UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-12-3

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before the Licensing Board:

G. Paul Bollwerk, III, Chair
Dr. Richard F. Cole
Dr. Kenneth L. Mossman

In the Matter of	Docket No. 40-9091-MLA
STRATA ENERGY, INC.	ASLBP No. 12-915-01-MLA-BD01
(Ross In Situ Recovery Uranium Project)	February 10, 2012

MEMORANDUM AND ORDER
(Ruling on Standing and Contention Admissibility)

Strata Energy, Inc., (SEI) has applied to the Nuclear Regulatory Commission (NRC) for a combined source and Atomic Energy Act (AEA) section 11e(2) byproduct materials license pursuant to 10 C.F.R. Part 40 that would authorize SEI to construct and operate an in situ recovery (ISR) uranium project at the Ross site in Crook County, Wyoming. On October 27, 2011, two public interest organizations, the Natural Resources Defense Council (NRDC) and the Powder River Basin Resource Council (PRBRC), hereinafter referred to as Joint Petitioners, together filed a hearing request seeking to intervene in that licensing proceeding to challenge SEI's application, in particular certain aspects of its environmental report (ER). SEI and the NRC staff oppose the petition on the grounds that Joint Petitioners have failed to establish their standing to intervene and have not submitted an admissible contention.

For the reasons set forth below, we find that Joint Petitioners have provided sufficient support to establish their standing "as of right" to intervene in this adjudicatory proceeding and have proffered four admissible contentions. As a consequence, we grant their intervention

petition and outline certain procedural and administrative directives regarding further litigation of the admitted contentions.

I. BACKGROUND

A. SEI's Application and Joint Petitioners' Intervention Request

On January 4, 2011, SEI submitted an application pursuant to 10 C.F.R. Part 40 for a combined source and section 11e(2) byproduct materials license.[1] See Letter from Anthony Simpson, Chief Operating Officer, SEI, to Keith McConnell, Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, NRC Office of Federal and State Materials and Environmental Management Programs (Jan. 4, 2011) at 1 (ADAMS Accession No. ML110120055). SEI proposes to construct and operate an in situ leach recovery facility adjacent to the ranching community of Oshoto in eastern Wyoming. See 1 [SEI], [ER], Ross ISR Project [NRC] License Application, Crook County, Wyoming at 1-8 (Dec. 2010) (ADAMS Accession No. ML110130342) [hereinafter SEI ER].

On July 13, 2011, the Commission published a notice of opportunity to request a hearing and to petition for leave to intervene regarding the licensing proceeding for the Ross ISR project. See [SEI], Ross [ISR] Uranium Project, Crook County, WY; Notice of Materials License Application, Opportunity to Request a Hearing and to Petition for Leave to Intervene, and

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[1] As outlined by the Commission in its decision in Sequoyah Fuels Corp. (Gore, Oklahoma Site), CLI-03-15, 58 NRC 349 (2003), section 11e(2) byproduct material is that material, as defined by AEA section 11e(2), 42 U.S.C. § 2014e(2), that is "the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content." This byproduct material category was created in 1978 by the Uranium Mill Tailings and Reclamation Act to afford the NRC regulatory jurisdiction over mill tailings at active and inactive uranium milling sites. See Sequoyah Fuels, CLI-03-15, 58 NRC at 353-54.

Commission Order Imposing Procedures for Document Access to Sensitive Unclassified Non-Safeguards Information for Contention Preparation, 76 Fed. Reg. 41,308 (July 13, 2011). The notice allowed any person whose interest might be affected by the proposed SEI ISR project to file such a request and petition, in accordance with 10 C.F.R. § 2.309, within sixty days of the notice. Subsequently, in response to a request by Joint Petitioners, the Commission extended the time to file a hearing petition by forty-five days. See Commission Order (Aug. 17, 2011) (unpublished). Joint Petitioners then submitted a hearing request regarding the SEI license application on October 27, 2011. See Petition to Intervene and Request for Hearing by [Joint Petitioners] (Oct. 27, 2011) [hereinafter Intervention Petition]. Acting on an October 31, 2011 referral memorandum from the Secretary of the Commission, on November 2 the Chief Administrative Judge established this Licensing Board to rule on the Joint Petitioners' hearing request and to conduct any hearing as warranted. See Memorandum from Annette Vietti-Cook, NRC Secretary, to E. Roy Hawkens, Chief Administrative Judge, Atomic Safety and Licensing Board Panel, Request for Hearing with Respect to Notice of Opportunity for Hearing Regarding Materials License Application for [SEI] Ross [ISR] Uranium Project, Docket No. 40-9091 (Oct. 31, 2011); [SEI]; Establishment of Atomic Safety and Licensing Board, 76 Fed. Reg. 69,295 (Nov. 8, 2011).

Thereafter, this Board granted a joint request by the participants for additional time to file their respective answers and reply brief. See Licensing Board Memorandum and Order (Initial Prehearing Order) (Nov. 3, 2011) at 2 (unpublished) [hereinafter Initial Prehearing Order]. Adhering to that revised filing schedule, on December 5, 2011, SEI and the staff submitted their answers to the Joint Petitioners' hearing request. See Applicant [SEI's] Response to [Joint Petitioners] Request for a Hearing and Petition to Intervene (Dec. 5, 2011) [hereinafter SEI Answer]; NRC Staff Response to Petition to Intervene and Request for Hearing by [Joint

Petitioners] (Dec. 5, 2011) [hereinafter Staff Answer]. Joint Petitioners followed with their reply to both answers on December 15, 2011. See [Joint Petitioners] Reply to Responses by [SEI] and the NRC Staff to Petition to Intervene and Request for Hearing (Dec. 15, 2011) [hereinafter Joint Petitioners Reply]. In accord with several Board scheduling orders,[2] on December 20, 2011, the Board convened an initial prehearing conference in the Licensing Board Panel's Rockville, Maryland hearing room. During this session, the Board heard oral presentations from the participants regarding the disputed matters of whether Joint Petitioners have established their standing to intervene in this proceeding and the admissibility of their five proffered contentions. See Tr. at 1-175.

B. ISR Process

The technical report (TR) portion of SEI's application describes the ISR process as consisting of two steps: extracting uranium from the underground ore body and processing the recovered solution into yellowcake. See 1 [SEI], [TR], Ross ISR Project [NRC] License Application, Crook County, Wyoming (Dec. 2010) at 1-6 to -7 (ADAMS Accession No. ML110130333). In the first step, an aqueous recovery solution, called lixiviant, is injected into the ore-bearing sandstone via injection wells. The lixiviant solution consists of an oxidant such as hydrogen peroxide or oxygen, a complexing agent such as sodium bicarbonate or carbon dioxide, and native groundwater. As it is pumped through the ore body, the lixiviant oxidizes and dissolves uranium contained in the ore. Recovery wells pump the pregnant (uranium-containing) lixiviant back to the surface.

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[2] Licensing Board Memorandum and Order (Initial Prehearing Conference Directives and Guidance) (Dec. 13, 2011) at 1-2 (unpublished); Licensing Board Memorandum and Order (Scheduling Initial Prehearing Conference; Opportunity for Limited Appearance Statements) (Dec. 8, 2011) at 2 (unpublished); Licensing Board Memorandum (Date for Initial Prehearing Conference) (Nov. 15, 2011) at 1 (unpublished).

At the surface, the pregnant lixiviant undergoes ion exchange at the facility's central processing plant (CPP) to extract the uranium from the lixiviant using a uranium-specific resin. Finally, the uranium is removed from the resin and precipitated into a slurry that is filtered and dried into yellowcake. The lixiviant and resin are then recycled for continued use.[3]

As the SEI ER indicates, the process of constructing and later operating the facility will involve round-the-clock onsite activities, particularly during the construction phase. The construction and operation of the facility also will generate additional traffic (and any associated dust) on the Ross site and on local roads as materials and supplies are brought into the facility and dried uranium yellowcake and waste materials, including section 11e(2) byproduct material, are transported out of the facility for, respectively, further conversion into more enriched products or disposal. See 2 SEI ER at 4-14 to -29, 4-99, 4-105 to -106, 5-58 (ADAMS Accession No. ML110130344).

II. ANALYSIS

A. Joint Petitioners' Standing

1. Standards Governing Standing

For an individual or organization to be deemed a "person whose interest may be affected by the proceeding" under AEA section 189a, 42 U.S.C. § 2239(a)(1)(A), so as to have standing "as of right" such that party status can be granted in an agency adjudicatory proceeding, the

[3] The ISR process, which sometimes is also referred to as the in situ leach (ISL) process, has been similarly described by other licensing boards. See Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC __, __-__ (slip op. at 7-8) (Aug. 5, 2010); Crow Butte Res., Inc. (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 704 (2008), aff'd in part, rev'd in part, and remanded, CLI-09-9, 69 NRC 331 (2009) [hereinafter Crow Butte II]. The ISL and ISR processes are the same, with ISR being a newer term. See Dewey-Burdock, LBP-10-16, 72 NRC at __ n.28 (slip op. at 7 n.28).

intervention petition must include a statement of (1) the petitioner's name, address, and telephone contact information; (2) the nature of the petitioner's right under the AEA to be made a party; (3) the nature of the petitioner's interest in the proceeding, whether property, financial or otherwise; and (4) the possible effect of any decision or order that might be issued in the proceeding on the petitioner's interest. See 10 C.F.R. § 2.309(d)(1)(i)-(iv). In assessing this information to determine whether the petitioner has established its standing, the Commission generally applies contemporaneous judicial standing concepts in section 189a adjudicatory proceedings, inquiring whether the participant has established that (1) it has suffered or will suffer a distinct and palpable injury that constitutes injury-in-fact within the zones of interest arguably protected by the governing statutes (e.g., the AEA, the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321, et seq.); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. See Yankee Atomic Elec. Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996). An organization that asserts it has standing to intervene in its own right, i.e., organizational standing, must establish a discrete institutional injury to the organization's interests, which must be based on something more than a general environmental or policy interest in the subject matter of the proceeding. See International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001). Alternatively, an entity may seek to demonstrate its standing to intervene on behalf of its members, i.e., representational standing, but that entity must then show it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests. See Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

Finally, in assessing a petition to determine whether these elements are met, which a presiding officer must do even if there are no objections to a petitioner's standing, there are a number of important benchmarks that we are to apply. Initially, "the petitioner bears the burden to provide facts sufficient to establish standing." PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139 (2010). Generally speaking, to meet this burden it is sufficient "if the petitioner provides plausible factual allegations that satisfy each element of standing." U.S. Army Installation Command (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), LBP-10-4, 71 NRC 216, 229 (2010) (citing Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992)), aff'd, CLI-10-20, 72 NRC __ (Aug. 12, 2010). Moreover, in assessing whether a petitioner has demonstrated its standing, a licensing board is to "construe the petition in favor of the petitioner."[4] Georgia Inst. of Tech. (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). At the same time, however, if a petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether the standing element at issue has been satisfied. See Schofield Barracks, LBP-10-4, 71 NRC at 230 & n.14 (citing Bell Bend, CLI-10-7, 71 NRC at 139; Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 410 (2007); Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000)).

[4] There is also a precept that a board must afford latitude to a pro se petitioner in considering that petitioner's pleadings, see PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), LBP-09-18, 70 NRC 385, 396-97 (2009), aff'd on other grounds, CLI-10-7, 71 NRC at 141, which is not a consideration here in that Joint Petitioners are represented by counsel.

We apply these general rules and guidelines in evaluating the Joint Petitioners' standing presentation. Because each of the Joint Petitioners claims standing on the same basis, we consider the Joint Petitioners' standing to intervene together.

2. Ruling on Standing

DISCUSSION: Intervention Petition at 3-8; SEI Answer at 29-44; Staff Answer at 8-13; Joint Petitioners Reply at 2-12; Tr. at 10-51.

