary, and removed, and any necessary reclamation and re-vegetation of surface soils is completed. As a result, after site closure is completed and approved, there is no visual evidence of an ISR uranium recovery site, and the decommissioned site will be available for unrestricted (i.e., any future) use.

Liquid waste also is generated during groundwater restoration when uranium recovery operations have ceased. Groundwater sweep uses existing wells to remove affected water from the ore zone which draws natural groundwater flow into the

recovery zone to replace the water removed. Additionally, removed groundwater may be treated using reverse osmosis (RO) to create *de-ionized* water which is re-injected to accelerate groundwater restoration. In fact, groundwater restoration often uses a combination of these two techniques and, possibly, the injection of a reductant and pH modifier to optimize results.

In over three decades of operations, there have been *no significant, adverse impacts to USDWs* from ISR uranium recovery operations in the United States. Well-field balancing, use of the “bleed,” and extensive monitoring at ISR uranium recovery sites has been highly successful in assuring that leach solution is contained within the ore (recovery) zone. Before monitoring ceases, restoration is conducted to minimize or eliminate the potential risk of excursion that could result in the migration of contaminants from the exempted recovery zone portion of the aquifer to adjacent, non-exempt portions of the aquifer. This regulatory approach has been a success because there has never been a report of contamination of adjacent, non-exempt USDWs outside of the ore zone and into the related area of review¹ as a result of ISR uranium recovery.

¹ The “area of review” is essentially a “buffer zone” prescribed by EPA’s underground injection control (UIC) program to provide additional protection for USDWs during ISR uranium recovery. 40 CFR § 146.6 requires that all ISR uranium recovery licensees must establish a fixed radius of not less than ¼ mile for the area surrounding the recovery zone. The regulation also states:

In light of this technological process and to assure adequate regulatory oversight of this industry, pursuant to its AEA authority, the AEC/NRC promulgated 10 CFR Part 40 and, later, Appendix A to Part 40 for conventional uranium milling operations. At the time of Appendix A's issuance, conventional uranium mining and milling operations were assumed to be the primary source of uranium production in the United States, so Appendix A Criteria reflect that assumption. Recently, as ISR uranium recovery has become the prevalent form of uranium recovery in the United States, NRC has applied portions of Part 40 and Appendix A Criteria to ISR uranium recovery licensing "as relevant and appropriate." Appendix A Criteria were created to be *flexible and performance-oriented rather than prescriptive*, since they address facilities (i.e., conventional mills and tailings impoundments) that can be affected by, and can affect, natural systems that can vary from site-to-site and even within the license boundary of a given site, and because they were to be applied to pre-existing uranium milling facilities. As stated in the Preamble to Appendix A:

"In many cases, *flexibility* is provided in the criteria...on a site-specific basis.... *Licensees or applicants may propose alternatives to the specific requirements* in this appendix. The alternative proposals may take into

"In determining the fixed radius, the following factors shall be taken into consideration: Chemistry of injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area."

40 CFR § 146.6(b)(2).

account local or regional conditions, including geology, topography, hydrology, and meteorology.”²

This flexibility is also reflected in the Preamble’s statement that:

“In implementing this appendix, the Commission will consider ‘*practicable*’ and ‘*reasonably achievable*’ as equivalent terms. Decisions involving these terms will take into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of atomic energy in the public interest.”³

Since ISR uranium recovery operations similarly take place in natural systems, NRC has approached application of relevant Appendix A Criteria to, and the development of license conditions for, such operations to them with flexibility (e.g., the iterative, “phased” licensing approach).

Since Appendix A Criteria were focused primarily on conventional uranium milling facilities, to facilitate the submission of complete license applications for ISR uranium recovery operations, NRC created an ISR Standard Review Plan (SRP or NUREG-1569).⁴ The SRP identifies Appendix A and other relevant regulatory requirements, NRC guidance, and standard industry practices that should be used in preparing ISR uranium recovery license applications. The SRP provides detailed insight into the nature of ISR uranium recovery projects and

² 10 CFR Part 40 Appendix A, Preamble (emphasis added).

³ *Id.*

⁴ United States Nuclear Regulatory Commission, NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications* (June, 2003) (Intervenors’ Joint Appendix, Volume III, p. 612).

NRC's approach to their regulation. As a general proposition, ISR uranium recovery projects are process-oriented, phased projects, as demonstrated, with clarity, by SRP Chapter 2 entitled *Site Characterization* and Chapter 5 entitled *Operations*. These chapters show that ISR uranium recovery projects are developed through a process involving *pre-operational* site characterization followed by detailed, progressive *operational* site development that occurs only after licensing is complete.⁵ As noted above, this iterative, "phased" approach is reflected in the sequential development of ISR uranium recovery well-fields, upper control limits (UCLs) for operations and restoration, monitor wells to protect water quality, and appropriate financial assurance.

As an independent regulatory agency, NRC is not bound by regulations promulgated by the Council of Environmental Quality (CEQ) under the National

⁵ While not binding on the Board, the Commission has stated in its decisions in *Seabrook* and *Private Fuel Storage* that Commission guidance documents are nonetheless entitled to special weight. See *Nextera Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-05, 75 NRC 301, 314, n.78 (2012); see also *In the Matter of Private Fuel Storage* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001). In its 2005 *Yankee* decision, the Commission further elaborated on the role of NRC Staff guidance with respect to regulatory compliance:

"We recognize, of course, that guidance documents do not have the force and effect of law. Nonetheless, guidance is at least implicitly endorsed by the Commission and therefore is entitled to correspondingly special weight."

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 375, n.26 (2005); see also *Consumers Power Co.* (Big Rock Point Nuclear Plant), ALAB-725, 17 NRC 562, 568 & n.10 (1983) (finding that NUREGs are entitled to considerable prima facie or special weight).

Environmental Policy Act of 1969 (NEPA).⁶ As stated in the Federal Register in 1984:

“as a matter of law, the NRC as an independent regulatory agency can be bound by CEQ’s [Council on Environmental Quality’s] regulations only so far as those regulations are procedural or ministerial in nature. NRC *is not bound* by those portions of CEQ’s regulations which have a substantive impact on the way in which the Commission performs its regulatory functions.”⁷

However, NRC promulgated regulations at 10 CFR Part 51 designed to facilitate compliance with NEPA. Pursuant to these regulations, NRC requires that a detailed environmental evaluation of the potential impacts of, and alternatives to, proposed uranium recovery operations.⁸ Unless mandated by regulation to perform an environmental impact statement (EIS), NRC Staff is required to conduct an initial environmental assessment (EA) and to determine whether the potential impacts of the proposed action warrant a finding of no significant impact (FONSI) or an environmental impact statement (EIS).⁹ In the event that an EIS is warranted, NRC first prepares a draft EIS for issuance and public comment and,

⁶ 42 U.S.C. § 4321 *et seq.*

⁷ 49 Fed. Reg. 9352 (March 12, 1984) (emphasis added).

⁸ See generally 10 CFR Part 51.

⁹ 10 CFR §§ 50.20-51.21; see also United States Nuclear Regulatory Commission, NUREG-1748, *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs*, <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1748/> (August, 2003).

upon completion of the public comment period, NRC responds to comments and issues an final EIS.

NRC also requires an applicant to submit detailed procedures, protocols, and other data and information demonstrating that the applicant is capable of performing the proposed action under the conditions and requirements prescribed by NRC. For example, NRC requires that an applicant provide adequate information demonstrating that it is financially qualified to perform NRC license requirements and that its personnel, procedures, and protocols are technically sufficient. Based on the FEIS and the applicant's license application, NRC determines whether a license should be issued or not and what, if any, appropriate conditions should be added to the applicant's proposed license.

STANDARD OF REVIEW

Intervenor-Respondent Strata hereby accepts the Standard of Review offered by Federal Respondents NRC and the USA.

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SUMMARY OF THE ARGUMENT

Intervenor-Respondent Strata hereby accepts the Summary of the Argument provided by Federal Respondents NRC and the USA.

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ARGUMENT

As a preliminary matter, Intervenor-Respondent Strata hereby adopts each of the arguments raised by Federal Respondents NRC and the USA in their Initial Brief. Intervenor-Respondent Strata also offers the following arguments in support of Federal Respondents.