RULING: In their initial hearing request, Joint Petitioners provided some information about the activities and interests of NRDC and PRBRC and their members that suggest they might be seeking organizational intervention status. See Intervention Petition at 3-4, 8; see also id. Declarations at 1-2 (Declaration of Linda Lopez (Oct. 20, 2011) (on behalf of NRDC)); id. at 3-5 (Declaration of Wilma Tope (Oct. 24, 2011) (on behalf of PRBRC)).[5] Their counsel represented at the December 20 oral argument that this was indeed the case. See Tr. at 11. It is apparent, however, that for both of these organizations, the general environmental and policy interests that they champion -- the former on a national level and the latter on a more regional/local basis -- and that they assert could be degraded or impaired by the licensing action at issue here are "of the sort [that] repeatedly have [been] found insufficient for organizational standing." White Mesa, CLI-01-21, 54 NRC at 252; see Cogema Mining, Inc. (Irigaray and Christensen Ranch Facilities), LBP-09-13, 70 NRC 168, 191 (2009) (concluding PRBRC lacks organizational standing).

[5] In citing these declarations, as well as the other declarations provided in support of Joint Petitioners' hearing request, we will reference the comprehensive "Bates" numbering that is provided for all the declarations attached to their intervention petition rather than the numbering for the particular declaration.

As a consequence, any demonstration of standing by Joint Petitioners will have to be on the basis of their claims regarding representational standing.[6] To this end, they rely on the declaration of a single individual, Pamela Viviano, who claims, among other things, membership in both NRDC and PRBRC and states that those organizations are authorized to represent her interests in this proceeding. See Intervention Petition, Declarations at 6 (Declaration of Pamela Viviano (Oct. 21, 2011)) [hereinafter Viviano Declaration].

In a materials licensing action, for the purpose of ascertaining if a hearing requestor has standing based on radiological impacts, "whether a petitioner could be affected by the licensing action must be determined on a case-by-case basis, taking into account the petitioner's distance from the source, the nature of the licensed activity, and the significance of the radioactive source." Schofield Barracks, CLI-10-20, 72 NRC at __ (slip op. at 3) (footnote omitted). And the standing regime to which we must look in the first instance is whether, in lieu of the usual injury and causation showings, the petitioner has been able to establish "promixity plus" by showing "(1) that the proposed licensing action involves a 'significant source' of radiation, which has (2) an 'obvious potential for offsite consequences.'" Id. at __ (slip op. at 3-4) (footnote omitted) (quoting Sequoyah Fuels Corp. (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)). If these elements of proximity-based standing are not demonstrated, then standing must be established according to traditional standing principles

[6] In their hearing petition, Joint Petitioners represent that their organizations have members who have visited and plan to visit the Devils Tower National Monument, which is some ten miles from the proposed Ross facility, and are interested in preserving the site's viewshed and aesthetic integrity. See Intervention Petition at 8. To the extent this assertion is intended as an additional basis for Joint Petitioners' organizational standing claim, it provides no information that would bolster any effort to establish such standing. Alternatively, if this claim is intended as a basis for representational standing, it lacks the necessary supporting declarations from the unnamed members identifying themselves, outlining their interests, and authorizing Joint Petitioners to represent them in this proceeding. See Palisades, CLI-07-18, 65 NRC at 409.

that, along with the usual showing of redressability, require a specific showing of injury and causation. See id. at __ (slip op. at 4); see also Exelon Generation Co. (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 581 (2005).

Before us, Joint Petitioners have made no attempt to establish that any "promixity plus" presumption should be applicable to the licensing action they are challenging. See Crow Butte Res., Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 272-73 (2008), aff'd as to ruling on standing, CLI-09-12, 69 NRC 535, 544-48 (2009) [hereinafter Crow Butte I]. As a consequence, we must look to the traditional standing precepts of injury and causation, as well as redressibility, to determine whether Joint Petitioners have made a sufficient factual and legal demonstration regarding their standing to intervene.

Toward that end, relying upon the terms of Ms. Viviano's affidavit as well as allegations provided in the three technical affidavits submitted as support for Joint Petitioners' five contentions and the technical and environmental reports accompanying SEI's application, Joint Petitioners seek to establish that the injury, causation, and redressibility elements of standing have been met. More specifically, Joint Petitioners contend that several different injuries to Ms. Viviano that can be caused by the activities associated with the proposed Ross ISR facility will be redressible if Joint Petitioners are allowed to challenge the requested authorization in this proceeding. In particular, Joint Petitioners claim that impacts arising from aquifer/surface water contamination, traffic and dust, light pollution, and property value decline associated with Ms. Viviano's residential and investment properties, as well as the cumulative effects of this ISR project and other past and future ISR and non-ISR projects that are in the vicinity of the Ross facility and Ms. Viviano's residential and investment properties, are more than sufficient to establish their representational standing. On each count, however, SEI and the staff disagree

and assert that Joint Petitioners have failed to establish Ms. Viviano's standing and, concomitantly, their representational standing.

a. Allegations Regarding Aquifer/Surface Water Contamination, Property Value Decline, and Cumulative Impacts Fail to Provide a Basis for Standing

In reviewing the five items upon which Joint Petitioners assert Ms. Viviano's (and their) standing rests, we are skeptical as to whether three -- aquifer/surface contamination, property value decline, and cumulative impacts -- afford Joint Petitioners any support for their representational standing claim. With respect to aquifer contamination, Ms. Viviano in her sworn affidavit indicates that she resides on a ranch approximately ten miles to the northeast of the Ross facility and owns a piece of investment property some seven miles to the southeast of the facility and that these properties have wells with depths of between 300 and 700 feet that provide a potable water supply from the Inyan Kara aquifer.[7] See Viviano Declaration at 6-8. Although the Ross facility will, according to the SEI application, seek to extract uranium from an ore body in the Lance/Fox Hills aquifer that, at the facility site, is approximately 4000 feet above the Inyan Kara aquifer, SEI claims there is at least a 1000 foot layer of impermeable shale (the Pierre Shale) between the Lance/Fox Hills aquifer and the Inyan Kara aquifer.[8] See 1 SEI ER at 3-77 (fig. 3.3-5); see also SEI Oral Argument Exh. 1.[9] Ms. Viviano declares, however, that

[7] Although Ms. Viviano's affidavit does not specify the name of the aquifer that serves her residential and investment properties, in Joint Petitioners' reply brief and at the oral argument it was acknowledged that the aquifer is the Inyan Kara aquifer. See Joint Petitioners Reply at 6; Tr. at 121.

[8] At the site of Ms. Viviano's properties, the Inyan Kara aquifer lies near the surface. SEI has provided information indicating that by the time the Inyan Kara aquifer has reached the Ross site to the west of her properties, that aquifer has plunged to a depth of some 4000 feet and is overlaid by the Pierre Shale and other strata, including the near-surface Lance/Fox Hills layer. See SEI Answer at 33; see also SEI Oral Argument Exh. 1.

[9] With respect to the SEI oral argument exhibit referenced above, this item, along with (continued...)

she is concerned about contamination of the Inyan Kara aquifer by reason of a connection between these aquifers based on the 5000-plus oil and gas bore holes she maintains exist both within and beyond the Ross project area and extend to depths of six-to-seven thousand feet, many of which she asserts have been improperly plugged and abandoned.[10] See Viviano Declaration at 6, 8; Joint Petitioners Reply at 6 & n.1.

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[9](...continued)
two other so-called "exhibits," were filed by SEI on December 16, four days before the scheduled oral argument. In a submission that accompanied these items, SEI indicated that they "are intended to provide the Licensing Board and all parties appropriate points of reference based on information included in [SEI's] license application when discussing standing and admissible contentions during the course of the scheduled oral argument." Submission of Oral Argument Exhibits (Dec. 16, 2011) at 1. That filing also indicated that "[SEI] has consulted with both [Joint Petitioners] and NRC Staff counsel on this filing and received no objections, although [Joint Petitioners] reserve[] [their] right to object to the substance of the exhibits at a later time." Id. at 2. Just before beginning the participants' oral argument presentations, the Board raised with Joint Petitioners' counsel the question whether they had any objection to the items, which in addition to being submitted electronically were brought into the hearing room on poster boards, and was advised that "[w]e didn't see it until Friday afternoon and we will want to talk about how that exhibit could be interpreted today, which we can do in the course of argument." Tr. at 10. As a consequence, although these items were not admitted as evidentiary exhibits, they were referenced and discussed by the participants and the Board during the argument.

We would add as well that, as was represented by SEI in its December 16 submission, two of the "exhibits" were based upon one or more figures from the SEI ER, albeit with shadings, call-outs, and additional background mapping added for enhancement. See SEI Oral Argument Exh. 1 (based on 1 SEI ER at 3-75 (fig. 3.3-3), 3-76 (fig. 3.3-4), 3-77 (fig. 3.3-5)); SEI Oral Argument Exh. 2 (based on 1 SEI ER at 3-199 (fig. 3.4-1)). This, however, does not appear to be the case relative to a major portion of the third item, which seems to have been created for the argument. See SEI Oral Argument Exh. 3 (windrose figure based on SEI ER addendum 3.6-B, Site-Specific Meteorology and Climatology Data (rev. Feb. 2011) at 21 (fig. 6)) (ADAMS Accession No. ML11321A153), with no ER attribution for map with accompanying callouts).

[10] In her affidavit, Ms. Viviano also indicates she is concerned that the large amounts of water used in the ISR processing and restoration phases will draw down the Fox Hills aquifer and, concomitantly, the aquifers above it. See Viviano Declaration at 7. Whatever relevance this assertion might have relative to Joint Petitioners' contentions, in particular their contention 4, it fails to provide any basis for representational standing since at the Ross site the Inyan Kara aquifer that is the source of water for her properties is located well below the Fox Hills aquifer. See supra n.8; see also 1 SEI ER at 3-77 (fig. 3.3-5); SEI Oral Argument Exh. 1.

In this instance, however, we do not consider dispositive either the SEI claim regarding the impermeability of the intervening shale formation or Ms. Viviano's allegation that the bore hole information upon which she relies would be sufficient to establish the requisite "plausible path" between the Lance/Fox Hills and Inyan Kara aquifers in the vicinity of the Ross site.[11] Rather, we consider important in this context the circumstance that both Ms. Viviano's home and investment properties, located ten and seven miles from the Ross facility, are locations "upgradient of the proposed mining area." Dewey-Burdock, LBP-10-16, 72 NRC at __ (slip op. at 18). Acknowledging that the gradient-induced groundwater flow in the area is from east to west, i.e., away from Ms. Viviano's properties and toward the proposed Ross facility, see Tr. at 17, Joint Petitioners assert that this is not a relevant factor because the issue is not whether her particular wells have the potential to be contaminated, but whether the aquifer from which her wells draw their water will be contaminated, see Tr. at 18.[12] We disagree. As the

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[11] Certainly, the question of the extent of possible groundwater contamination as the basis for standing has been the focus of several recent board determinations in ISR licensing cases. For petitioners claiming to be using water from the same aquifer that was to be employed as the uranium ore source, whether living at a distance of one mile or fifty miles from the facility in question, licensing boards have found that a "plausible pathway" connecting the proposed mining operation to their water source has been shown with plausible factual allegations so as to establish the petitioner's standing. See Dewey-Burdock, LBP-10-16, 72 NRC at __ (slip op. at 16); Crow Butte II, LBP-08-24, 68 NRC at 709 & n.77; Crow Butte I, LBP-08-6, 67 NRC at 281-82. On the other hand, when the ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between these aquifers. In such circumstances, board approaches have been more varied. Although standing has been found in several instances, see Crow Butte II, LBP-08-24, 68 NRC at 708-10; Crow Butte I, LBP-08-6, 67 NRC at 278-80, 282-84, 288-89, one board concluded that the circumstances involved did not support a determination that the petitioners had established their right to intervene, see Dewey-Burdock, LBP-10-16, 72 NRC at _ -_ (slip op. at 16-18).

[12] In this regard, although Joint Petitioners had access to three individuals with academic and professional qualifications in the areas of hydrology, geology, and biochemistry, see Intervention Petition, Declarations at 11 (Declaration of Robert E. Moran on Behalf of [Joint Petitioners] (Oct. 24, 2011)) [hereinafter Moran Declaration]; id. at 69-72 (Declaration of Dr. Ronald L. Sass on Behalf of [Joint Petitioners] (Oct. 25, 2011)) [hereinafter Sass Declaration];

(continued...)