A. The Commission's Final Supplemental Environmental Impact Statement Adequately Addresses Groundwater Quality Issues in Accordance with AEA Regulations

Petitioners consistently raise concerns regarding the Atomic Safety and Licensing Board's handling and the Commission's review of how groundwater quality is assessed and protected within the scope of a license application review and the conduct of licensed activities. Indeed, each of Petitioners' admitted contentions pertains directly to how NRC regulations address groundwater quality for uranium recovery licensees. More specifically, Petitioners raise concerns regarding either (1) the suggestion that NRC Staff include additional bounding analysis of potential alternate concentration limits (ACL) that could be used at the Ross site in the future post-operations/restoration or (2) the imposition of an additional *protective* license conditions requiring the plugging and abandonment of previously drilled boreholes prior to the commencement of licensed operations. However, Petitioners concerns aside, the Commission has been empowered with the ability to implement the requirements of the AEA and, more specifically, the

safe handling of source material and 11e.(2) byproduct material (or the wastes from source material milling). As such, a review of the Commission's implementing regulations demonstrates that Strata's NRC license and its record of decision (ROD) were issued in accordance with the AEA.

First, with respect to Petitioners' insistence that the final SEIS did not adequately address post-restoration groundwater quality concentrations, this assertion is inconsistent with existing NRC regulations. As correctly stated by NRC, it "had posited that it would be speculative to provide quantitative estimates of future alternate concentration limits at the site, given the variable and factors involved in their approval...." Federal Respondent Brief at 34. This statement is consistent with the historical application of 10 CFR Part 40, Appendix A, Criterion 5B(5) to ISR operations, which has now been deemed to apply as a matter of law.¹⁰

As a general proposition, the development of final groundwater quality standards on a wellfield-by-wellfield basis at ISR sites is conducted in the same "phased" manner as described in the sections above. There are two "phases" to gathering of site-specific groundwater quality data and the formulation of groundwater quality standards. The first phase under 10 CFR Part 40, Appendix

¹⁰ See United States Nuclear Regulatory Commission, Regulatory Issue Summary 2009-05, *Uranium Recovery Policy Regarding: (1) The Process for Scheduling Licensing Reviews of Applications for New Uranium Recovery Facilities and (2) The Restoration of Groundwater at Licensed Uranium In Situ Recovery Facilities* (April 29, 2009) ("Accordingly, the requirements in Criterion 5B of Appendix A apply to restoration of groundwater at uranium ISR facilities").

A, Criterion 7 envisions gathering and analysis of “baseline” groundwater quality data sufficient to obtain an NRC license under the AEA. “Baseline” data gathering requires a license applicant to gather sufficient groundwater quality data to *characterize* the affected environment. This interpretation of Criterion 7 is reflected by language in NUREG-1569 when it states:

“Reviewers should keep in mind that the development and initial licensing of an in situ leach facility is not based on comprehensive information. This is because in situ leach facilities obtain enough information *to generally locate the ore body and understand the natural systems involved*. More detailed information is developed as each area is brought into production....[R]eviewers should ensure that sufficient information is presented to reach only the conclusion necessary for initial licensing.”

NUREG-1569 at 1-1.

As discussed in the final SEIS, Criterion 7 data gathering requirements result in the development of pre-operational baseline water quality levels which are used to license the ISR project and *is not intended to represent final groundwater quality standards* which are addressed by Criterion 5B(5).¹¹

¹¹ 10 CFR Part 40.32(e) otherwise known as the “construction rule,” which specifically states that “commencement of construction prior to this conclusion [full environmental evaluation] is grounds for denial of a license to possess and use source and byproduct material in the plant or facility.” 10 CFR § 40.32(e) (2017). The Commission’s interpretation of this Rule is that installation of a full wellfield and monitor well network, which is necessary to determine Criterion 5B(5) groundwater quality standards, constitutes construction and, thus, would result in denial of a license application. As a result, NRC issues ISR licenses allowing licensees to begin to address detailed plans for installation of wellfields and monitor wells and development of groundwater quality standards only after their license is granted.

The second phase of data gathering envisioned by the Commission under its 10 CFR Part 40, Appendix A Criteria and its Commission-endorsed performance-based licensing program is Criterion 5B(5) “Commission-approved background” (CAB) groundwater quality standard, which is the basis for appropriate site-specific groundwater standards against which operational groundwater and restoration goals are set. Pursuant to 10 CFR Part 40, Appendix A, Criterion 5B(5), three (3) permissible groundwater protection standards for uranium recovery facilities such as ISR facilities are identified: (1) “Commission-approved background” or (2) a maximum contaminant level (MCL), *whichever is higher*, or (3) an alternate concentration limit (ACL). Under the Uranium Mill Tailings Radiation Control Act of 1978, which amended the AEA, EPA conducted a rulemaking (resulting in 40 CFR Part 192) pursuant to its responsibility to develop *generally applicable standards* for uranium mill tailings facilities, including Part 192.32 specifically incorporates the aforementioned Resource Conservation and Recovery Act of 1976 (RCRA)¹² groundwater standards, including ACLs. NRC’s conforming 10 CFR Part 40 rulemaking to comply with UMTRCA’s requirement that NRC conform its regulations to EPA’s *generally applicable standards* for possession and use of source and 11e.(2) byproduct material incorporate 40 CFR §

¹² 42 U.S.C. § 6901 *et seq.* (2017).

192.32's groundwater corrective action standards into the Commission's regulations (e.g., 10 CFR Part 40, Appendix A, Criterion 5B(5)).

ACLs are Commission-approved *alternative* groundwater quality standards originating with the United States Environmental Protection Agency's (EPA) RCRA regulations, which were promulgated through a full rulemaking, including notice and public comment. EPA's RCRA regulations at 40 CFR Part 264, Subpart F prescribe groundwater protection standards for RCRA facilities, including Part 264.94(a)(3) which discusses ACLs.

An ACL is a site-specific, constituent-specific, risk-based human health standard that requires a detailed technical and environmental justification through NRC license amendment to demonstrate that restoration to that level is adequately protective of human health and the environment. In order for ACLs to be granted, an ISR operator must submit a license amendment application consistent with Criterion 5B(6) and applicable guidance, and *all* ACL applications require a complete safety review consistent with 10 CFR Part 40 regulations and Appendix A Criteria and a complete 10 CFR Part 51 environmental review with, at a minimum, an environmental assessment (EA) with a finding of no significant impact (FONSI).¹³

¹³ NUREG-1748 at 1-2 (stating that an EA with a FONSI, at a minimum, is required if no categorical exclusion applies). Thus, given that a full 10 CFR Part 51 (NEPA) analysis is

Pursuant to the Commission's regulations, an ISR licensee is required to cease licensed uranium recovery operations when the identified ore body is depleted and immediately commence groundwater restoration. In accordance with the Commission's "as low as reasonably achievable" (ALARA) standard, an ISR licensee must strive to return groundwater within the confines of a given wellfield to requisite primary standards (i.e., CAB or an MCL, whichever is higher). In the event that a licensee cannot return such groundwater to this standard, such licensee is entitled, *as a matter of law*, to apply for an ACL for one or multiple COCs.¹⁴ 10 CFR Part 40, Appendix A, Criterion 5B(6) sets forth the Commission's requirements for ACLs. Criterion 5B(6) sets forth a series of nineteen (19) factors the Commission will consider during the evaluation of an ACL application. 10 CFR Part 40, Appendix A, Criterion 5B(6) (2017). Many of these factors cannot be satisfied until NRC has issued a license and the licensee has completed both licensed uranium recovery operations and as low as reasonably achievable (ALARA) groundwater restoration in a given wellfield. Based on these Criteria, it is well-understood that an ISR licensee cannot even apply for an ACL until it has demonstrated that its efforts to complete groundwater restoration to the primary or

required for all ACL applications and despite the fact that NRC's bounding analysis strengthens the final SEIS' content, the use of such analyses for the Ross project was merely prophylactic.