Dewey-Burdock board observed, when petitioners "considerably upgradient of the mining area . . . fail to explain how contaminated material from the [ISR] site might plausibly enter their drinking water, they fail to demonstrate they fulfill the causation element necessary to establish their standing." Dewey-Burdock, LBP-10-16, 72 NRC at __ (slip op. at 18).[13] And this is particularly so when, as is the case in this instance, the challenged allegation lacks any relevant scientific or technical support.[14] See Schofield Barracks, LBP-10-4, 71 NRC at 230 n.14.

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[12](...continued)
id. at 105-06 (Declaration of Dr. Richard Abitz on Behalf of [Joint Petitioners] (Oct. 23, 2011)) [hereinafter Abitz Declaration], the focus of their supporting experts' affidavits is contamination at the Ross facility site, with no specific mention of the possibility of, or mechanics that might be involved in, water contamination at the site of Ms. Viviano's wells that are upgradient and some miles away from the proposed Ross facility.

[13] Admittedly, our determination here may raise concerns about a "slippery upslope" to the degree our decision, in conjunction with the Dewey-Burdock ruling, could be construed to suggest that a petitioner with a well located on property upgradient of an ISR facility cannot be found to have standing relative to that facility based on potential groundwater contamination. This is not the case. Of course, as would be the situation with a petitioner located downstream from such a facility, see Crow Butte I, LBP-08-6, 67 NRC at 288-89 (standing found for petitioner fishing river sixty miles downstream from proposed ISR facility expansion alleged to allow drainage into river from operations), a petitioner situated downgradient might be able to provide a less exacting explanation to establish the plausibility of the possible harmful waterborne impacts asserted to establish its standing. So too, a petitioner whose property is upgradient but nonetheless located in close proximity to a proposed ISR facility may be able to establish its plausible pathway with a less particularized showing. See id. at 281 (petitioner with well within 1.5 miles of proposed facility expansion boundary found to have standing). But as the distance increases from the ISR facility, the petitioner with an upgradient water source must expect that it will be called upon to deal with the factual circumstances that exist and provide the board with some analysis, which is missing in this instance, as to how any contamination will come to affect any wells alleged to be impacted by the facility, given the distance involved. See Dewey-Burdock, LBP-10-16, 72 NRC at __ (slip op. at 14).

[14] Although Joint Petitioners' technical experts certainly do suggest that the various oil and gas bore holes may have provided a mechanism for interconnection of the Lance/Fox Hills and Inyan Kara aquifers, they provide nothing that addresses the question of how, given their upgradient location, see supra p. 13, Ms. Viviano's particular wells might be affected via such an interconnection. The same is true for the map depicting oil and gas wells greater than 4600 feet provided as an attachment in support of Joint Petitioners' reply pleading, see Joint Petitioners Reply attach. 1, which denotes the closest oil and gas wells as being approximately four miles and six miles to the west of Ms. Viviano's residential and investment properties,
(continued...)

Moreover, in our estimation the same result appends to the question of surface water contamination, which has played a significant role in standing determinations in recent ISR cases as well. See, e.g., Crow Butte I, LBP-08-6, 67 NRC at 284-87. In her declaration, Ms. Viviano does state that contaminated leach solution spills, leaks, and excursions "could cause contamination of our well water, as well as the surface waters that run northeast from the mining area." Viviano Declaration at 7. Unrefuted, however, is information from SEI indicating that Ms. Viviano's residential and investment properties either are (1) not downstream from the Little Missouri River that receives any surface water flow from the vicinity of the Ross facility; or (2) located in a totally different river basin from the Ross project. See SEI Answer at 36; see also 1 SEI ER at 3-199 (fig. 3.4-1); SEI Oral Argument Exh. 2. Thus, to the degree her otherwise unexplained statement was intended to imply that surface water contamination from the facility will reach her properties, it fails to establish the requisite plausible pathway.

Regarding the matter of a possible decline in property values for Ms. Viviano's residential and investment properties, in her affidavit Ms. Viviano states that

> another potential impact is that the value of [our residential] property will drop, due to the close proximity of a uranium operation . . . , [or] the pool of potential buyers could shrink, as many people are not willing to buy close to a uranium operation. Therefore, we could suffer a negative financial impact from reduced property values due to the proposed site.

Viviano Declaration at 8. She expresses similar concerns about her investment property, particularly given the importance of an uncontaminated "working well" in maintaining the property's value, also asserting that "[a] loss of value in this property will result in the loss of much of our invested retirement money, and thus cause us a great deal of economic hardship for our future retirement." Id. Joint Petitioners maintain that these assertions about loss of

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[14](...continued)
respectively.

property values are sufficient to establish Ms. Viviano's standing in this proceeding so as to allow them, as her representative, to litigate all their proffered contentions.[15]

In our view, however, what is necessary is a showing from the petitioner (or the individual it seeks to represent) that the purported economic loss has some objective fundament, rather than being based solely on the petitioner's (or affiant's) perception of the economic loss in light of the proposed licensing action. See Pac. Gas & Elec. Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 432 (generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing), aff'd, CLI-03-1, 57 NRC 1 (2003). This nonsubjective showing could, for example, be provided by demonstrating the value of property at a comparable distance from another ISR facility had dropped from what it was prior to the submission of a license application. Alternatively such a showing might be based on actual sales/offers before and after the licensing proposal at issue in the proceeding, or by providing the declaration of a local realtor or property appraiser who furnishes an independent assessment of the property's value before and after the licensing action was proposed before the agency.[16] Nothing like this is included in Ms. Viviano's affidavit or with Joint Petitioners'

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[15] In so doing, Joint Petitioners acknowledge the existing case law that standing claims based on economic impacts, such as Ms. Viviano's, are only cognizable in agency proceedings with regard to NEPA-based concerns. See Tr. at 19-20; see also Houston Lighting & Power Co. (Allens Creek Nuclear Generating Station), ALAB-582, 11 NRC 239, 242 (1980) (citing Tennessee Valley Auth. (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1420-21 (1977)).

[16] A more subjective appraisal of declining property values might be permissible in, for instance, the context of a licensing action associated with an applicant or facility shown to have engaged in a "continuous and pervasive" course of illegal conduct. Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. 167, 184 (2000). Nothing presented to us in this instance, however, provides a plausible ground for permitting an otherwise unsubstantiated assessment of property values to establish the basis for Ms Viviano's (and Joint Petitioners') standing.

other filings. As such, in this instance we cannot accord Ms. Viviano, or Joint Petitioners as her representatives, standing based on economic loss.

Also unavailing is Joint Petitioners' assertion of standing based on cumulative impacts. Joint Petitioners made no claims about the cumulative impacts of the Ross facility relative to other past, present, and future local ISR and non-ISR facilities as a grounds for standing in their initial hearing petition. But in the wake of the staff's acknowledgment in its answer that, in staff's estimation, at least portions of Joint Petitioners' contentions 4 and 5 regarding cumulative impacts are admissible as they relate to what SEI has indicated is a proposed future Lance District expansion of the Ross Project facility, Joint Petitioners in their reply brief also proffer these impacts as a potential standing basis. Compare Intervention Petition at 3-8 with Joint Petitioners Reply at 6-10. Although both SEI and the staff contend that a concern about NEPA-related cumulative impacts cannot be a basis for standing, see Tr. at 33-34, 41-44, even if we assume cumulative impacts can be the basis for standing, there is still a significant problem with Joint Petitioners' attempt to interpose such impacts as grounds for standing here. Nothing in Ms. Viviano's affidavit indicates she has a concern that she will suffer any harm relative to purported cumulative impacts associated with any past, existing, or proposed ISR or non-ISR facilities.[17]

[17] In her affidavit, Ms. Viviano does make reference to a "long history of spills, leaks, and excursions of the contaminated leach solutions" at ISR sites in Wyoming, Nebraska, and Texas, and a concern about groundwater restoration at undesignated ISR sites in Wyoming, as well as about aquifer depletion at otherwise undesignated ISR sites. Viviano Declaration at 6-8. These claims regarding the ISR process are much too imprecise to provide an appropriate basis for standing relative to any purported cumulative impacts on Ms. Viviano or her properties. So too, her claims regarding the impact of oil and gas drilling bore holes, see id. at 6-7, are associated with her particular concerns about contamination of the Inyan Kara aquifer rather than any cumulative impacts.

b. Allegations Regarding Traffic and Dust and Light Pollution Do Provide a Basis for Standing

While Joint Petitioners' showings regarding aquifer/surface water contamination, property value decline, and cumulative impacts fail to establish Ms. Viviano's, and thus Joint Petitioners', standing, Joint Petitioners' assertion regarding standing based upon the discussion in Ms. Viviano's affidavit about traffic and dust proves to be more fruitful. In this regard, Ms. Viviano's affidavit states:

> Another potential negative impact from this site would be the increase in traffic on our road during the construction of the site and the operational phase. These roads are dirt and gravel, and any traffic results in a dust problem. The increased traffic would cause a health hazard to us and to all those with homes along these roads.

Viviano Declaration at 8. As this statement makes apparent, the concern expressed relates to the possibility of dust from increased traffic associated with construction or operation of the site as it relates to those, including Ms. Viviano, with homes along the roads that might experience such traffic.[18] In their reply brief, Joint Petitioners further assert that while SEI and the staff claimed that Ms. Viviano's residence is too far from the Ross project to suffer any real impact, this

> ignore[s] the fact that a number of unpaved roads in the project vicinity may see substantially increased traffic, including D Road and New Haven Road (or Oshoto County Road). These roads connect Ms. Viviano's property to the nearby towns of Gillette and Moorcroft, and she uses them regularly to come to and from her property. The proposed Ross Project will likely increase traffic

[18] Joint Petitioners hearing request describes this concern as outlined in Ms. Viviano's affidavit as "increased traffic and dust (along with health problems that may result from dust)." Intervention Petition at 6. And notwithstanding Ms. Viviano's expressed concern about "all those with homes along these roads," Viviano Declaration at 8, our concern in making a standing determination is with the impact on Ms. Viviano, who is the only person that has provided information indicating she has given authorization to Joint Petitioners to represent her interests. See supra n.6.

> and dust on the these roads, and Ms. Viviano will suffer injury as a result.

Joint Petitioners Reply at 5.

A descriptive shortcoming exists with respect to Joint Petitioners' reply brief suggestion that Ms. Viviano, by reason of driving in the vicinity of the Ross facility, will incur negative health impacts from fugitive dust. Ms. Viviano's affidavit says nothing about any concern she might have regarding harmful impacts that relate to her driving near the facility. And while a petitioner has some latitude to supplement or cure a standing showing in its reply pleading, any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit. See South Carolina Elec. & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 (2010) (reply pleading and supplemental declarations appropriately clarified original affidavits). In this instance, however, Ms. Viviano's only affidavit makes no mention of her driving in the vicinity of the facility,[19] or of any harm from

[19] Although it was suggested at the oral argument in support of this reply brief assertion that the county roadways to the west of Ms. Viviano's residence that run past the Ross facility are Ms. Viviano's "only way to access I-90, which is to the south," Tr. at 12, given where Ms. Viviano lives, this does not account for the availability of a route from her residence to the east that eventually goes south out of Hulett to I-90, see Tr. at 14. In any event, we have no allegations from Ms. Viviano indicating whether, and to what extent, she utilizes either of these routes.

such an activity,[20] so as to provide support for Joint Petitioners' representational standing on the basis of contacts by Ms. Viviano with the Ross project area.[21]

The same is not true for Ms. Viviano's assertion that a standing-cognizable dust impact will occur relative to increased traffic on the dirt road that abuts her residential property. While acknowledging that traffic along certain local roads will increase in both the construction and operational phases of the Ross facility, see 2 SEI ER at 4-18 to -19, the SEI ER also indicates that this traffic during construction and operations, particularly truck traffic, is likely to generate fugitive dust and that various dust mitigation measures will need to be implemented, including (1) speed limits for SEI employees and contractors traveling to and from the facility on local access roads; (2) strategically-placed dust control water loadout facilities within the Ross project

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[20] Although a nonspeculative showing regarding increased traffic accidents could be another impact of increased road usage that might establish standing, see White Mesa, CLI-01-21, 54 NRC at 253, this concern was not raised in Ms. Viviano's affidavit or Joint Petitioners' filings. Moreover, while fugitive dust generated onsite at a facility, particularly during construction, can be a concern in the vicinity of a facility, see AREVA Enrichment Servs., LLC (Eagle Rock Enrichment Facility), LBP-11-26, 74 NRC __, __-__ (slip op. at 58-68) (Oct. 7, 2011), Ms. Viviano's declaration makes no mention of fugitive dust impacts from the facility (as opposed to dust from facility-related traffic using the road that she asserts goes by her property). Further, although disputing whether wind direction data provided by SEI, which shows that at Oshoto for a one-year period between January 2010 and January 2011 the prevailing winds were not in the direction of either of Ms. Viviano's properties, accurately reflects the actual situation on a daily, monthly, and seasonal basis, see Tr. at 47 (discussing SEI Oral Argument Exh. 3), Joint Petitioners have provided us with no grounds, other than the generally windswept nature of eastern Wyoming, that suggest fugitive dust from the Ross facility will have a health and safety impact on Ms. Viviano's investment or residential properties that are at least seven miles away from the Ross facility.