¹⁴ 10 CFR Part 40, Appendix A, Criterion 5B(6) sets forth the Commission's requirements for ACLs. Criterion 5B(6) sets forth a series of nineteen (19) factors the Commission will consider during the evaluation of an ACL application.

secondary standard satisfies the ALARA standard.¹⁵ Since a license amendment application necessary for a specific ACL is not before NRC at this time, there is no need for a purely speculative NEPA evaluation in the FSEIS. *Compare Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2); Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 293 (2002) (denying a National Environmental Policy Act (NEPA) “segmentation” contention because it involved inchoate plans of the licensee and explaining that, to bring NEPA into play, a possible future action must constitute a “proposal” pending before the agency).

Given that the Supreme Court has stated that a reviewing court’s “ultimate criterion is the administrative interpretation, which becomes of controlling weight unless it is plainly erroneous or inconsistent with the regulation,” the Commission’s interpretation of the application of 10 CFR Part 40, Appendix A, Criterion 5B(5) to ISR operations should be sustained as consistent with its implementing AEA regulations and prior decisions regarding such interpretations.¹⁶

¹⁵ This phased approach to groundwater data gathering and analysis is consistent with the Commission’s holding in *Hydro Resources, Inc.* (CLI-06-01), which was tacitly endorsed by the United States Court of Appeals for the Tenth Circuit. *See Marilyn Morris et al v. US NRC*, 598 F.3d 677 (10th Cir. 2007).

¹⁶ *See e.g., Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945).

B. The Commission Correctly Upheld the Board's Dismissal of Petitioners Untimely Filed Contentions

Petitioners seek redress in this Court based on an assertion that the Board should not have denied admission of and that the Commission should have reinstated previously proffered Contention 6 related to the alleged “segmentation” and stated that “the SEIS should encompass the entire scope of Strata’s planned operations in the Lance District....” Petitioners Brief at 53. Petitioners claim based on their reliance on *Dole* that agencies cannot separate major federal actions into smaller components. *See id.* at 54, *citing Coal. On Sensible Transp., Inc. v. Dole*, 82 F.2d 60, 68 (D.C. Cir. 1987). This claim is misguided based upon the manner in which NRC addresses individual applications under the AEA.

As an independent regulatory agency, NRC is designed by statute to be a “reactive” agency in that it does not promote or initiate the peaceful use of nuclear energy. Thus, NRC is required to be “reactive” in terms of waiting for potential license applicants to submit license applications. Under the AEA, NRC is empowered to review licensing actions, as proposed by applicants or licensees, and to either approve, approve with conditions or reject such applications. But, the agency’s review of such applications is strictly limited to the four corners of the

license application as proposed by the applicant or licensee.¹⁷ Pursuant to the Commission's Rules of Practice at 10 C.F.R. § 2.309(f)(1)(iii), a contention must establish that it is within the scope of the proceedings. *PPL Susquehanna, LLC*, (Susquehanna Steam Electric Station, Units 1 & 2), LBP-07-4, 65 NRC 281, 304 (2007); *Southern Nuclear Operating Co.*, (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007). However, the potential for future license amendment applications for additional satellite or contiguous ISR sites carries two additional safeguards, both of which are currently in effect. First, as stated above in the case of ACLs, NRC regulations and guidance dictate that a license amendment application for a satellite or contiguous ISR site requires, at a minimum an EA and, if a FONSI cannot be reached, a full EIS-level analysis.¹⁸ Thus, based on this evaluation, any license amendment application for a satellite or contiguous ISR site would be fully evaluated under 10 CFR Part 51 (NEPA) environmental review regulations.

¹⁷ In Commission administrative practice, the subject matter of all contentions is limited to the scope of the proceeding delineated by the Commission in its hearing notice and referral order delegating to the Licensing Board the authority to conduct the proceeding. See *Florida Power & Light Co.*, (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 151 (2001); *PPL Susquehanna LLC*, (Susquehanna Steam Electric Station, Units 1 & 2), LBP-07-10, 66 NRC 1, 23 (2007).

¹⁸ In the case of ISR sites, given that NUREG-1910 entitled *Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities* is used to tier SEISs off its programmatic analyses, it is likely that an SEIS would be prepared if an EA-level analysis does not yield a FONSI.