[21] During the December 20 oral argument, Joint Petitioners referred several times to the possibility of submitting supplements to support various claims. See Tr. at 14, 22, 48. The time for such supplementation, however, was when Joint Petitioners submitted their reply brief. While the seven days generally afforded a petitioner to file its reply under the agency's rules of practice, see 10 C.F.R. § 2.309(h)(2), is relatively short, the impact of this abbreviated time frame was mitigated somewhat in this instance by the participants' agreement regarding the schedule for their post-hearing petition filings that afforded additional time both to SEI and the staff to file their answers to Joint Petitioners' hearing request (fourteen additional days) and to Joint Petitioners to file their reply (three additional days). See Initial Prehearing Order at 2.

area's access roads; (3) use of dust suppression chemicals; and (4) selection of road surface materials that will minimize fugitive dust. See id. at 4-89 to -90, 4-91, 4-93, 5-58 to -59, 5-60 to -61. Thus, notwithstanding the claims of SEI and the staff to the contrary, see Tr. at 30-32, 37-40, the health-impact potential of facility traffic-associated dust, if properly pled, could provide a basis for standing. Cf. White Mesa, CLI-01-21, 54 NRC at 253 (given facility produces wet sludge, allegations regarding dust impacts associated with driving past milling facility on a daily basis are unfounded conjecture).

And in that regard, we recognize that despite the fact the ER makes no mention of any traffic increase to the northeast via the dirt New Haven Road,[22] the road that eventually goes past Ms. Viviano's residence before heading to the southeast (as County Road 105) toward the town of Hulett (estimated 2009 population 516, see id. at 3-378 (tbl. 3.10-1)),[23] we cannot say that it is implausible that the proposed Ross facility will generate some increase in traffic via this northeast route in the form of trucks or workers' passenger vehicles. This, in combination with Ms. Viviano's unrebutted averment that "any traffic results in a dust problem" on the road abutting her property and the Commission's admonition to "construe the petition in favor of the petitioner," Georgia Tech Research Reactor, CLI-95-12, 42 NRC at 115, is, in our view,

[22] That the New Haven Road is, in fact "dirt and gravel" as Ms. Viviano asserts, is apparent from the 2011-12 American Automobile Association Wyoming/Colorado roadmap. See 10 C.F.R. § 2.337(f)(1).

[23] The SEI ER only indicates that the traffic increase associated with the Ross project, which the ER acknowledges could be three-fold during construction, is anticipated to be on the portions of the New Haven Road (County Road 164) and the D Road (County Road 68) going south from the facility, toward the east/west-running Interstate 90 and the cities of Moorcroft and Gillette (estimated 2009 populations 926 and 28,726, respectively, see 2 SEI ER at 3-378 (tbl. 3.10-1)). See id. at 4-18 to -20, 4-31 to -32 (tbls. 4.2-1 & 4.2-2).

sufficient to establish the injury and causation elements necessary to afford Ms. Viviano standing relative to this dust impact claim.[24]

The other purported harm outlined in Ms. Viviano's affidavit that we conclude is sufficient to establish her standing is the possibility of light pollution. In her declaration she states that "lights from operating [the Ross facility] on a 24[-]hour schedule could interfere with the clear views of the night skies that we now enjoy."[25] Viviano Declaration at 8. And as is the case with fugitive dust, light pollution is a matter of concern as a proposed nuclear materials facility undergoes agency licensing review. See Eagle Rock, LBP-11-26, 74 NRC at __-__ (slip op. at 101-02). Indeed, the SEI ER analysis of potential visual and scenic resources notes the possibility of lights associated with the facility creating a visual impact at night and discusses mitigation measures to address such impacts on eleven residences that lie within a two-mile visual resource study area surrounding the proposed facility. See, e.g., 2 SEI ER at 3-348, 4-106, 5-58 (during wellfield construction, nighttime operation of lighted drill rigs is possible, increasing the potential for visual impact, which can be mitigated by minimizing nighttime drilling, turning any lights away from nearby residences, and restricting proximity of

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[24] We would add that Ms. Viviano's averment that the environmental contentions proffered by Joint Petitioners will better position the agency to "fully review the possible impacts of [SEI's] proposed ISL mining and milling project and based on [Joint Petitioners] and their experts' information, may address concerns and mitigate impacts to our water, land, and other resources," Viviano Declaration at 8-9, is an assertion that is sufficient to fulfill the redressibility element of the standing requirement in a case such as this in which environmental/NEPA-related matters are raised by the petitioners. See Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 242-43, aff'd, CLI-09-22, 70 NRC 932 (2009).

[25] Ms. Viviano's affidavit makes no mention of light pollution relative to her investment property. See Viviano Declaration at 8. Also, although the visual impact of the Ross facility upon the Devils Tower National Monument, located some eleven miles to the east of the facility, see 1 SEI ER at 3-18 (tbl. 3.1-6), is the subject of one of Joint Petitioners' contentions, see section II.B.2.e infra, the visual impact of the facility at Devils Tower is not an asserted basis for Ms. Viviano's standing.

rigs to residences). Relative to Ms. Viviano's concern, however, in its answer SEI declares that Ms. Viviano's showing in this regard is deficient because she fails to provide anything to support the supposition in her affidavit that the facility would generate enough light to cause an impact at her property or to account for the regional topography, which precludes her from seeing the facility from her residence. See SEI Answer at 43-44; see also Staff Answer at 12; SEI Oral Argument Exh. 3.

In this instance, we do not find Joint Petitioners' failure to challenge the applicant's showing that the Ross facility is not visible from Ms. Viviano's property is a fatal deficiency relative to her standing, given the fact that, as anyone knows who has ever seen a search light sweeping the night sky, light pollution can still be observed from a source that is out of the line of sight. Nor do we find dispositive the assertion that the lack of a particularized showing that Ross facility-generated light can be viewed from her property establishes the lack of plausibility for her claim about visual impacts on her property given (1) the SEI ER's acknowledgment that this facility located in the relatively flat and unpopulated confines of eastern Wyoming will have a visual impact that includes night illumination; and (2) the Commission's admonition to "construe the petition in favor of the petitioner," Georgia Tech Research Reactor, CLI-95-12, 42 NRC at 115. Under these circumstances, we consider her showing adequate to establish her standing.[26]

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[26] In fact, what is most disconcerting with regard to Joint Petitioners' attempt to establish this visual impact as an adequate grounds for standing is Ms. Viviano's statement in her affidavit that "the skies in our area are free of any lights, as the closest town of approximately 400 people is over 10 miles away." Viviano Declaration at 8. SEI suggested during oral argument that the town of Hulett referred to by Ms. Viviano in her affidavit actually is at a distance of less than eight miles from her residence, see Tr. at 29, a claim that appears to be borne out by Google Maps and Mapquest searches of the distance from her address (as provided in her affidavit) to Hulett. See 10 C.F.R. § 2.337(f)(1). Based on the information now before us, it is not clear to the Board how Hulett, with its lighted residences and retail businesses that seemingly are two miles closer to the east, apparently produces no discernable

(continued...)

Thus, although the issue of standing is a close one, we conclude Ms. Viviano's allegations regarding dust and traffic and light pollution are sufficient to provide a basis for deeming her a "person whose interest may be affected" by this proceeding in accord with AEA section 189a.[27] This, in turn, provides the grounds by which Joint Petitioners, as her

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[26](...continued)
light pollution at her residence. Nonetheless, given we have no particulars about the light emissions from either Hulett to the east or the Ross industrial facility to the west (with whatever light mitigation measures it might employ), we do not consider this sufficient to vitiate fatally the sufficiency of her light pollution-based standing showing.

[27] Given the latitude afforded the agency to define who is an "affected person" within the meaning of AEA section 189a, 42 U.S.C. § 2239(a), see Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Plant, Unit 3), CLI-09-20, 70 NRC 911, 917 n.27 (2009), and the challenge a petitioner generally would have in establishing "proximity plus" or traditional standing relative to aerial and groundwater releases, it does not seem untoward for the Commission to consider adopting, at least for the initial construction/operation authorization of major nuclear material facilities, including uranium recovery (e.g., ISR mining) and fuel cycle (e.g., uranium conversion/enrichment and fuel fabrication) sites, a standing regime that mirrors the one applicable to the construction/operation of power reactor facilities by which persons living or having substantial contacts within a fifty-mile radius of the facility are afforded standing, see id. at 916-17. There does not appear to be a "standing zone" for major materials facilities that is readily analogous to the reactor fifty-mile zone, which (perhaps not surprisingly) encompasses roughly the emergency planning zone intended to address pathways associated with the ingestion of contaminated water or food, see NRC & Federal Emergency Management Agency, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, NUREG-0654/FEMA-REP-1, at 10-17, 5-3 (rev. 1 Nov. 1980), available at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/r1/. Nonetheless, some past actions by the staff in the context of materials licensing environmental justice (EJ) assessments suggests this task is not necessarily impractical. See Policy Statement on the Treatment of [EJ] Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040, 52,047-48 (Aug. 24, 2004); Office of Nuclear Material Safety and Safeguards, [NRC], NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs at C-4 (2003) [hereinafter NUREG-1748]. A reasonable distance from these major materials facilities could be established, perhaps a radius of as much as twenty miles, within which anyone living or having substantial contacts would be afforded standing, assuming the individual provided an affidavit or other supporting information establishing his or her residential location or significant contacts within that area, in addition to any other required standing prerequisites under section 2.309(d)(1) and applicable agency case law. As is the case with reactors, having such a standing zone for major nuclear materials facilities would avoid the need to engage in a detailed review of allegations about possible plausible pathways for radiological or other impacts. For materials facilities, this is likely to stave off the parsing of items, such as

(continued...)

acknowledged representatives, can establish their standing in this particular ISR facility licensing proceeding.

B. Admissibility of Joint Petitioners' Contentions

With Joint Petitioners having established their standing, we turn to the question of the admissibility of their five proffered contentions.[28]

1. Contention Admissibility Standards

Section 2.309(f)(1) of the Commission's rules of practice specifies the requirements that must be met if a contention is to be deemed admissible. Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists in regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. See 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), (vi). In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding." Id.

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[27](...continued)
belowground hydrologic routes or aboveground dust or light pollution, that are, in the best of circumstances, difficult to plot with precision.

[28] In doing so, we recognize the well-established precept that there is no "contention-based" requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought will address that injury, a petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application. See Crow Butte II, CLI-09-9, 69 NRC at 339-40; Yankee Nuclear, CLI-96-1, 43 NRC at 6.

§ 2.309(f)(1)(iii), (iv). Failure to comply with any of these requirements is grounds for dismissing a contention. See Summer, CLI-10-1, 71 NRC at 7 & n.33. As is pertinent to this proceeding, NRC case law has further developed these requirements, as summarized below:

a. Challenges Outside Scope of Proceeding

All proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board. See 10 C.F.R. § 2.309(f)(1)(iii); Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). As a consequence, any contention that falls outside the specified scope of the proceeding must be rejected. See Pac. Gas & Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC __, __ (slip op. at 11) (Oct. 12, 2011).

b. Need for Adequate Factual Information or Expert Opinion

It is the petitioner's obligation to present factual allegations and/or expert opinion necessary to support its contention. See 10 C.F.R. § 2.309(f)(1)(v); USEC, Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006). While a board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires that the contention be rejected. See Arizona Pub. Serv. Co. (Palo Verde Nuclear Stations, Units 1, 2, and 3), CLI-91-12, 34 NRC 143, 155 (1991). Neither mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow the admission of a proffered contention. See Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). If a petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions or draw inferences that

favor the petitioner, nor may the Board supply information that is lacking. See Crow Butte I, CLI-09-12, 69 NRC at 553; Palo Verde, CLI-91-12, 34 NRC at 155. Likewise, simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention. See Fansteel, CLI-03-13, 58 NRC at 204-05.

c. Insufficient Challenges to the Application

All properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application (including the safety analysis report/TR and the ER) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact. See 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed. See Crow Butte I, CLI-09-12, 69 NRC at 557; American Centrifuge Plant, CLI-06-10, 63 NRC at 462-63.

2. Joint Petitioners' Contentions

Turning to the admissibility of Joint Petitioners' contentions under these standards, initially we observe that while Joint Petitioners have acknowledged that "this is a NEPA case" and that all of their contentions are challenges to the SEI application based on asserted NEPA-related deficiencies, Tr. at 20, for each contention they have attempted to add an AEA caveat. In an effort to "preserve any future challenges" they may wish to bring under the AEA, Joint Petitioners contend that, given the NEPA-related shortcoming identified in each contention, if the Commission were to issue a license to SEI with that deficiency unresolved, the agency would be violating the AEA's mandate to issue only licenses that are not inimical to the common defense and security and the public health and safety. Intervention Petition at 15-16 (contention 1), 19 (contention 2), 24 (contention 3), 26 (contention 4), and 32 (contention 5).

Such a "bootstrap" approach is neither necessary nor appropriate relative to contentions that Joint Petitioners themselves characterize as firmly footed in NEPA. If Joint Petitioners are unable to prevail under NEPA with respect to the issues they raise in their contentions, then the AEA will not afford them additional solace. Consequently, we consider all these contentions as raising environmental/NEPA issues, and thus we label them and rule upon their admissibility as such, a task to which we turn below. In each instance, we begin by reciting the contention as it is specified in Joint Petitioners' hearing request.

a. Environmental Contention 1: The application fails to adequately characterize baseline (i.e., original or pre-mining) groundwater quality.

> CONTENTION: The application fails to comply with 10 C.F.R. § 51.45, 10 C.F.R. Part 40, Appendix A, and NEPA because it lacks an adequate description of the present baseline (i.e., original or premining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies. The ER's departure from NRC guidance serves as additional evidence of these regulatory violations. NRC, NUREG-1569, Standard Review Plan for In Situ Leach Uranium Extraction License Applications, §§ 2.7.1, 2.7.3, 2.7.4 (2003).

DISCUSSION: Intervention Petition at 10-15; SEI Answer at 44-47; Staff Answer at 16-21; Joint Petitioners Reply at 15-18; Tr. at 51-78.

RULING: Admissible, as denominated in Appendix A to this decision, in that this contention and its foundational support are sufficient to establish a genuine material dispute adequate to warrant further inquiry.

The question framed by this contention -- whether NRC regulations and NEPA require a groundwater baseline characterization for an ISR site -- is not new to NRC adjudications. In the Dewey-Burdock ISR proceeding, in admitting a contention raising this issue, the board concluded that the applicant and staff were incorrect in their assertions that such information was not required, particularly the applicant's assertion that 10 C.F.R. § 40.32(e) prohibited the applicant from gathering complete information on baseline water quality. See Dewey-Burdock,

LBP-10-16, 72 NRC at __-__ (slip op. at 63-64). SEI and the staff essentially renew these objections here, with SEI contending (and the staff agreeing) that, regardless of whether the Dewey-Burdock ruling was correct, a subsequent agency rulemaking regarding what are impermissible activities at an ISR site prior to agency authorization to begin "construction" establishes that wellfield development, including the type of water quality assessment being sought by Joint Petitioners, is prohibited. See SEI Answer at 20-21 (citing Licenses, Certifications, and Approvals for Materials Licensees, 76 Fed. Reg. 56,951 (Sept. 15, 2011)); Tr. at 71.

As revised in September 2011, the regulatory provisions involved, section 40.32(e) and the Part 40 definition section, section 40.4, provide, respectively, that grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is "commencement of construction" by an applicant, 76 Fed. Reg. at 56,964 (to be codified at 10 C.F.R. § 40.32(e)). Further, "construction" is defined as

> the installation of wells associated with radiological operations (e.g., production, injection, or monitoring well networks associated with in-situ recovery or other facilities), the installation of foundations, or inplace assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security. The term ''construction'' does not include:
>
> . . . .
>
> (2) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;
>
> . . . .
>
> (9) Taking any other action that has no reasonable nexus to:
> (i) Radiological health and safety, or
> (ii) Common defense and security . . . ,

and "commencement of construction" is defined as

> taking any action defined as ''construction'' or any other activity at the site of a facility subject to the regulations in this part that has a reasonable nexus to:
> (1) Radiological health and safety; or
> (2) Common defense and security . . . .

Id. at 56,963-64 (to be codified at 10 C.F.R. § 40.4 (definitions of "Commencement of construction" and "Construction")).

Both SEI and the staff assert that the only way to gain the type of information needed to establish a groundwater baseline such as Joint Intervenors desire would require drilling wells that would violate these provisions, as well as the dictates of Part 40, App. A, Criterion 7, and the guidance in the staff's standard review plan for ISR applications, NUREG-1569. See SEI Answer at 18-20; Staff Answer at 16-18. On the other hand, Joint Petitioners argue that the combination of (1) the requirement in 10 C.F.R. § 51.45(b) that an ER contain "a description of the environment affected"; (2) Appendix A, Criterion 7's direction to an applicant to furnish "baseline data"; (3) Appendix A, Criterion 5B(5)(a)'s proviso that with regard to subsequent groundwater restoration, a hazardous constituent must not exceed the "background concentration" of that constituent; and (4) the Dewey-Burdock board's rejection of the SEI/staff section 40.32(e) interpretation of "construction" all point to the need now for a baseline water quality assessment of the type SEI has declared it need not prepare, at least until after it receives its license. See Joint Petitioners Reply at 15-18.

In this circumstance, we conclude that the Dewey-Burdock board's resolution of the legal question of the interpretation of "construction" under section 40.32(e) was correct and that the subsequent rulemaking revision did not change this result. In this regard, contrary to the assertions of SEI and the staff, we are unable to conclude that the September 2011 rulemaking has the definitive effect they claim. Indeed, relative to the final rule's language regarding the

"commencement of construction," the statement of considerations accompanying the final rule provides the following colloquy:

> Comment: One commenter states that the proposed regulations fail to state whether the installation of monitoring wells, a significant component of uranium recovery facilities, including in situ leach facilities, is a "construction" activity or is exempted from the definition of "construction."
>
> Response: Installation of monitoring wells that are only intended to be used to collect background data or perform background aquifer testing would be permissible. However, monitoring wells that are part of an ISR wellfield monitoring network would not be permissible because such facilities are necessary to ensure the radiological health and safety of the public and that the licensed facility is operating within standards determined by the NRC; therefore, these wells have a reasonable nexus to radiological health and safety.

76 Fed. Reg. at 56,956-57. While this agency response indicates that drilling monitoring wells that are part of the "wellfield monitoring network" would be considered construction activity, it also states that a monitoring well intended to collect "background data or perform background aquifer testing" would not fall into that category. As a consequence, we agree with the Dewey-Burdock board that, like the petitioners in that proceeding, Joint Petitioners here have framed an admissible contention that has a factual dispute, i.e., the adequacy of the baseline water quality description in the SEI ER and whether SEI must take any additional steps to fulfill its legal responsibility under 10 C.F.R. § 51.45 to provide information in its ER outlining a description of the existing water quality baseline sufficient to enable the staff to prepare its own environmental impact statement. Accordingly, we conclude that this contention should be admitted for further litigation in this proceeding.

b. Environmental Contention 2: The application fails to analyze the environmental impacts that will occur if [SEI] cannot restore groundwater to primary or secondary limits.

CONTENTION: The application fails to meet the requirements of 10 C.F.R. § 51.45 and NEPA because it fails to evaluate the virtual certainty that [SEI] will be unable to restore groundwater to primary or secondary limits.

DISCUSSION: Intervention Petition at 16-19; SEI Answer at 47-49; Staff Answer at 21-23; Joint Petitioners Reply at 18-21; Tr. at 81-110.

RULING: Admissible, as denominated in Appendix A to this decision, in that this contention and its foundational support are sufficient to establish a genuine material dispute adequate to warrant further inquiry.

With this contention, Joint Petitioners allege that when the time comes for the Ross site to cease operations, SEI (or its successor in interest) will be unable to restore the groundwater either to baseline quality (primary) or to drinking water quality (secondary) standards. This is so, according to Joint Petitioners, because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards and, therefore, Joint Petitioners declare in their contention, it is a "virtual certainty" that SEI will be unable to do so, necessitating an alternate concentration limit (ACL). See Intervention Petition at 16, 17. As a consequence, Joint Petitioners contend that SEI would be required to request that the Commission set an ACL for aqueous contaminants, see 10 C.F.R. Part 40, App. A, Criterion 5B(5)(c). And because restoring groundwater to a quality that is no lower than the ACL would necessarily result in a degradation of groundwater quality from pre-mining baseline conditions, Joint Petitioners assert that the SEI ER must outline the environmental impacts of such an ACL.

SEI disputes this claim that an ACL is inevitable, see SEI Answer at 49; Tr. at 95, 96, with both SEI and the staff also attempting to characterize Joint Petitioners' argument as resting in some fashion on the presumption that SEI will violate NRC regulations, see SEI Answer

at 48; Staff Answer at 22-23, an assumption that the Commission has instructed licensing boards not to make, see, e.g., GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000). While the latter characterization is flawed, in that SEI would still be in compliance with NRC regulations if it restores the site to an agency-approved ACL, this argument misses the point of Joint Petitioners' allegation. Under the agency's regulations implementing NEPA, the ER is to discuss any "irreversible and irretrievable commitments of resources which would be involved in the proposed action." 10 C.F.R. § 51.45(b)(5). Although, as SEI points out, the water in the aquifer that is the subject of an ISR project is, under the federal exemption and state permitting processes that govern underground injection control projects, unsuitable now or in the future as a source of drinking water, see SEI Answer at 13-18, at the same time the ISR process will further degrade the pre-operational or baseline quality of the water, unless it can be restored. And unless the baseline can be restored, there will be an "irreversible and irretrievable" commitment of a resource the parameters of which must, under NEPA and agency regulations, be outlined in the applicant's ER.

Also questioned by SEI is Joint Petitioners' assertion that an ISL/ISR restoration back to baseline has never occurred, pointing to the example of the Nubeth research and development project, the predecessor to the Ross project at this same site, the restoration of which was, SEI asserts, the subject of final agency action. See 3 SEI Answer at 46. But when contrasted with the supporting statements of Drs. Moran and Abitz regarding the issues and problems with aquifer restoration at the Nubeth project and other ISR projects, see Moran Declaration at 35, 26-28; Abitz Declaration at 11-12, this merely highlights a material factual dispute relative to the participants' positions on this point.