Second, as noted by the Board, the potential impacts of Strata's first planned satellite or contiguous ISR site (Kendrick), as well as other potential sites, were adequately evaluated in the context of the final SEIS's section on "cumulative impacts."¹⁹ NRC specifically requested additional information on the potential satellite or contiguous ISR sites, so that it could complete its cumulative impacts analysis for the draft and final SEISs. Thus, even in the face of Petitioners' assertion that these potential sites required further detailed evaluation, NRC's final SEIS specifically addressed the potential cumulative impacts of such sites on the Ross project and surrounding industries. NRC recognized that the Ross project could be independently operated without other potential satellite or contiguous sites that were addressed in NRC's final SEIS cumulative impacts analysis.

Therefore, as correctly stated by NRC, Petitioners have not demonstrated that there is any factual or legal error associated with the Board dismissal of Contention 6, and this Court should uphold the Commission's determination to uphold the Board's decision to dismiss Contention 6.

C. The Commission Correctly Upheld the Board's Decision Not to Migrate Petitioners' Contention 4/5 on Cumulative Impacts

Petitioners claim that the Board should have migrated their proffered Contention 4/5 from a challenge to Strata's license application to a challenge of

¹⁹ See *Strata Energy, Inc.*, (Ross ISR Project), LBP-13-10, 78 NRC 117 at 24 (2013).

NRC's draft SEIS. The Commission's Rules of Practice (10 CFR Part 2) are clear on the requirements for pleading contentions in that the petitioner has the burden of bringing contentions meeting the pleading requirements.²⁰ Additionally, in *BPI v. AEC*, 502 F.2d 424 (D.C. Cir. 1974), this Court upheld, in part, the pleading requirements of 10 C.F.R. § 2.309 (formerly § 2.714) governing petitions to intervene. Specifically, the Court ruled that:

- (a) the requirement that contentions be specified does not violate Section 189(a) of the Act; and
- (b) the requirement for a basis for contentions is valid.

As stated by NRC in its Initial Brief, Petitioners failed to avail themselves of the opportunity to satisfy the Commission's new or amended contentions requirements at 10 CFR § 2.309(f) both when the draft SEIS was issued and when it filed with the Board for reconsideration of the dismissal of Contention 4/5. *See* Federal Respondent Brief at 50, fn 125. As stated in Commission case law, § 2.714). *Commonwealth Edison Co.*, (Zion Station, Units 1 & 2), ALAB-226, 8 AEC 381, 406 (1974); *see also Duke Energy Carolinas, LLC*, (William States Lee III Nuclear Station, Units 1 & 2), LBP-08-17, 68 NRC 431, 447 (2008) ("A contention's proponent, not the licensing board, is responsible for formulating the contention.") (quoting Statement of Policy on Conduct of

²⁰ *Duke Cogema Stone & Webster*, (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001).

Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998)). Given that Contention 4/5 as proffered by Petitioners did not comply with the express pleading requirements of 10 CFR Part 2.309, the Commission did not err when upholding the Board's refusal to reinstate this Contention. Therefore, this Court should uphold the Commission determination in CLI-16-13.

D. The Commission Correctly Upheld the Board's Determination to Impose an Additional License Condition Without Ordering Vacatur of the License or Supplementation of the Final SEIS

A major argument presented by Petitioners is based on the dissenting opinion offered by NRC Commissioner Baran in CLI-16-13 in which he opines that the Board should have suspended Strata's license pending supplementation of the final SEIS to address potential impacts of the plugging and abandonment of site boreholes. *See Strata Energy, Inc.* (Ross ISR Project), CLI-16-13, 83 NRC 566 (2016). Essentially, Petitioners argue that this dissent necessitates that any license should be stayed or vacated if additional information is identified and additional license conditions are imposed in a hearing after a license and final SEIS have been issued.²¹

²¹ It is important to note that the license condition imposed by the Board and that was implemented by NRC Staff is a far more onerous requirement in that typical practice is to plug and abandon boreholes in each wellfield as it is developed. Thus, the implementation of this license condition, as reflected by NRC Staff's supplement of the ROD is indeed more protective.