Thus, Joint Petitioners' contention appears to be a candidate for admission. Another challenge remains, however. While NEPA requires that the NRC consider the reasonably

foreseeable environmental impacts of the proposed licensing action, the agency need not consider remote and speculative impacts, particularly if the impact cannot easily be estimated at the current time, and an appropriate future opportunity will exist for the agency to analyze the impact. See Sierra Club v. Marsh, 769 F.2d 868, 878 (1st Cir. 1985). And in this regard, there are two elements that potentially are fatal to the admissibility of Joint Petitioners' contention, i.e., determining the parameters of an ACL, given that such a limitation is generally set as part of the decommissioning process for an ISR facility, and the fact that the sufficiency of any ACL, when requested, can be contested in a future hearing.

To fashion an adequate evaluation of the environmental effects of being able to restore the groundwater quality to an ACL, there would need to be some determination about what that ACL would be.[29] But, as SEI and the staff assert, see Tr. at 92-94, 105, given the differences that exist among well fields, it likely cannot be known at this juncture exactly what alternative concentration will be deemed necessary to protect human health and the environment under the nineteen factors of Appendix A, Criterion 5B(6). Joint Petitioners, on the other hand, suggest that the magnitude of the endeavor could be narrowed to a range of possible ACLs based on the historical experience of other ISL/ISR sites. See Tr. at 83-85. What this essentially calls for is a bounding analysis, something that is not unheard of in the context of NEPA analyses and does not seem untoward in this instance, given the importance of NEPA as a mechanism for providing information regarding the parameters of "irreversible and irretrievable" resource commitments. As such, we do not consider this concern a reason for precluding this contention's admission.

[29] The other factor of importance in such an analysis, the parameters of baseline/current water quality, presumably will be generated in the context of admitted environmental contention 1.

Nor is this contention's admission impeded by the fact that, as both SEI and the staff acknowledge, see Staff Answer at 22 n.43; Tr. at 103, 109-10, SEI will be required to submit a license amendment request to the Commission if it wishes to utilize an ACL. Joint Petitioners then would have an opportunity to petition for a new hearing regarding the sufficiency of the SEI request.[30] But as Joint Petitioners point out, see Tr. at 107-09, the ability of any interested person to obtain an AEA hearing at that point would not provide the relief Joint Petitioners should be able to obtain now, consistent with NEPA, i.e., a public explanation of the impacts of being unable to restore the mined aquifer to primary or secondary baseline and, instead, having to use an ACL, as that alternate limitation might be implemented per a reasonable bounding analysis.

We thus find this contention should be admitted for further litigation in this proceeding.[31]

c. Environmental Contention 3: The application fails to include adequate hydrogeological information to demonstrate [SEI's] ability to contain fluid migration.

CONTENTION: The application fails to provide sufficient information regarding the hydrogeological setting of the area to meet the requirements of 10 C.F.R. § 51.45, 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2), and NEPA. The application also runs afoul of NUREG-1569 § 2.6, which provides guidance for complying with the mandatory rules. The application similarly fails to assess the likelihood and impacts of fluid migration to the adjacent surface water and groundwater, as required by 10 C.F.R. § 51.45 and NEPA, and as discussed in NUREG-1569 § 2.7.

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[30] By all appearances, this also would be the point at which the topic of the possible use of new water quality restoration technology, which Dr. Abitz discusses in his declaration, see Abitz Declaration at 12-13, would be appropriately raised in connection with the Ross facility.

[31] In doing so, we emphasize again that, assuming it is properly derived, utilizing an ACL is not a violation of any agency regulation, see supra p. 33, and, as such, this contention is not a vehicle for Joint Petitioners to seek to establish that a satisfactory ACL cannot be adopted or that SEI will be unable to comply with any ACL that might be instituted, matters that would be the subject for any future license amendment proceeding if the use of an ACL is, in fact, proposed by SEI.

DISCUSSION: Intervention Petition at 19-24; SEI Answer at 49-52; Staff Answer at 23-27; Joint Petitioners Reply at 21-24; Tr. at 110-24.

RULING: Admitted in part, as outlined in the discussion below and denominated in Appendix A to this decision, in that a portion of this contention and its foundational support are sufficient to establish a genuine material dispute adequate to warrant further inquiry.

Although we have determined that Joint Petitioners have failed to provide information about a number of asserted impacts associated with the Ross facility, including groundwater and surface water migration, that are sufficient to demonstrate standing relative to Ms. Viviano, see section II.A.2.a supra, our standing findings are not necessarily dispositive of our determination on a contention that raises similar concerns. Thus, we look anew at Joint Petitioners' environmental contention 3, which likewise raises hydrological concerns.

And in doing so, we find, as SEI and the staff assert, that the declarations of Drs. Moran, Sass, and Abitz do not provide support for that portion of this issue statement, i.e., the first two sentences, that challenges the adequacy of the SEI application's analysis of geology/seismology relative to 10 C.F.R. Part 40, Appendix A, Criteria 4(e), 5G(2), and section 2.6 of NUREG-1569. As such, this aspect of the contention lacks sufficient support to show that a genuine dispute exists on a material issue of law or fact. See 10 C.F.R. § 2.309(f)(1)(vi).

On the other hand, we disagree with the SEI and staff claims regarding the inadequacy of Joint Petitioners' hydrology-based challenges to the application, as embodied in the last sentence of the contention. The declarations of Drs. Moran, Sass, and Abitz contain detailed discussions regarding boreholes and aquifer isolation in the immediate vicinity of the Ross facility that raise questions about the groundwater hydrology associated with the site as detailed in the SEI application sufficient to establish a material issue of fact in accord with the pleading

requirements of section 2.309(f)(1)(vi). See Moran Declaration at 15-21; Sass Declaration at 72-74, 78-80; Abitz Declaration at 106-10.

We thus admit this contention, albeit limited to its groundwater hydrology-related aspects outlined in the third sentence of the contention.

d. Environmental Contention 4: The application fails to adequately document negative impacts on groundwater quantity.

CONTENTION: The application violates 10 C.F.R. § 51.45 and NEPA by failing to properly analyze the project's impacts on groundwater quantity. Furthermore, the application presents conflicting information on groundwater consumption, precluding accurate evaluation of the project's impacts in this area.

DISCUSSION: Intervention Petition at 24-26; SEI Answer at 52-53; Staff Answer at 27-28; Joint Petitioners Reply at 24-26; Tr. at 124-36.

RULING: Admitted in part, as denominated in Appendix A to this decision, in that the contention presents a genuine material dispute adequate to warrant further inquiry regarding the ER's analysis of the cumulative impacts of SEI's proposed mining activities at the Ross site and other nearby sites in the Lance District expansion on groundwater quantity.

With this contention and the accompanying supporting explanation, Joint Petitioners question various aspects of the SEI ER discussion regarding groundwater quantity impacts. Specifically, they assert that the ER is deficient because it "fails to analyze how much water will be used by the Ross operations in the long term and instead only offers several partial and conflicting estimates of possible groundwater consumption." Intervention Petition at 25. Additionally, Joint Petitioners state that SEI's proposed additional ISL/ISR facilities in the so-called Lance District expansion area to the north and south of the Ross project will compound the project's effects on groundwater depletion. See id.

Also in this regard, Joint Petitioners' expert Dr. Moran offers specific criticisms of SEI's water use and restoration analysis. He points to two different and unreconciled measures of

water consumption in different parts of SEI's ER. See Moran Declaration at 31-32. Further, Dr. Moran argues that the low annual precipitation in the Ross facility area means that "recharging the aquifers and recovery of local water levels may require much longer periods of time than are predicted in the Application, especially if numerous other ISL projects are approved." Id. at 32.

SEI opposes admission of environmental contention 4, insisting that 10 C.F.R. § 51.45, which governs the contents of the environmental report, does not require the level of detail about groundwater consumption that Joint Petitioners demand. SEI also argues that the hearing petition does not present a sufficient dispute with the sections of the ER discussing groundwater consumption.

In contrast, the staff supports the admission of environmental contention 4 in part, agreeing with Joint Petitioners that the cumulative impact on groundwater quantity of the Ross project, in conjunction with that of SEI's other proposed ISL/ISR operations in the Lance District expansion, must be considered before granting the license.

We find that portion of Joint Petitioners' environmental contention 4 regarding the cumulative impact on groundwater quantity of the Ross project and the planned Lance District expansion satisfies the admissibility requirements of 10 C.F.R. § 2.309. This portion of the contention presents a material dispute with SEI's application that is within the scope of this licensing proceeding. See Dewey-Burdock, LBP-10-16, 74 NRC at __-__ (slip op. at 68-69) (admitting similar contention). Joint Petitioners also corroborate this portion of their contention challenging the SEI ER with expert support. To the extent that SEI disagrees with Joint Petitioners' criticisms of its groundwater analysis, those disagreements are matters to be decided on the merits, not at the contention admissibility stage. On the other hand, we consider all other claims raised by Joint Petitioners in the context of this contention, including concerns about the computer modeling methodology utilized by SEI to calculate groundwater quantity

impacts, inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute. See 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c supra.

e. Environmental Contention 5: The application fails to adequately assess cumulative impacts of the proposed action in conjunction with other industrial activities in the area, and fails to evaluate adverse environmental effects resulting from an insufficient decommissioning bond and the disposal of 11e(2) byproduct material. It also does not properly consider impacts to visual resources at the nearby Devils Tower National Monument and improperly tiers to NRC's flawed [generic environmental impact statement (GEIS)] for ISL uranium mining.

CONTENTION: The application violates 10 C.F.R. § 51.45, NEPA, and the Council on Environmental Quality's (CEQ) implementing regulations for NEPA because it fails to consider cumulative impacts that may result from [SEI's] proposed ISL uranium mining operations in conjunction with oil and gas drilling and other ISL uranium mining operations, all of which exist in the project vicinity and are likely to continue and expand in the foreseeable future. The application also violates these authorities because it does not provide an adequate analysis of the foreseeable impacts and negative environmental effects that will result in the likely event that [SEI's] decommissioning bond is insufficient to achieve its purpose, as well as those impacts related to disposal of 11e(2) byproduct material. Finally, the application violates NEPA because the ER tiers to NRC's flawed and unsupportable GEIS for ISL uranium mining.

DISCUSSION: Intervention Petition at 27-32; SEI Answer at 53-59; Staff Answer at 29-37; Joint Petitioners Reply at 26-32; Tr. at 137-67.

For ease of discussion, we will separate Joint Petitioners' environmental contention 5 into its five component allegations: inadequate cumulative impacts analysis (5A); inadequate decommissioning bond (5B); disposal of section 11e(2) byproduct material (5C); visual impacts at Devils Tower National Monument (5D);[32] and improper tiering to the NRC GEIS for ISL mining (5E).

(i) RULING on Environmental Contention 5A, Inadequate Cumulative Impacts Analysis: Admitted in part, as dominated in Appendix A to this decision, in that the

[32] Although the title of this contention makes reference to the failure properly to consider the impacts of the Ross facility upon Devils Tower visual resources, the contention itself makes no mention of this matter.

contention and its foundational support, as it relates to cumulative impacts associated with the Lance District expansion, are sufficient to establish a material dispute adequate to warrant further inquiry.

NRC regulations implementing NEPA require the agency to consider the cumulative impacts of a proposed licensing action, i.e., those that result from the incremental effects of the proposed action in conjunction with past, present, and reasonably foreseeable future actions. In particular, the definitions in 10 C.F.R. § 51.14(b) incorporate the CEQ regulations that define the scope of an environmental impact statement (EIS) to include cumulative impacts, see 40 C.F.R. §§ 1508.7, 1508.25(c). To assist the staff with preparing its cumulative impacts analysis, the staff guidance document for environmental reports requests that license applicants include their own cumulative impacts analysis. See NUREG-1748, at 6-4.

SEI and the staff state that license applicants do not have a specific duty under section 51.45 to analyze cumulative impacts in their environmental reports. See SEI Answer at 54; Staff Answer at 29. This claim does not, however, conform with the provisions of Part 51 governing the consideration of "impacts" on the environment, which is to include cumulative impacts.[33] Accordingly, because the staff uses the ER as the basis for its EIS, and because hearing petitioners are required to style their NEPA contentions against the ER, see 10 C.F.R. § 2.309(f)(2), a contention would be admissible if it raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the ER. See, e.g., Progress Energy

[33] Under 10 C.F.R. § 51.45(b)(1), "impacts" on the environment are to be discussed, and under 40 C.F.R. § 1508.25(c), which is one of the CEQ provisions section 51.45(b) indicates is to be used to implement the NRC's responsibilities under NEPA section 102(2) to prepare an EIS, "cumulative impacts" are included within the scope of the impacts to be assessed. Not surprisingly, therefore, SEI includes in its ER a subchapter on "Cumulative Effects." See 1 SEI ER at 2-17 to -44. The subchapter considers such impacts as transportation, noise, air and water quality, socioeconomic conditions, and past, current, and planned mineral development. The analysis also considers, in varying levels of detail, whether and how the proposed Ross project will interact with other activities in the vicinity of the project.

Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 102 (2009) (admitting cumulative impacts contention relative to applicant's ER), aff'd in part and rev'd in part on other grounds, CLI-10-2, 71 NRC 27 (2010); Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 258-59 (2007) (same).

In support of their contention, Joint Petitioners lodge three major criticisms regarding the ER with respect to cumulative impacts.[34] First, Joint Petitioners claim that "the ER does not consider the impacts of past activities, including uranium exploration and ISL testing." Intervention Petition at 28. Second, they assert that "the ER does not consider the full cumulative scope of the Ross-Lance project contemplated by [SEI]," because the reasonably foreseeable impacts of the additional satellite facilities that SEI proposes to construct in the Lance District expansion are not adequately analyzed in conjunction with the Ross project. Id. at 28-29. Finally, Joint Petitioners echo their argument from environmental contention 4 that the combined SEI operations will have cumulative impacts on water quantity that are not discussed in the ER and additionally allege that water quality impacts will result from cumulative disposal of liquid waste via deep-well injection. See id. at 29.

Regarding their first claim, Joint Petitioners are incorrect in their assertion that the ER does not consider past ISL/ISR activities. The ER provides a history of prior uranium exploration and testing, see 1 SEI ER at 1-5 to -7, and, as Joint Petitioners' hearing request acknowledges, the ER contains multiple references to the boreholes that remain from prior drilling at the site, see Intervention Petition at 21-23; see also 1 SEI ER at 3-10, 3-47; 2 id. at 4-61 to -63. For its part, SEI states that because the groundwater was restored when the earlier Nubeth research and development (R&D) ISR project was decommissioned, there are no

[34] We note that Joint Petitioners' claim regarding the impacts of other industrial sites in the vicinity of the proposed Ross facility is not footed in EJ concerns.

cumulative impacts with the Ross project, and Joint Petitioners provide nothing to contradict SEI on this score. And while Joint Petitioners' supporting affiant Dr. Moran opines in his declaration that "the application fails to adequately present the true extent of historical exploration drilling, borehole abandonment details, R&D testing, changes to groundwater water quality, and interconnections of geologic strata," Moran Declaration at 12, his declaration contains no alleged facts to support this opinion. Consequently, this claim does not raise a genuine dispute with SEI's application. See Fansteel, CLI-03-13, 58 NRC at 203.

With respect to the scope of SEI's Lance District expansion, SEI states in its ER that it intends to construct and operate additional ISR facilities in the Lance District expansion surrounding the Ross site. See 1 SEI ER at 1-19 to -20, 2-23. SEI indicates that these additional facilities would likely operate as satellites of the Ross facility and would utilize the same CPP that SEI proposes to construct for the Ross project. See id. at 2-23. And with respect to cumulative impacts, SEI states:

> Absent any site-specific features that could preclude development of these other sites (e.g., historical and cultural resources), ISR operations at additional sites likely will result in essentially the same potential impacts analyzed in this ER for the Proposed Action. Development of these sites may act to produce cumulative effects by increasing or prolonging the impacts analyzed for the Proposed Action, but the impacts will be distributed proportionately throughout the region of influence and therefore are not expected to significantly increase the severity of any impact.

Id. Joint Petitioners allege that this discussion is inadequate, particularly with regard to the lack of specificity about SEI's planned satellite facilities, and the potential impacts resulting from the Ross facility's CPP being used for SEI's additional facilities and possibly those of third parties. See Intervention Petition at 28-29. The staff agrees that this portion of the contention is admissible. See Staff Answer at 29-30, 31.

We conclude relative to the matter of cumulative impacts associated with the Lance District expansion that Joint Petitioners have raised a genuine dispute as to the sufficiency of SEI's cumulative impacts analysis, supported by fact and expert opinion, that is material to the findings the NRC must make before granting a license to SEI. Certainly, given the size of the Lance District expansion relative to the Ross permit area, see 1 SEI ER at 1-249 (fig. 1.2-3), and the possible use of the Ross CPP in connection with that expansion, the potential for cumulative impacts seems apparent.

As to the cumulative impacts of SEI's proposed ISR facilities on groundwater quantity, for the reasons outlined in our discussion regarding environmental contention 4 above, see section II.B.2.d supra, this portion of environmental contention 5A likewise is admissible. Regarding the impacts on groundwater quality from liquid waste disposal, Dr. Moran observes that SEI plans to dispose of liquid waste via deep disposal wells into the Deadwood and Flathead formations. See Moran Declaration at 35; 2 SEI ER at 4-66. He does not, however, analyze the cumulative impacts of long-term disposal of that waste along with that of SEI's planned additional facilities and nearby industrial projects that also dispose of liquid waste into these formations. Although SEI did not directly address this deep disposal claim, the staff asserts in response that the groundwater in these formations is already unusable and, therefore, Joint Petitioners do not raise a genuine dispute with the application. See Staff Answer at 31. We disagree, at least insofar as this concern relates to potential impacts associated with the Lance District expansion. Joint Petitioners have put forward a specific criticism of the ER that is material to the question of whether SEI has met its requirement to consider all significant environmental impacts of the proposed action. The staff's objection that there will in fact be no environmental impact is a question for the merits, not one that is relevant to admissibility.

Based on the foregoing, we conclude that environmental contention 5A concerning the cumulative impacts of the full scope of SEI's proposed Lance District expansion project is admissible. Moreover, as we discussed above, see section II.B.2.d supra, we also find admissible a portion of environmental contention 4 that concerns cumulative impacts associated with SEI's present and future Lance District expansion operations on groundwater quantity. As a consequence, we will consolidate with environmental contention 5A that portion of environmental contention 4 that alleges SEI has failed to consider cumulative impacts, with the language of this consolidated environmental contention forth in Appendix A to this decision.

(ii) RULING on Environmental Contention 5B, Inadequate Decommissioning Bond: Inadmissible, in that this contention and its foundational support lack adequate factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. See 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c supra.

Joint Petitioners base this contention, which asserts that SEI's ER must consider the reasonably foreseeable environmental impacts of its potential failure to finance adequately its decommissioning activities, on the declaration of their expert Dr. Moran. Dr. Moran provides a general critique of the financial assurance calculations of prior ISL facility operators and argues that SEI's "financial assurance calculations should be made by some independent party" and "should also consider the actual reclamation and restoration costs incurred, long-term, from a statistical sampling of the previously-licensed ISL sites." Moran Declaration at 44-45. We note initially that Dr. Moran is a hydrogeologist and geochemist, see id. at 11, and nothing in his declaration indicates that he has expertise with decommissioning bonds, surety arrangements, or financial analysis of any kind. But even putting aside any questions about his qualifications to provide an opinion regarding these financial assurance matters, Dr. Moran does not allege any specific inadequacies in SEI's calculation of the amount of its decommissioning bond.

Moreover, his references to prior problems involving the estimation of decommissioning costs are inadequate to establish a likelihood that the amount of SEI's decommissioning bond will be insufficient. See Crow Butte II, LBP-08-24, 68 NRC at 756 (contention seeking decommissioning bond increase based on Wyoming Department of Environmental Quality directive to applicant's subsidiary to increase surety bond at another ISL facility lacks sufficient support).

This portion of environmental contention 5 thus lacks alleged facts or expert opinion sufficient to support the contention, see 10 C.F.R. § 2.309(f)(1)(v), and fails to show that a genuine dispute exists with the application, see id. § 2.309(f)(1)(vi).

(iii) RULING on Environmental Contention 5C, Disposal of Section 11e(2) Byproduct Material: Inadmissible, in that this contention and its foundational support lack adequate factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. See 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c supra.

Joint Petitioners claim it is foreseeable that no facility for the disposal of section 11e(2) byproduct material will be available when SEI seeks to dispose of such material. Yet, they provide no alleged facts or expert opinion to support their assertion that the lack of a disposal site is reasonably foreseeable. By contrast, SEI's ER contains a review of the disposal capacity of four existing section 11e(2) byproduct material disposal facilities. See 2 SEI ER at 4-168 to -169. Because Joint Petitioners provide no information to suggest that these facilities will be unavailable, their contention fails as lacking adequate factual and expert support, and as failing to raise a genuine dispute with the application. See 10 C.F.R. § 2.309(f)(1)(v), (vi).

(iv) RULING on Environmental Contention 5D, Visual Impacts at Devils Tower National Monument: Inadmissible, in that this contention and its foundational

support lack factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. See 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c supra.

Besides a sentence citing section 51.45 as authority for the ER's asserted need to fully address visual and aesthetic impact, Joint Petitioners' hearing request contains only three sentences as the asserted basis for this contention. The first states that SEI "fails to properly consider the visual and aesthetic impacts that the project would have on Devils Tower." Intervention Petition at 31. But this challenge to the adequacy of the ER's visual and aesthetics impacts discussion fails to specify what is inadequate about that ER discussion. Nor do Joint Petitioners provide any factual or expert support for the additional allegation in the basis' second sentence that "[t]he industrial activity at the project site could tarnish the Monument's viewshed" from ten miles away. Intervention Petition at 31. To be sure, in reply to SEI's response that it conducted a full visual and aesthetic impacts discussion,[35] see SEI Answer

[35] For its part, the staff notes that in the ER's visual impacts assessment, the ER specifically mentions the Devils Tower monument, declaring that "'[t]he proposed project area is not visible from the visitor's center or hiking trails around the monument.'" Staff Answer at 35 (quoting 2 SEI ER at 4-105). While this ER statement, which is not specifically contested by Joint Petitioners, would appear to address the question of Ross facility visual impacts for those on the ground at Devils Tower, it does not speak to the question of the visual impacts for those who might be above ground level. And in that regard, the SEI ER recognizes that "[a]lthough the Devils Tower National Monument and surrounding area is classified as a Class II [visual resource management (VRM)] area [(i.e., one in which the existing character of the landscape should be retained and the level of characteristic landscape change should be low so as not to attract the attention of the casual observer)], the Ross ISR project will only be visible to climbers scaling the volcanic neck." 2 SEI ER at 3-349; see also id. at 3-348 (defining objectives for Class II VRM area); U.S. Nat'l Park Serv., Devils Tower National Monument - Climbing Information, http://www.nps.gov/deto/planyourvisit/climbing.htm (last visited Jan. 24, 2012). But Joint Intervenors likewise did not raise any specific concerns about the visual impacts of the facility upon those who might climb the western-looking face of Devils Tower, and it is not the Board's responsibility to provide support for their contention so as to make it admissible. See Crow Butte I, CLI-09-12, 69 NRC at 553 & n.81; Commonwealth Edison Co. (Zion Station, Units 1 and 2), ALAB-226, 8 AEC 381, 406 (1974). That being said, and recognizing that the number of individuals visually impacted above ground level may be a small proportion of those who visit the Devils Tower site, we nonetheless are aware of nothing that relieves the staff of the obligation to afford environmental impact statement consideration of the visual impacts of

(continued...)

at 58 (citing SEI ER at sections 3.9, 4.9, and 5.9), Joint Petitioners do declare that this ER analysis "neglects to address the site-specific impacts at Devils Tower, as do the programmatic discussions in NRC's GEIS for ISL uranium mining." Joint Petitioners Reply at 30 (citing NRC Office of Federal and State Materials and Environmental Management Programs and Wyoming Department of Environmental Quality Land Quality Division, [GEIS] for [ISL] Uranium Milling Facilities, NUREG-1910 (May 2009)). Joint Petitioners, however, fail to provide any citation to what it is among the GEIS programmatic discussions that the ER neglects to address, leaving it to the Board to identify the grounds that support their contention, which is something we need not do. See Fansteel, CLI-03-13, 58 NRC at 204-05; see also Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 534 (2009) ("The Commission should not be expected to sift unaided through . . . documents filed before the Board to piece together and discern a party's argument and the grounds for its claims") (internal quotations omitted).