First and foremost, as stated above, the Commission is not required to comply with portions of CEQ regulations that have some substantive impact on the manner in which the Commission performs its primary regulatory responsibilities.²² NRC Staff has been delegated the authority to interpret the Commission's AEA regulations *inter alia* at 10 CFR Part 40 and Appendix A, as well as other regulations applicable to Strata's requested and currently effective NRC combined source and 11e.(2) byproduct material license pursuant to 10 CFR § 1.41(b)(18 & 19). Its interpretation of the Commission's 10 CFR Part 51 regulations yielded a result that, pursuant to 10 CFR § 51.20(b)(8), an EIS-level analysis was required for Strata's Ross project and that the use of tiering off NUREG-1910 was expressly permitted by CEQ regulations and allowed for preparation of an SEIS.²³ *See* 40 CFR § 1502.20 (2017). This document was prepared in accordance with NRC regulations and was issued in draft form for public comment. The SEIS was then finalized and submitted for United States Environmental Protection Agency (EPA) concurrence pursuant to applicable rules. Even though Strata's license was issued prior to the conclusion of the administrative litigation below and the imposition of an additional license

²² *See generally* 49 Fed. Reg. 9352 (March 12, 1984).

²³ NRC Staff prepared, issued for public comment, and finalized a programmatic or GEIS for ISR facilities that is intended to have SEISs tiered off of its programmatic findings. It is this GEIS that serves as the primary, programmatic basis for the Ross ISR Project SEIS. To date, six (6) SEISs have been prepared and finalized for ISR projects since the development of the GEIS, including the Ross ISR Project.

condition, Petitioners are not entitled to a retroactive application review based on a simple modification by the Board. NRC correctly cites to *Swinomish Tribal Community* and *Friends of the River* when noting that this Court has endorsed the practice of modification of an EIS by either Board or Commission order or the adjudicatory record, as such information or requirement is part of the final ROD under NRC's rules and regulatory practices.²⁴ Petitioners offer no contradictory precedent that would give this Court reason to overturn these case.

Moreover, 10 CFR § 2.1213 provides express requirements for parties seeking to stay the effectiveness of a license, which are substantially similar to the requirements for an injunction in adjudicatory proceedings. Petitioners failed to avail themselves of this opportunity at any point in the proceeding and have not made any attempt to make a factual showing that the process followed by NRC Staff, the Board, and the Commission and the successful operation of the Ross project for the past several months would require suspension or vacatur of the license. Most importantly, absent a showing of irreparable harm, there is no need for vacatur of Strata's license as no imminent hazard can be demonstrated. Therefore, this Court should uphold the Commission's determination that the ROD

²⁴ *Swinomish Tribal Comty v. FERC*, 627 F.2d 499 (D.C. Cir. 1980); *Friends of the River v. FERC*, 720 F.2d 93 (D.C. Cir. 1983).

is adequate to sustain Strata's license despite the imposition of a new license condition.

CONCLUSION

For the reasons discussed above, Intervenor-Respondent Strata respectfully requests that this Court deny Petitioners arguments and sustain NRC's determination that Strata's ISR uranium recovery license is compliant with the AEA and NRC's implementing regulations.

Dated this 25th day of January, 2017.

Respectfully Submitted,



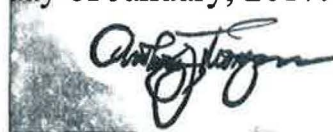
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STATEMENT WITH RESPECT TO ORAL ARGUMENT

Pursuant to Fed. R. App. P. 29(g), in the event that this Court grants oral argument to the principal parties, it is hereby requested that the Court allow Strata to participate in oral argument.

Date this 25th day of January, 2017:



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CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(a), Intervenor-Respondent Strata makes the following certifications:

1. This brief complies with the type-volume limitation of 8,750 words for briefs on behalf on Intervenors;
2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(6), because this brief has been prepared in monospaced typeface using Microsoft Word 2016 in 14 pitch font, Times New Roman Style.

Dated this 25th day of January, 2017:



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CERTIFICATE OF SERVICE

I, Anthony J. Thompson, hereby certify that I caused a true and correct copy of Strata Energy, Inc.'s Motion for Leave to Intervene to be served by United States Mail on the following this 23rd day of September, 2016:

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