Finally, in the third sentence of their basis statement Joint Petitioners cite a single case, LaFlamme v. FERC, 852 F.2d 389, 399-403 (9th Cir. 1988), for the proposition that the agency must adequately consider impacts to visual and aesthetic resources in its NEPA review. In that case, however, there was clear evidence that the construction of a hydroelectric dam would impair the aesthetic qualities of the appurtenant river. Here, as we have already noted, Joint Petitioners lack a statement of supporting facts or expert opinion to establish how the Ross project would impair the visual resources at Devils Tower. Such support, rather than mere speculation, is required for an admissible contention under 10 C.F.R. § 2.309(f)(1). See Fansteel, CLI-03-13, 58 NRC at 203.

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[35](...continued)
the Ross facility upon a climber's view of the surrounding landscape. This seems particularly so, given the obvious effort expended to obtain that elevated visual perspective.

The contention thus falls short of the requirements in 10 C.F.R. § 2.309(f)(1)(v), (vi) that a petitioner provide factual or expert support for a contention and show the existence of a genuine dispute with the application by reference to specific portions of the application.

(v) RULING on Environmental Contention 5E, Improper Tiering to the GEIS for ISL Mining: Inadmissible, in that this contention and its foundational support lack factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. See 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c supra.

As the staff acknowledges, in contrast to the GEIS associated with power reactor license renewals that has been incorporated into the agency's regulations, see 10 C.F.R. Part 51, Subpart A, App. B, the GEIS for ISL mining can be the subject of an appropriate challenge in an adjudicatory proceeding. See Tr. at 152. In support of this contention claiming that the SEI ER is deficient because it seeks to tier to a GEIS that is wholly inadequate, Joint Petitioners provide a string of citations to SEI's ER in which SEI references the ISL mining GEIS. See Intervention Petition at 31. Nowhere, however, do Joint Petitioners explain specifically which alleged GEIS flaws are reproduced and/or relied upon by SEI. Instead, Joint Petitioners direct us to the many comments they submitted on the draft and final GEIS, which they have included as six exhibits to their petition totaling 126 pages, see Intervention Petition, exhs. 1-6, and advise us that Joint Petitioners "incorporated them by reference" to avoid any "burden" that "such a litany" would impose on the Board, Tr. at 141.

Joint Petitioners have not put forward adequate grounds for their claim that the SEI application is flawed because it tiers to the agency's GEIS for ISL mining. In their petition, Joint Petitioners fail to link any of their past criticisms to specific provisions of the ER, and we decline to pore through the attachments to their intervention submission to assemble the basis for such

a contention. See Fansteel, CLI-03-13, 58 NRC at 204-05; see also Pilgrim, CLI-09-11, 69 NRC at 534.

In lieu of providing an explicit connection between the alleged flaws in the GEIS and the references to the GEIS in SEI's ER, Joint Petitioners essentially invite us to declare the ER guilty by association with the GEIS. Without more, this is an inadequate basis for the contention and fails to provide the necessary factual or expert support for the contention. Moreover, because Joint Petitioners fail to point to specific flaws in SEI's application, the contention fails to raise a genuine dispute on a material issue of fact.

III. PROCEDURAL/ADMINISTRATIVE MATTERS

Having determined in section II above that Joint Petitioners NRDC and PRBRC have established standing and have set forth at least one admissible contention, they are admitted as parties to this proceeding. Consequently, below we set forth procedural guidance for further litigation regarding their admitted contentions.

A. General Guidance

Given there was no request in Joint Petitioners' hearing petition that the Board ask the Commission for permission to conduct this proceeding under the procedures specified in 10 C.F.R. Part 2, Subpart G, see Crow Butte I, CLI-09-12, 69 NRC at 571-73, unless all parties agree that this proceeding should be conducted pursuant to 10 C.F.R. Part 2, Subpart N, this proceeding will be conducted in accordance with the procedures of 10 C.F.R. Part 2, Subparts C and L. Assuming all the parties currently do not consent to conducting this proceeding under Subpart N, the parties should conduct a conference within ten days of the date of this issuance to discuss their particular claims and defenses and the possibility of

settlement or resolution of any part of this proceeding and to make arrangements for the required disclosures under 10 C.F.R. § 2.336(a).[36]

The Board will oversee the discovery process through status reports and/or conferences, and expects that each of the parties will comply with the process to the maximum extent possible, with the understanding that failing to do so will result in appropriate Board sanctions.[37]

Pursuant to 10 C.F.R. § 2.332(d), the Board is to consider the staff's projected schedule for completion of its safety and environmental evaluations in developing the hearing schedule. Accordingly, on or before Tuesday, February 21, 2012, the staff shall submit to the Board through the E-Filing system a written estimate of its projected schedule for completion of its safety and environmental evaluations, including but not limited to its best estimate of the dates for issuance of any open item and final safety evaluation reports and the draft and final environmental impact statements relative to the Ross facility.

The Board will then conduct a prehearing conference to discuss initial discovery disclosures, scheduling, and other matters on a date to be established by the Board in a subsequent order. The parties should be prepared to address the following matters at the prehearing conference:

1. Estimates (discussed during the parties' conference) regarding when this case will be ready for an evidentiary hearing.

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[36] Among the items to be discussed is whether the staff's section 2.336(b) hearing file can be provided electronically via the NRC web site sooner than thirty days from the date of this issuance.

[37] In this regard, when a party claims a privilege and withholds information otherwise discoverable under the rules, the party shall expressly make the claim and describe the nature of what is not being disclosed to the extent that, without revealing what is sought to be protected, other parties will be able to determine the applicability of the privilege or protection. The claim and identification of privileged materials must occur within the time provided for disclosing withheld materials. See 10 C.F.R. § 2.336(a)(3), (b)(5).

2. Establishing time limits for updating mandatory disclosures under 10 C.F.R. § 2.336(d) and for updating the hearing file under 10 C.F.R. § 2.1203(c).

3. Whether any party intends to assert a privilege or protected status for any information or documents otherwise required to be disclosed herein and, if so, proposals for the submission of privilege logs under 10 C.F.R. § 2.336(a)(3), (b)(5), procedures and time limits for challenges to such assertions, and the development of a protective order and nondisclosure agreement.

4. Whether any of the parties anticipates submitting a motion for summary disposition regarding any of the admitted contentions and the timing and page length of such a motion and responses thereto.

5. Establishing time limits for various evidentiary hearing-related filings, including:

   a. The final list of potential witnesses for each contention pursuant to 10 C.F.R. § 2.336(a)(1).

   b. Any unanimous request, pursuant to 10 C.F.R. § 2.310(h), to handle any specific contention under 10 C.F.R. Part 2, Subpart N.

   c. Any motion for cross-examination under 10 C.F.R. § 2.1204(b).

   d. The parties' initial written statements of position and written direct testimony with supporting affidavits pursuant to 10 C.F.R. § 2.1207(a)(1), along with consideration of (i) whether the parties should file simultaneously or sequentially, and, if sequentially, which party should file first; and (ii) the timing of filing of written responses, rebuttal testimony, and in limine motions relative to direct or rebuttal testimony.

6. The items outlined in 10 C.F.R. § 2.329(c)(1)-(3).

7. The possibility of settling any of the contentions, in whole or in part, including the status of any current settlement negotiations and the utility of appointing a settlement judge pursuant to 10 C.F.R. § 2.338(b).
8. Whether a site visit would be appropriate and helpful to the Board in the resolution of the contentions.
9. Any other procedural or scheduling matters the Board may deem appropriate.

IV. CONCLUSION

For the reasons set forth above, we conclude that in challenging SEI's application for authorization to construct and operate the Ross ISR facility, Joint Petitioners have established their representational standing and have provided four admissible contentions. As a consequence, their hearing request is granted and they are admitted as parties to this proceeding. The text of their admitted contentions is set forth in Appendix A to this decision.

For the foregoing reasons, it is this tenth day of February 2012, ORDERED, that:

1. Having established their standing to participate in this proceeding, relative to the contentions specified in paragraph two below, the hearing request of Joint Petitioners NRDC and PRBRC is granted and those petitioners are admitted as parties to this proceeding.

2. The following of Joint Petitioners' contentions are admitted for litigation in this proceeding: Environmental Contention 1, Environmental Contention 2, Environmental Contention 3, and Environmental Contention 4/5A.

3. The following of Joint Petitioners' contentions are rejected as inadmissible for litigation in this proceeding: Environmental Contention 5B, Environmental Contention 5C, Environmental Contention 5D, and Environmental Contention 5E.

4. The parties are to take the actions required by section III above in accordance with the schedule established therein.

5. In accordance with the provisions of 10 C.F.R. § 2.311, as it rules upon an intervention petition, any appeal to the Commission from this memorandum and order must be taken within ten (10) days after it is served.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

G. Paul Bollwerk, III
CHAIR

/RA/

Richard F. Cole
ADMINISTRATIVE JUDGE

/RA/

Kenneth L. Mossman
ADMINISTRATIVE JUDGE

Rockville, Maryland

February 10, 2012

APPENDIX A

ADMITTED CONTENTIONS

1. Environmental Contention 1: The application fails to adequately characterize baseline (i.e., original or pre-mining) groundwater quality.

   CONTENTION: The application fails to comply with 10 C.F.R. § 51.45, 10 C.F.R. Part 40, Appendix A, and NEPA because it lacks an adequate description of the present baseline (i.e., original or premining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies. The ER's departure from NRC guidance serves as additional evidence of these regulatory violations. NRC, NUREG-1569, Standard Review Plan for In Situ Leach Uranium Extraction License Applications, §§ 2.7.1, 2.7.3, 2.7.4 (2003).

2. Environmental Contention 2: The application fails to analyze the environmental impacts that will occur if SEI cannot restore groundwater to primary or secondary limits.

   CONTENTION: The application fails to meet the requirements of 10 C.F.R. § 51.45 and NEPA because it fails to evaluate the virtual certainty that SEI will be unable to restore groundwater to primary or secondary limits.

3. Environmental Contention 3: The application fails to include adequate hydrological information to demonstrate SEI's ability to contain groundwater fluid migration.

   CONTENTION: The application fails to assess the likelihood and impacts of fluid migration to the adjacent groundwater, as required by 10 C.F.R. § 51.45 and NEPA, and as discussed in NUREG-1569 § 2.7.

4. Environmental Contention 4/5A: The application fails to adequately assess cumulative impacts of the proposed action and the planned Lance District expansion project.

   CONTENTION: The application violates 10 C.F.R. § 51.45, NEPA, and the Council on Environmental Quality's (CEQ) implementing regulations for NEPA because it fails to consider adequately cumulative impacts, including impacts on water quantity, that may result from SEI's proposed ISL uranium mining operations planned in the Lance District expansion project.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Strata Energy, Inc.	)	Docket No. 40-9091-MLA
(Ross In Situ Recovery Uranium Project)	)	
	)	
(Materials License Application)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility) (LBP-12-3)** have been served upon the following persons by Electronic Information Exchange.

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STRATA ENERGY, INC., Ross In Situ Recovery Uranium Project - Docket No. 40-9091-MLA
MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility)
(LBP-12-3)

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[Original signed by Nancy Greathead]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 10th day of February 2012